



**US Army Corps
of Engineers®**

Buffalo District

BUILDING STRONG®

Final Supplemental Sampling Technical Memorandum

**Former Guterl Specialty Steel Corporation
Formerly Utilized Sites Remedial Action Program (FUSRAP) Site
Lockport, New York**

**Contract Number W912QR-08-D-0013
Delivery Order DN03**

Prepared for:

**U.S. Army Corps of Engineers
Buffalo District**

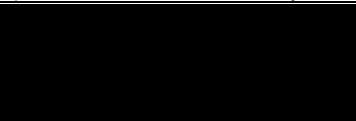
Prepared by:

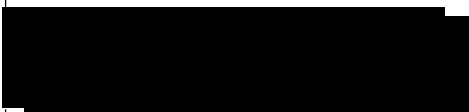
**Shaw Environmental & Infrastructure, Inc.
5050 Section Avenue
Cincinnati, OH 45212**


**Shaw Project Number 140416
26 July 2013**

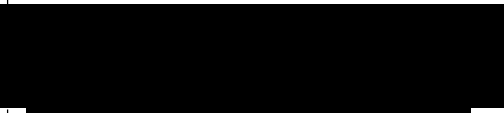
APPENDIX A

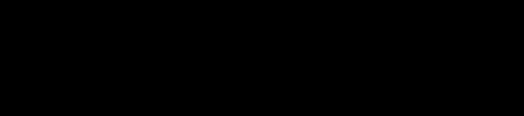
Daily Reports and Field Notes
(Provided on CD)


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u> 2 </u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u> 2 </u>
		Date 6/14/11
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: Calm, slight breeze 55-70, mist to sunny	
QC NARRATIVES		
<p>Did anything develop that may lead to a Change Order/Claim? No – PM Karl Van Keuren discussed charging overtime with Nothnagle drilling for extended work days. Rate is \$30/hr per person – will be used on an as needed basis – completing almost finished well, etc. to help production rate. Will not go over 2hr/day for HS concerns since drillers drive about 1 hour/day. No affect to USACE – Shaw cost management of project. -</p>		
<p>Activities In Progress:</p> <ul style="list-style-type: none"> • Cleared utilities with Allvac Maintenance Supervisor, air knifed in new locations at 701, 703, and 709, and set casing at 701DD. • Did location recon at 705, 710, 711, 712, and 713. All appear reachable other than 713. No good access point and large amount of clearing involved. • PM will call in offsite dig locations after finalized (onsite already called in). 		
<p>Were there any Delays in Work Progress today?</p> <ul style="list-style-type: none"> • Yes, Reg Buri was delayed from clearing 701DD by staff meetings. • Drillers didn't have acetate liners for split spoons. 		
General Comments:		
- No elevated radiological readings detected.		
Verbal Instructions given by Government:		
- none		
Safety Inspection / Safety Meetings:		
- Tailgate, AHA, JSA, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted):		
- Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice)		
- Drill rig and other equipment surveyed for radiological contamination,		
ACTIVITY STAR/FINISH		
- Started drilling today.		
QC REQUIREMENTS		
<ul style="list-style-type: none"> • - Need undisturbed geotech samples for Oak Ridge Lab leaching studies for U to GW, contactor to macro-core stratigraphy in unconsolidated, then push split-spoon with liner where Shaw wants geotech sample. 		
QA/QC PUNCH LIST		
-none		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site)		
Start – 6/13/11		
End - open		
LABOR HOURS		
Start 0700 - End 1700 (drillers and well installation)- no Shaw hourly.		
EQUIPMENT HOURS		
Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING		
none		
Contractor Certification : On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
 ate		Superintendent's Initials and Date

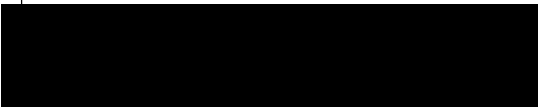
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>061511</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/15/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: Calm, sunny 55-80 F	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> • Soil sampling, setting and grouting 4" steel casings, begin bedrock coring. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> • No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately. Noise monitoring performed at rig during operations.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Sample soil, set and grout casings at 706 DD and 709 DD. Begin bedrock coring at 701 DD during early PM.		
QC REQUIREMENTS <ul style="list-style-type: none"> • - None 		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End – open		
LABOR HOURS Start 0700 - End 1630 (drillers and well installation)- no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification : On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>061611</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/16/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; sunny, 55-70, PM; becoming cloudy, rain showers after 1500.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Utility clearance, continue/finish bedrock coring, set groundwater monitoring well. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Clear utilities at 702 DD and 711 D, DD. Continue coring at 701 DD, finish in PM at ~80' BGL. - Plug back 701 DD corehole with bentonite to ~41' BGL, set 2" PVC screen from ~30' – 40'. Well construction documented separately.		
QC REQUIREMENTS <ul style="list-style-type: none"> -None 		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End – open		
LABOR HOURS Start 0700 - End 1700 (drillers and well installation)- no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>061711</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/17/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly cloudy, slight breeze 65-70, PM; same, light showers	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? May have increased number of flush mounted roadboxes installed at Reg Buri's request due to plant traffic.		
Activities In Progress: <ul style="list-style-type: none"> Began coring bedrock at 709 DD, suspended due to water coming back to surface; regouted borehole with additional grout and will set over the weekend. Cleared 711 D, DD and began clearing 705 D, DD. Sampled soils at 704 DD and 707 DD and collected 3" splitspoon samples. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) -		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS <ul style="list-style-type: none"> - None 		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1400 (drillers)- no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification : On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

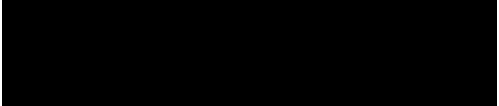
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062011</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/20/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, slight breeze 65°-75° F, PM; Partly sunny, 80° F, breezy	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Restarted coring bedrock at 709 DD (suspended due to water coming back to surface 06/17/11; regrouted) Cored from ~10' – 80' BGL. Plugged back with bentonite chips to ~48' BGL – will hydrate overnight and begin well install 6/21/11 am. Cleared 710 D, DD. UFPO called in by Karl V. for 705, 708, 710 & 711 locations. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – no USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS • - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1630 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

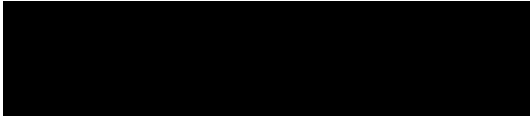
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/21/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, slight breeze 65°-75° F, PM; Mostly cloudy, 85° F, humid, breezy	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Cut 4" casing at 709 DD and installed 2" PVC monitoring well at ~ 41' bgl (well construction diagram completed). Started coring bedrock to ~10' bgl at 707 DD but was suspended due to water coming back to surface. Regouted from surface to ~10'bgl. Moved to 706 DD to begin coring there but coring also suspended due to water coming back to surface. Regouted from surface to ~10'bgl. Moved to 706 DD and cored from ~8' – 38' bgl. Cleared 703 DD and located 708 DD and 710 D, DD locations on east side of Ohio Street. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – no USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, forklift awareness/procedures, hot work permit for 709 DD casing cut down, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS • - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1600 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062211</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/22/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.		Weather: AM; Cloudy, rain showers, light breeze 65°-75° F, PM; Mostly cloudy, 85° F, humid, breezy.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued coring at 706 DD and cored from ~38' – 50' bgl (10' extra to look for deeper fracture zone). Plugged back to ~41' with bentonite and installed monitoring well – documented separately. Move drilling rig back to 704 DD to continue coring begun 6/21/11. Cored to ~40' bgl and set well from ~29'-39' bgl after consultation with K. Van Keuren and V. Tandon. Will complete 6/23/11 am. Premier Locating at Allvac in pm to locate utilities for offsite locations. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected, however rain fell in the morning.		
Verbal Instructions given by Government: - None – no USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, hot work permit for 704 DD casing cut down, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS <ul style="list-style-type: none"> - None 		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1630 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062311</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/23/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly sunny, light breeze 65°-75° F, PM; Mostly cloudy, 85° F, humid, breezy, rain showers after 1510, thunderstorms	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? Began using 8" temporary casing and running 6" tricone roller bit to approximately 10' bgl to adequately seat and grout 4" permanent casing in boreholes.		
Activities In Progress: <ul style="list-style-type: none"> • Soil sampled (Macrocore® and 3" ssp samples for geotech analysis) and ran 8" temporary casing and set and grouted 4" permanent casings at 702 DD, 711DD and 711 D. Moved coreboxes back to decon pad area. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> • No, PM thunderstorm arrived after casing work was completed at 1530. 		
General Comments:		
- No elevated radiological readings detected.		
Verbal Instructions given by Government:		
- None – no USACE personnel onsite today.		
Safety Inspection / Safety Meetings:		
- Tailgate, rig inspection, hot work permit for 702 DD, 711 D, DD casings, documented separately.		
Safety: (Inspections Made, Deficiencies noted):		
- Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice)		
- None		
ACTIVITY START/FINISH		
- Drilling began 06/14/2011		
QC REQUIREMENTS		
• - None		
QA/QC PUNCH LIST		
-None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site)		
Start – 6/13/11		
End - open		
LABOR HOURS		
Start 0700 - End 1545 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS		
Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING		
None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date		Superintendent's Initials and Date
		

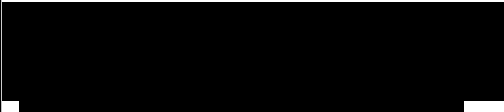
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062411</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/24/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, showers/rain/thunderstorm, breezy 65°F, PM; Mostly cloudy, 70° F, humid, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Drilled out grout from 4" casing at 702 DD and cored from 10' – 40' bgl. Installed 702 DD groundwater monitoring well (documented separately). Moved 702 DD coreboxes back to decon pad area. Cleared utilities at 708 DD and 710 D, DD. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> Yes; AM thunderstorm/heavy rain arrived after 0845 –lost ~45 minutes waiting for storms to pass. 		
General Comments: - No elevated radiological readings detected however rain event during work.		
Verbal Instructions given by Government: - None – no USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS <ul style="list-style-type: none"> - None 		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End – open		
LABOR HOURS Start 0700 - End 1315 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062711</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/27/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, light breeze 65°-75° F, PM; Sunny, 80° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Soil sampled (Macrocore® and 3" ssp sample for geotechnical analysis) and ran 8" temporary casing and set and grouted 4" permanent casing at 708 DD. Collected Macrocore® soil samples and ran 8" temporary casing and set and grouted 4" permanent casings at 710D and 710 DD. Moved back to 707 DD to resume coring but had water leaking out around 4" casing again. Pulled 4" casing, drove 8" temporary casing and rollerbit (6") to ~10' bgl and grouted after installing ~11' length of 4" casing into borehole. Work on well completion at 702 DD location. (Driller has to leave early today for doctor's appt.). 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments:		
- No elevated radiological readings detected.		
Verbal Instructions given by Government:		
- None – Mark , Jeff Hall and Bill Fredricks (USACE personnel) onsite today.		
Safety Inspection / Safety Meetings:		
- Tailgate, rig inspection, hot work permit for 708 DD, 710 D, DD casings, documented separately.		
Safety: (Inspections Made, Deficiencies noted):		
- Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice)		
- None		
ACTIVITY START/FINISH		
- Drilling began 06/14/2011		
QC REQUIREMENTS		
<ul style="list-style-type: none"> - None 		
QA/QC PUNCH LIST		
-None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site)		
Start – 6/13/11		
End - open		
LABOR HOURS		
Start 0700 - End 1600 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS		
Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING		
None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

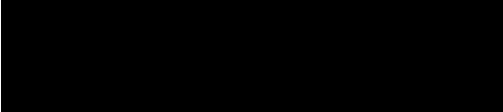
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062811</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/28/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, breezy 65°-75° F, PM; Mostly sunny, 85° F, humid, windy.	
QC NARRATIVES		
<p>Did anything develop that may lead to a Change Order/Claim? Flush mounted protective casing requested for well 708 DD instead of stickup casing. Possible that some restoration work will be needed on rutted lawn leading into 707 DD location (multiple moves on and off location due to leaking surface casing work).</p>		
<p>Activities In Progress:</p> <ul style="list-style-type: none"> Completed coring at 708 DD, cored from ~5' – 40' bgl and installed monitoring well – documented separately. Move CME 85 drilling rig back to 707 DD to continue coring begun 6/21/11. Cored to ~30' bgl. Will complete coring and well installation 6/29/11 am. Nothnagle brought CME 55LC ATV rig onsite this am, moved to 705 D, DD location. 		
<p>Were there any Delays in Work Progress today?</p> <ul style="list-style-type: none"> No 		
<p>General Comments: - No elevated radiological readings detected.</p>		
<p>Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.</p>		
<p>Safety Inspection / Safety Meetings: - Tailgate, rig inspection, hot work permit for 708 DD casing cut down, documented separately.</p>		
<p>Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.</p>		
<p>PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None</p>		
<p>ACTIVITY START/FINISH - Drilling began 06/14/2011</p>		
<p>QC REQUIREMENTS</p> <ul style="list-style-type: none"> - None 		
<p>QA/QC PUNCH LIST -None</p>		
<p>CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open</p>		
<p>LABOR HOURS Start 0700 - End 1545 (drillers) - no Shaw hourly.</p>		
<p>EQUIPMENT HOURS Equipment hours included in bid for well footage. .</p>		
<p>ACCIDENT REPORTING None</p>		
<p>Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.</p>		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>062911</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/29/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, breezy 65° F, PM; Mostly sunny, 70° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? Possible that some restoration work will be needed on rutted lawn leading into 707 DD location (multiple moves on and off location due to leaking surface casing work, well drilling and installation).		
Activities In Progress: <ul style="list-style-type: none"> Completed coring at 707 DD, cored from ~30' – 40' bgl and installed monitoring well – documented separately. Utilized CME 55LC ATV rig to set 4" casings at 705 D and 705 DD locations. Cored bedrock from ~7' – 32' at 710 DD with CME 85 rig. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, hot work permit for 707 DD casing cut down, 705 D and DD casings, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies. Noted grout overspray at 705 location on Daily Safety Inspection Report.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1545 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>063011</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 06/30/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 65° F, PM; Sunny, 80° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Completed coring at 710 DD, cored from ~32' – 42' bgl and installed monitoring well – documented separately. Moved CME 85 to 703 DD location and soil sampled (Macrocore & 3" ssp) and set and grouted 4" casing to ~5' bgl. Utilized CME 55LC ATV rig to begin coring at 705 DD location but after 1st run (from ~5' – 10' bgl) in weathered bedrock 4" casing was leaking. RegROUTED that casing (now called 705 D) and moved to other 4" casing (now called 705 DD) and cored bedrock from ~10' – 40' and installed monitoring well – documented separately. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, hot work permit for 703 DD casing cut down, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1630 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

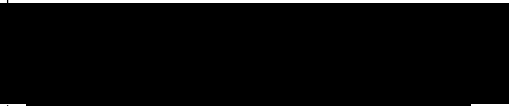
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>070111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/01/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 70° F, PM; Sunny, 80° F, calm.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Resumed coring with CME 55LC at 705 D; cored from ~10' – 20' bgl and installed monitoring well – documented separately. Moved ATV rig to 703 DD location for the holiday weekend. Moved CME 85 rig to begin coring at 710 D location and cored bedrock from ~7' – 20' and installed monitoring well – documented separately. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies. Air sampling performed at 710 D location only as the generator's pull cord broke when starting sampling at 705 D in am. Hertz onsite at 1130 to replace pull cord. Sampling begun thereafter.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1215 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>070511</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/05/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 75° F, PM; Partly to mostly sunny, 75°-80° F, calm.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Began coring with CME 85 at 711 DD; cored from ~7' – 40' bgl and installed monitoring well – documented separately. Moved to ATV rig parked at 703 DD location and begin coring. Cored bedrock from ~5' – 40' and installed monitoring well – documented separately. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies. Air sampling performed at 711 DD location but the generator would cut out at times – concluded it was from vapor lock from high temperature. After cooling down a short while, generator would start right back up.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1630 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

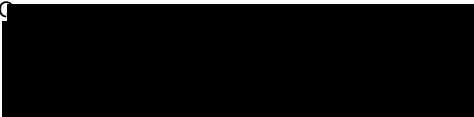
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>070611</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/06/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy 70° F, PM; Cloudy with scattered showers, becoming sunny, humid, 80° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Began coring with CME 85 at 711 D; cored from ~7' – 20' bgl and installed monitoring well – documented separately. Worked on well pads at 711D and DD, 703 DD, and 702 DD. Began well development; developed 708 DD and 709 DD - documented separately. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies. Air sampling performed at 711 D location..		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011 at 701 DD, finished 07/06/11 at 711 D. No access granted for 712 or 713 clusters as of today.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 6/13/11 End - open		
LABOR HOURS Start 0700 - End 1545 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

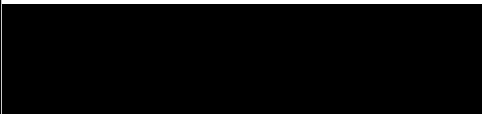
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>070711</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/07/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy 70° F, PM; Mostly cloudy, humid, 80° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Continued well development; developed 710 D and 710 DD (both completed), 707 DD (drying out), 706 DD (drying out) and 704 DD (completed) - documented separately. Both Nothnagle drilling rigs were radiologically scanned out and released offsite. 706 DD and 707 DD will be revisited 07/08/11. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 06/14/2011 at 701 DD, finished 07/06/11. Well development began 07/06/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End - open		
LABOR HOURS Start 0700 - End 1530 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>070811</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/08/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 70° F. PM; Mostly sunny, becoming humid, 80° F, calm.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Continued well development; developed 707 DD (drying out), 706 DD (drying out), 711 D and DD (both drying out) and 705 D and DD (both drying out). These locations will be revisited 07/11/11. Trent Richards continues scanning bedrock cores begun 07/07/11 at the decon pad. Richards/Cronin/Legeza attended Shaw/USACE conference call in AM. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Well development began 07/06/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End - open		
LABOR HOURS Start 0700 - End 1530 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/11/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy 70° F. PM; Mostly sunny, humid, 85° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Continued well development; completed 701 DD and 703 DD – documented separately. Developed 702 DD (drying out), 706 DD (drying out), 711 D and DD (both drying out) and 705 D and DD (both drying out). Well 707 DD hadn't recharged much over the weekend and had little groundwater in it. These locations will be revisited 07/12/11. Trent Richards continues scanning bedrock cores begun 07/07/11 at the decon pad. Nothnagle personnel will not be onsite 7/12/11 due to a family funeral – Shaw personnel will continue development with Nothnagle's Whale pump. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Well development began 07/06/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End - open		
LABOR HOURS Start 0700 - End 1530 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

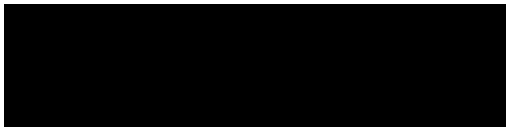
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071211</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/12/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy 75° F. PM; Sunny, humid, 85° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Continued well development; completed 706 DD – documented separately. Developed 702 DD (drying out), 711 D and DD (both drying out) and 705 D and DD (both drying out). Well 707 DD hadn't recharged much overnight and had little groundwater (<0.4 gal.) in it. These locations will be revisited 07/13/11. Trent Richards completed scanning bedrock cores, begun 07/07/11 and performed a release survey on the rented generator. Generator was returned to Hertz this am. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Well development began 07/06/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End - open		
LABOR HOURS Start 0700 - End 1530 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071311</u>
		Page 1 of <u>1</u>
DAILY LOG OF CONSTRUCTION		Date 07/13/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy 70° F. PM; Mostly sunny, 80° F, breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Continued well development. Developed 702 DD (drying out), 711 D and DD (both drying out) and 705 D and DD (both drying out). Well 707 DD hadn't recharged much overnight and groundwater elevation changed only ~0.12 foot. These locations will be revisited 07/14/11. Trent Richards completed release surveys on two high-vol air samplers which will be returned to Shaw's Findlay, Ohio shop. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies. Began bi-monthly Project Safety Inspection Report. Additional supplies ordered for office trailer.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Well development began 07/06/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End - open		
LABOR HOURS Start 0700 - End 1430 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

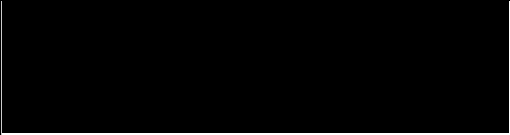
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071411</u>
		Page 1 of <u>1</u>
DAILY LOG OF CONSTRUCTION		Date 07/14/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 70° F. PM; Sunny, 85° F, somewhat breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Continued well development. Developed 702 DD (drying out), 711 D and DD (both drying out) and 705 D and DD (both drying out). Well 707 DD hadn't recharged much overnight and groundwater elevation changed only ~0.04 foot from July 13, 2011am. These locations will be revisited 07/15/11. Attempted to locate 712 and 713 well locations on NYS Erie Canal parcel – looks improbable to clear/locate suitable drilling locations due to surface conditions (boulders, excavated rock piles and berms, steep slopes, narrow property dimensions). 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies. Completed bi-monthly Project Safety Inspection Report. Fire extinguisher purchased and installed in office trailer.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Well development began 07/06/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End - open		
LABOR HOURS Start 0700 - End 1530 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

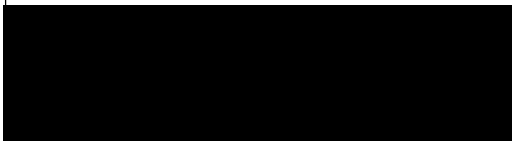
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071511</u>
		Page 1 of <u>1</u>
DAILY LOG OF CONSTRUCTION		Date 07/15/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.		Weather: AM; Sunny, breezy 60° F. PM; Sunny, 85° F, somewhat breezy.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Finished well development. Developed 702 DD (drying out), 711 D and DD (both drying out) and 705 D and DD (both drying out). Development task completed – documented separately. Well 707 DD hadn't recharged much overnight and groundwater elevation changed only ~0.11 foot from July 14, 2011am. Nothnagle's 250-gallon poly tank was cleaned out and radiologically scanned for release. Nothnagle transports 16 unused 55-gal. drums offsite (8 remain at decon pad for future use). 58 drums (all labeled) of IDW are at decon pad area. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Well development began 07/06/11 and was completed 07/15/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 06/13/11 End – 07/15/11 (Nothnagle Drilling to remove late July – early August for drilling of 712 and 713 locations [2 wells each]).		
LABOR HOURS Start 0700 - End 1415 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage.		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

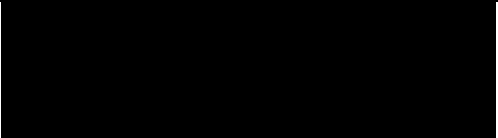
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071811</u>
		Page 1 of <u>1</u>
DAILY LOG OF CONSTRUCTION		Date 07/18/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.		Weather: AM; Cloudy, breezy 60° F., rain showers. PM; Mostly sunny, 87° F, humid, somewhat breezy.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Searched for City of Lockport Sanitary Sewer manholes to be sampled; unable to locate along Ohio Street and inside the eastern boundary of the Excised Area. Called Al Campisano (City of Lockport Water & Sewer) to assist in locating these structures. Staked 712 and 713 locations as per Karl VanKeuren's location map. UFPO request will be made when locations are approved by the USACE. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Located 713 D and DD but may need to move staked 712 locations northward to be on AllVac property.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date		Superintendent's Initials and Date
		


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>071911</u>
		Page 1 of <u>1</u>
DAILY LOG OF CONSTRUCTION		Date 07/19/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy 70° F., PM; Mostly sunny, 87° F, humid, somewhat breezy.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Met with Rolando Moreno, CE (City of Lockport Eng. Dept.) to determine locations of Sewer Sampling points. City personnel haven't been able to locate sample Location #2 in years (paved over?). Used metal detector to locate possible location in middle of Ohio St. Direction will be needed on how to proceed with this sample location. Restaked 712 and 713 locations to avoid property lines as per latest GPS location map received by Trent Richards. UFPO request will be made when locations are approved by the USACE. Trent Richards traveled to Nothnagle Drilling to perform additional scans requested by Jim Langsted on the 250-gallon poly tank that was cleaned out and radiologically scanned for release on July 15, 2011. Documented separately. Contacted TestAmerica to process sample bottle order and begin receiving bottles/coolers at the site. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Relocated 712 D and DD and 713 D and DD locations. Will confirm that staked locations fall on ATI/Allvac property. UFPO will be contacted to clear utilities when USACE approval is given.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

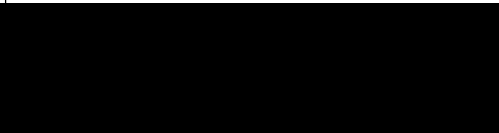
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072011</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Date 07/20/2011
Contractor: Shaw Environmental & Infrastructure, Inc.		Contract W912QR-08-D-0013 DO DN03
		Weather: AM; Sunny, breezy, humid 75° F., PM; Sunny, 88° F, breezy, humid.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> • Reshot 708 DD, 712 and 713 proposed locations as latest GPS location map received by Trent Richards appears to be skewed. UFPO request will be made when locations are approved by the USACE. • Contacted TestAmerica St. Louis to process sample bottle order and begin receiving bottles/coolers at the site. • Investigated submersible pump and Teflon-lined tubing costs for upcoming groundwater sampling. Peristaltic pump received at Cooper Avenue office 07/19/11 and is onsite. • Awaiting clarification on Sewer Sampling locations. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> • No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Shawn Andrews) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Reshot 712 D and DD and 713 D and DD locations with GPS handheld and sent coordinates to Cincinnati office for plotting in order to confirm that staked locations fall on AT/Allvac property. UFPO will be contacted to clear utilities when USACE approval is given.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/21/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy, humid 81° F., PM; Sunny, breezy, humid, 93° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> • UFPO request called in for proposed 712D, DD and 713D, DD locations. Estimated start date is 07/27/11 (3 business days notice). UFPO Ticket expires 08/10/11. • Conducted background radiation surveys in an upwind area covered by soil and vegetation and an area covered by crushed rock/gravel. Performed survey of adjoining former guard house for possible sample cooler storage area. • Investigated submersible pump and Teflon-lined tubing costs for upcoming groundwater sampling. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> • No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Performed background radiation area surveys which was covered by soil and vegetation grasses and an area covered by crushed rock/gravel. Surveyed possible storage area inside former guard house adjacent to office trailer.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072211</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Date 07/22/2011
Contractor: Shaw Environmental & Infrastructure, Inc.		Contract W912QR-08-D-0013 DO DN03
		Weather: AM; Sunny, calm, humid 75° F., PM; Sunny, calm, humid, 93° F.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Richards/Cronin attended Shaw/USACE Guterl PDT Bi-weekly Status Call in AM. Investigated Sanitary Sewer line (15") that crosses undeveloped Newfane Lumber parcel for upcoming sampling. Spoke with Paul Henning (?) – owner, who located southwest manhole. Northeast sewer manhole is under Newfane Lumber parking lot pavement. City of Lockport Engineering Department (Rolando Moreno) was contacted to get sewer construction specifics; awaiting callback. Spoke with Norm Baker regarding water lines. Called Nothnagle Drilling regarding remove to site for 712D, DD and 713D drilling, awaiting callback with date. First shipment of sample bottles (6 boxes) and coolers (23) received from TestAmerica, more expected next week. All brought on site. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Begin storing sample supplies onsite.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

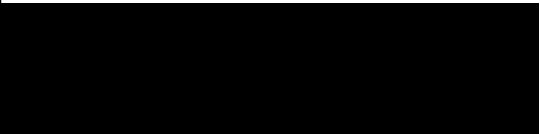
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072511</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/25/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, calm, occasional rain showers and thunderstorms, humid 70° F., PM; Mostly sunny, breezy, humid, 83° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> City of Lockport Engineering Department (Rolando Moreno) was contacted to coordinate sewer sampling with City personnel. Sampling scheduled for Wednesday July 27, 2011 at 1330. Four gas meter ordered from Pine Environmental. Reviewed Nothnagle Drilling invoice for tasks completed to date. Inventoried shipment of sample bottles and coolers received from TestAmerica. Determined bottle needs for sewer sampling task later this week. Ordered sixty 45 µm in-line filters for upcoming groundwater sampling task. Verified that no QC samples are required to be collected during this task. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No radiological readings detected. All instruments were sourced checked.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Begin storing sample supplies onsite.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

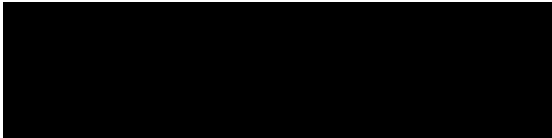
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072611</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Date 07/26/2011
Contractor: Shaw Environmental & Infrastructure, Inc.		Contract W912QR-08-D-0013 DO DN03
		Weather: AM; Mostly sunny, breezy, 70° F., PM; Sunny, breezy, 83° F.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Four gas meter received from Pine Environmental for sewer sampling. Purchased sampling equipment (extendable pole, disposable plastic cups, longer gloves). Prepared electronic copy of TestAmerica Chain-of-Custody to be used during sampling. Called TestAmerica Amherst to arrange courier service for collected samples. Worked on Master sampling list to track progress of site-wide sampling effort. Prepared sample bottles, labels and COC for groundwater and sewer sampling tasks 07/27/11. Cronin/Richards attend Guterl Team Meeting conference call. Perform well survey to locate existing wells and check on tubing in them. Unable to locate several wells. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No radiological readings detected. All instruments were sourced checked.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Begin storing sample supplies onsite.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date		Superintendent's Initials and Date
		

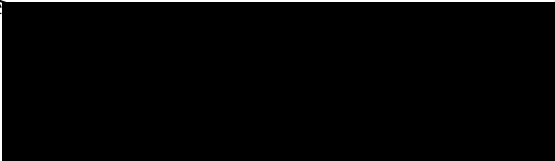
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072711</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/27/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, slightly breezy, 70° F., PM; Mostly sunny, breezy, 81° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Prepared for City of Lockport Sewer Sampling task (calibrated PID and 4-gas meter), met with City engineering personnel and collected Sewer Location #1 (Clark Rigging property) and Sewer Location #2 (Newfane Lumber property) samples. Radiologic release procedure being performed on bottles and cooler prior to pick up. Called TestAmerica Amherst to arrange courier service for collected samples. Samples to be released August 1, 2011 for transport. Picked up Grunfos submersible pump and tubing from Shaw office. Finalized sample cooler release procedure to utilize locale TestAmerica's courier service for sample shipping. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No radiological readings detected. All instruments were sourced checked.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza) onsite today.		
Safety Inspection / Safety Meetings: - Daily Tailgate/Safety Meeting/ Training Log; documented separately. Performed biweekly Project Safety Inspection Report, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Begin and finish City of Lockport Sanitary Sewer sampling. Store samples onsite to perform radiologic release prior to shipping.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – None End –		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS -None		
ACCIDENT REPORTING -None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

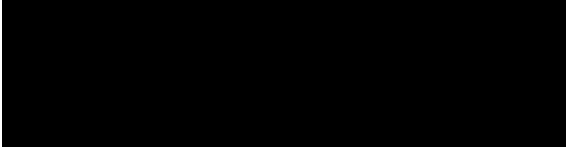
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072811</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Date 07/28/2011
Contractor: Shaw Environmental & Infrastructure, Inc.		Contract W912QR-08-D-0013 DO DN03
		Weather: AM; Cloudy, showers, calm 75° F, PM; Cloudy, 80° F, calm, humid.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Nothnagle Drilling remobes to site for 712 D, DD and 713 D well drilling. T. Richards performs rad surveys of the CME 85 drilling rig and the 712 and 713 drilling locations. Nothnagle hand clears all drilling locations. Work on setting 4" casings at all 3 locations; 4" casing set at ~7' bgl at 713 D, ~5' bgl at both 712 D and DD. Performed release survey of Sanitary Sewer sample bottles and cooler for later shipping. Purchased tools and fittings for Grunfos Redi-Flo 2 submersible pump and tubing. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Mark Legeza, Steven Curry, Lindsey Bartolomei) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 07/28/2011.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 07/28/11 End - open		
LABOR HOURS Start 0745 - End 1200 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

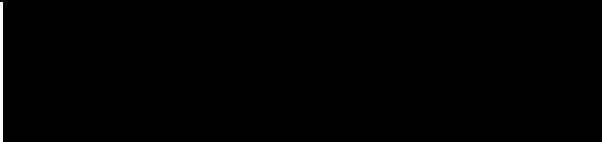
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>072911</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 07/29/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.		Weather: AM; Cloudy, rain showers – heavy at times, calm 75° F, PM; Cloudy, 82° F, calm, humid.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Nothnagle Drilling cores bedrock from ~7' to 20' bgl at 713 D and installs 2" PVC well – documented separately. Move to 712 DD and core bedrock from ~5' to 40' bgl and install 2" PVC well – documented separately. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected. Approximately 30 minutes standby time in AM due to thunderstorm in area.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 07/28/2011.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 07/28/11 End - open		
LABOR HOURS Start 0745 - End 1245 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>080111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/01/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 75° F, PM; Cloudy, 82° F, calm, humid.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> Nothnagle Drilling finishes well installation at 712 DD then cores bedrock from ~5' to 20' bgl at 712 D and installs 2" PVC well – documented separately. Well pads installed at 712 D, 712 DD and 713 D. All wells (17) have now been installed. Begin/complete development at 713 D – documented separately. Begin/complete development at 712 DD – documented separately. Sewer sample locations #1 and #2 were shipped off today to TestAmerica St. Louis via TestAmerica courier. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate, rig inspection, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Rig safety and radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 07/28/2011.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 07/28/11 End - open		
LABOR HOURS Start 0745 - End 1530 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

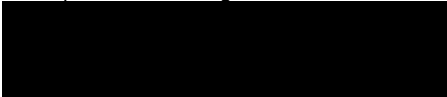
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>080211</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/02/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, calm 75° F, PM; Mostly sunny, 84° F, calm, humid.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No		
Activities In Progress: <ul style="list-style-type: none"> • Determined screened interval of 712 D was presently dry when setting up to begin development at – documented separately. • Performed Exit Survey on Nothnagle drilling rig – documented separately. Nothnagle offsite at 1030. • 61 drums of IDW at decon area, 8 empty drums available to contain sampling purge water. • Worked on groundwater sampling strategy and scheduling. 		
Were there any Delays in Work Progress today? <ul style="list-style-type: none"> • No 		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None		
ACTIVITY START/FINISH - Drilling began 07/28/2011. Finish 08/01/11. Development began 08/01/11, ended 08/02/11.		
QC REQUIREMENTS - None		
QA/QC PUNCH LIST -None		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) Start – 07/28/11 End – 08/02/11		
LABOR HOURS Start 0700 – End 1030 (drillers) - no Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid for well footage. .		
ACCIDENT REPORTING None		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>080311</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/03/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, rain showers, calm 73° F, humid. PM; Cloudy, 84° F, slightly breezy, late PM rain showers, humid.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> • Worked on groundwater sampling strategy and scheduling. • Completed a round of groundwater level readings (53 wells) across the site – documented separately. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater level measurement task began and finished 08/03/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications stated above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>080511</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/05/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly sunny, calm 68° F. PM; Partly sunny, 85° F, slightly breezy, humid.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-603 D, MW-22 (first MS/MSD collected here), and MW-18 – documented separately. Samples handed off to TestAmerica Buffalo courier in PM for Saturday delivery. Confirmed receipt of groundwater samples collected 08/04/11 at TestAmerica St. Louis. Assemble sampling supplies for scheduled Erie Canal Seep Sampling task and groundwater sampling Monday 08/08/11. Cronin/Richards attended USACE PDT conference call. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Shawn Andrews, Lindsey Bartolomei) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

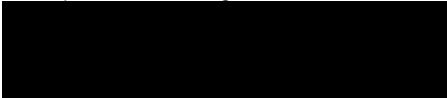
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>080811</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/08/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, calm 72° F, humid. PM; <i>Partly sunny, 85° F, slightly breezy, humid.</i>	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-08, MW-09 and MW-11 – documented separately. Samples handed off to TestAmerica Buffalo courier in PM for Tuesday delivery to TestAmerica St. Louis.. Two Seep samples (Seep 01 & Seep 02) collected along the bedrock faces of the Erie Canal by USACE and Shaw (Vikas Tandon) personnel. These samples shipped along with today's groundwater samples. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Jeff King, Bill Frederick, Dennis Reimer, and Lindsey Bartolomei) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date

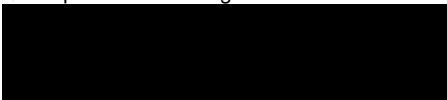
CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>080911</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/09/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, rain showers throughout AM, calm 70° F, humid. PM; Cloudy, scattered rain showers, calm 75° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-705 D, MW-705 DD and MW-711 D – documented separately. Samples handed off to TestAmerica Buffalo courier in PM for Wednesday delivery to TestAmerica St. Louis. Had difficulty purging groundwater with larger diameter silicone tubing, ordered replacement tubing from Shaw Electronics. Vikas Tandon onsite to inspect rock cores. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>081011</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/10/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly cloudy becoming mostly sunny, breezy 72° F. PM; Mostly sunny, breezy, 77° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-604 D, MW-605 D, MW-704 DD MW-709 DD, and MW-26 – documented separately. Collected duplicates at MW-605 D and MW-704 DD. Samples handed off to TestAmerica Buffalo courier in PM for Thursday delivery to TestAmerica St. Louis. Collected NYSDEC split samples at MW-604 D, MW-605 D, MW-704 DD and MW-26 – USACE to handle shipment to NYSDEC. Mc Intosh Surveyors onsite to survey in new well locations and elevations. Provided Rad support for their activities. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today. No NYSDEC personnel onsite today for sampling.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -Mc Intosh Surveyors (0815 – 1535). No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number <u>081111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/11/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly sunny, breezy 72° F. PM; Mostly sunny, breezy, 76° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-602 D, MW-702 DD, MW-708 DD, and MW-13D – documented separately. Collected duplicate sample at MW-708 DD. Samples handed off to TestAmerica Buffalo courier in PM for Friday delivery to TestAmerica St. Louis. Collected 3 remaining NYSDEC split samples at MW-602 D, MW-708 DD and MW-13D – handed seven 1-gallon plastic jugs to NYSDEC personnel (John Mitchell) – documented separately. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today. NYSDEC personnel (John Mitchell) onsite today for sampling.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011. Well surveying completed 08/10/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>081211</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/12/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly sunny, calm, 72° F. PM; Mostly sunny becoming cloudy, breezy, humid, occasional showers, 76° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-25, MW-06, MW-07, and MW-10 – documented separately. Collected fourth duplicate sample at MW-25. Samples handed off to TestAmerica Buffalo courier in PM for Saturday delivery to TestAmerica St. Louis. 		
Were there any Delays in Work Progress today? No.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE personnel (Shawn Andrews) onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST -None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) -None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING -None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>081511</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/15/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.		Weather: AM; Cloudy, breezy, 72° F. PM; Mostly cloudy becoming partly sunny, breezy, humid, 76° F.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-706 DD, MW-710 D, and MW-711 DD – documented separately. Could not fill full bottle set at MW-711 DD due to slow recharge at depth. Will continue to collect groundwater at that location tomorrow. Samples handed off to TestAmerica Buffalo courier in PM for Tuesday delivery to TestAmerica St. Louis. Set up Grunfos Redi-Flo 2 submersible pump at MW-710 DD but keep getting 'ground fault' message at controller unit. Consult with Pine Environmental – likely an electrical short in the pump cable. Replacement pump unit being delivered 08/16 am to the Lockport Comfort Inn. 		
Were there any Delays in Work Progress today? -Yes, issues with the Grunfos submersible pump.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>081611</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/16/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Clear, slightly breezy, 68° F. PM; Sunny, slightly breezy, 83° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Collected samples at MW-606 D, MW-14, MW606 DR, MW-15 and MW-17 – documented separately. Completed sampling at MW-711 DD using disposable bailer to collect remaining unfiltered and filtered metal samples. Samples handed off to TestAmerica Buffalo courier in PM for Wednesday delivery to TestAmerica St. Louis. Packaged geotechnical soil samples collected in acetate tubes during earlier drilling operations. Samples handed off to TestAmerica Buffalo courier in PM for shipment to Shaw Knoxville, TN office – documented separately. 		
Were there any Delays in Work Progress today? - None..		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>081711</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/17/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Clear, slightly breezy, 69° F. PM; Sunny, slightly breezy, 84° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued groundwater sampling task. Attempted to use replacement Grunfos pump but had problem with Hertz generator's GFCI tripping repeatedly. Called Pine Environmental (Mattydale, NY and New Jersey offices) to discuss problem. They suggest using a different generator as voltage range produced might be too much for controller. Drive to Hertz to try another generator with pump but it too trips GFCI. Consult with Karl V. Make arrangements with Pine to meet in Rochester, NY area to get Honda generator from them and to test pump(s). Drive to and from Victor, NY to get a new controller and Honda EU 2000i generator. Purged MW-707 DD using disposable bailer to collect ~ 6' of groundwater. Well dried out. Will check Thursday to see if any groundwater can be sampled. No samples collected today so no TestAmerica Buffalo courier needed. Cut/cleared vegetation to create a path to MW-600 cluster along northern site boundary. 		
Were there any Delays in Work Progress today? - Grunfos pump/controller issues, replacement.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Groundwater sampling task began 08/04/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS - No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>082611</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/26/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly cloudy, calm, 67° F. PM; Partly sunny, breezy, 78° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued hydraulic conductivity testing at MW-710 D (Solid PVC slug; falling and rising head tests) along with MW-710 DD offset testing, and at MW-709 DD (Pneumatic slug assembly; rising test) along with MW-604 D offset testing. Set up to perform testing, at MW-706 DD (Pneumatic slug assembly) along with MW-19 offset testing, but found we could not build up pressure in MW-706 DD. Found sand from the annular space between 4" protective casing and 2" PVC riser pipe was being blown out the casing's weep hole, suggesting either a split in the riser pipe or a loose joint. Riser connections appear to be tight. A Solid PVC slug test will be run on this well next Monday. Received groundwater sampling filters from Pine Environmental for future sampling events. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance, no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Hydraulic Conductivity testing begun 08/24/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>082911</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/29/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly sunny, calm, 60° F. PM; Mostly sunny, breezy, 79° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued hydraulic conductivity testing at MW-706 DD (Solid PVC slug; falling and rising head tests) along with MW-19 offset testing, at MW-711 DD and MW-711D (Pneumatic slug assembly; rising head tests) along with offset testing, and at MW-705 D and MW-705 DD (Pneumatic slug assembly; rising head tests) along with offset testing. Testing at MW-701 DD, MW-702 DD, MW-703 DD and MW-704 DD remain to be performed. Took IDW drum inventory. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - No radiological readings taken; just source checks performed.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - No deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Hydraulic Conductivity testing begun 08/24/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>083011</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/30/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy, 66° F. PM; Mostly sunny, breezy, 78° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued hydraulic conductivity testing at MW-703 DD (Pneumatic slug assembly; rising head tests) along with MW-607 D offset testing, at MW-701 DD (Pneumatic slug assembly; rising head tests), at MW-702 DD along with MW-602 D offset testing, and at MW-704 DD (Pneumatic slug assembly; rising head tests) along with MW - 605 D offset testing. Hydraulic conductivity testing is completed. Ordered non-aqueous IDW bottle set from TestAmerica Buffalo, will pick up in late PM. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - No radiological readings taken; just source checks performed.		
Verbal Instructions given by Government: - None – USACE (Mark Legeza) personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - No deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Hydraulic Conductivity testing begun 08/24/2011, finished 08/30/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>083111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/31/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy, 65° F. PM; Mostly sunny, breezy, 82° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Collected aqueous and non-aqueous IDW samples from drummed waste for disposal analysis. Collected final groundwater samples (filtered Total Uranium, filtered and unfiltered TAL metals) from MW-707 DD. Samples handed off to TestAmerica Buffalo courier in late PM for Thursday delivery to TestAmerica St. Louis. Sent empty coolers and unused bottles back to TestAmerica. Performed out-of-scope hydraulic conductivity testing at MW-705 D and MW-705 DD (solid PVC slug testing), only performed falling head tests due to the extremely slow recharge rate observed at both wells. Test ended at MW-705 DD due to Troll running out of memory. Plan to perform falling head tests at MW-702 DD and MW -711 DD as time allows. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – USACE (Mark Legeza) personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance; no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Hydraulic Conductivity testing begun 08/24/2011, finished 08/30/2011. Out-of-scope K testing started 08/31/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>090111</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 09/01/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly cloudy becoming mostly sunny, breezy, 68° F. PM; Mostly sunny, breezy, humid, 82° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Performed out-of-scope hydraulic conductivity testing at MW-702 DD and MW-711 DD (solid PVC slug testing), only performed falling head tests due to the extremely slow recharge rate observed at both wells. Began emptying office trailer and moving remaining materials and supplies to adjacent old Guard House for future site activities. Drive material to Tonawanda office and return to site with remaining tyvek to store onsite. Performed radiological release surveys on peristaltic pump, PID, and hydraulic conductivity equipment for return to Electronics Shop. Filled out dispatch forms and returned equipment to Findlay, Ohio office via UPS. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately. Completed Project Safety Inspection Report, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance; no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Hydraulic Conductivity testing begun 08/24/2011, finished 08/30/2011. Out-of-scope K testing begun 08/31/2011, finished 09/01/11.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 	Superintendent's Initials and Date	


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>090211</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 09/02/2011
PROJECT: Data Gap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly sunny, breezy, humid, 68° F. PM; Mostly sunny, breezy, humid, 82° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> • Cronin/Richards attend bi-weekly PDT telecon. • Finished emptying office trailer and moving remaining materials and supplies to adjacent old Guard House for future site activities. Ferguson Electric onsite at 0830 to disconnect electrical service; ask him to wait ~1/2 hour so Trent Richards can finish counting release smears. Drive material to Tonawanda office and return to site after returning pickup truck to Hertz. • Performed radiological release surveys on rental truck and office trailer (interior and exterior), and equipment for return to Electronics Shop. Filled out dispatch forms and returned equipment to Findlay, Ohio office via UPS. • Site keys returned to USACE personnel (M. Legeza) at guard house. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - No elevated radiological readings detected.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - Radiological clearance; no deficiencies.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Completed demobe activities 08/31/2011, finished 09/02/2011.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS Equipment hours included in bid.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_013012_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 01/30/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly Cloudy, windy, light snow, 28° F. PM; Mostly sunny, windy, 29° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> • Cronin/Smith onsite to download data from Level Trolls and Troll 9500 Water Quality Instruments installed in 10 wells November 2, 2011. Downloaded water quality parameters and level data using Win-Situ 4 & 5 programs respectively onto Cronin's laptop. • Began 2012 quarterly groundwater sampling task; purged and sampled MW-708DD, MW-710D, MW-710DD, and MW-713D for Total U and Isotopic U (Total and Filtered). 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Downloaded collected data from Level Trolls and Troll 9500s. Began 2012 1 st Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_013112_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 01/31/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.		Weather: AM; Sunny, windy, 43° F. PM; Mostly sunny, windy, 47° F.
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> • Cronin/Smith calibrate Troll 9500 Water Quality Instruments (MW-708DD, MW-710D, MW-710DD, and MW-713D) and reinstall into monitoring wells. • Cronin/Smith onsite to download data from remaining six Level Trolls and Troll 9500 Water Quality Instruments. Downloaded water quality parameters and level data using Win-Situ 4 & 5 programs respectively onto Cronin's laptop. Calibrate the Troll 9500s. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Downloaded collected data from Level Trolls and Troll 9500s. Continue calibration of Trolls 9500s.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_020112_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 02/01/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, windy, 40° F. PM; Cloudy, windy, 40° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Continued 2012 1st Quarter Groundwater Sampling task; purged and sampled MW-26, MW-604D, MW-605D (Duplicate sample A04BMW9006 collected at this well), MW-704DD (MS/MSD collected at this well), MW-707DD, and MW-709DD for Total U and Isotopic U (Total and Filtered). 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Completed 2012 1 st Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_020212_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 02/02/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, light snow, 30° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Reinstalled recalibrated Troll 9500s into MW-26, MW-604D, MW-605D, MW-704DD, MW-707DD, and MW-709DD. Return to office to decon and ship back equipment to Shaw Findlay office and Pine Environmental. Download photos. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - One drum of purged groundwater generated. Drum is staged outside old guard station building and has been labeled.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Completed 2012 1 st Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 	Superintendent's Initials and Date	


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_050312_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 05/03/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: <i>AM; Mostly Clear, windy, 50° F. PM; Mostly sunny, windy, 75° F.</i>	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Began 2012 second quarterly groundwater sampling task; purged and sampled MW-605D (duplicate sample DUP-01 collected at this well), MW-704DD, MW-708DD, MW-710D, MW-710DD, and MW-713D for Total U and Isotopic U (Total and Filtered). 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – USACE personnel (Sheila Hint & Mark Legeza) visit site today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Began 2012 - 2nd Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 	Superintendent's Initials and Date	


CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_050412_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 05/04/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Cloudy, windy, 61° F. PM; partly sunny, windy, 72° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Cronin/Smith continue 2012 - 2nd Quarter Groundwater Sampling task; purged and sampled MW-26, MW-604D (MS/MSD collected at this well), MW-707DD, and MW-709DD for Total U and Isotopic U (Total and Filtered). 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Completed 2012 - 2 nd Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_080312_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/03/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mostly Sunny, 75° F. PM; Mostly Sunny, humid, 95° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Began 2012 third quarterly groundwater sampling task; downloaded data from Troll 9500s and Level Trolls at MW-708DD, MW-710D, MW-710DD, and MW-713D and purged and sampled these wells for Total U and Isotopic U (Total and Filtered). Reinstalled refurbished Troll 9500 in MW-709 DD well. Set test to begin at 1800 this evening. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - USACE personnel (Sheila Hint & another) visit site today to test Whale Pump and peristaltic pump at MW-710 DD.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Began 2012 – 3rd Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_080612_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 08/06/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, 75° F. PM; Sunny, windy, 82° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Cronin/Smith continue 2012 – 3rd Quarter Groundwater Sampling task; purged and sampled MW-26, MW-604D (MS/MSD collected at this well), MW-605D (Duplicate 02 collected at this well), MW-704DD, MW-707DD, and MW-709DD for Total U and Isotopic U (Total and Filtered). At K. VanKueren's request resampled MW-710D and MW-710DD using small diameter Teflon tubing left by USACE at the site. Completed work too late for TestAmerica courier pickup; samples to be picked up on 08/07/12 am. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – No USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Completed 2012 – 3 rd Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_102212_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 10/22/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Sunny, breezy, 49° F. PM; Sunny, 60° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> Began 2012 fourth quarterly groundwater sampling task; downloaded data from Troll 9500s and Level Trolls at MW-708DD, MW-710D, MW-710DD, and MW-704DD and purged and sampled these wells for Total U and Isotopic U (Total and Filtered). Collected VOC samples at MW-708DD and MW-710D for the USACE. At MW-708DD it was found that water had entered the Troll 9500 battery compartment again (unit was refurbished and reinstalled on 09/05/12; test suspended on 10/13/12). Dried out unit and replaced batteries for the first time since 09/05/12, downloaded data and reset test to begin at 1800. Reinstalled refurbished Troll 9500s in MW-710D and MW-704DD and set up tests to begin later in the day. At MW-710 DD location the Troll 9500 was accidentally dropped down the 2" well after setting up the test. It was determined that the knurled locking sleeve was not locked down and when the Troll was picked up to be put in the well, it slipped from the joined electrical connectors. Cronin/Smith spent 2 hours attempting to fish the Troll out of the well, all efforts were unsuccessful. Called In-Situ but they had no further advice; left message at Nature's Way for advice. 		
Were there any Delays in Work Progress today? - Two hours (1700 – 1900) spent trying to retrieve Troll 9500 from MW-710DD.		
General Comments: - None.		
Verbal Instructions given by Government: - USACE personnel (Peter Lorey & Mark Legeza) visit site today to observe sampling/Troll 9500 & Level Troll download procedures.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Began 2012 – 4th Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_102312_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 10/23/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Rain, 54° F. PM; Rain showers, misty, 56° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> • Cronin/Smith continue 2012 – 4th Quarter Groundwater Sampling task; purged and sampled MW-604D (MS/MSD and Duplicate 03 collected at this well), MW-707DD, MW-709DD, and MW-713D for Total U and Isotopic U (Total and Filtered). Collected VOCs at these wells for the USACE. Samples to be transported by TestAmerica courier tomorrow. Pulled remaining rental Troll 9500 and downloaded collected data except for unit in MW-605D which is stuck in well (probably due to wire hangers attached to the cable sections). Swapped out RDO caps from rental units to permanent units (several more will be required), some rental units required new batteries to be installed prior to download. • Will attempt to free Troll 9500 from MW-710DD tomorrow. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – Six USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Continued 2012 – 4 th Quarter Groundwater Sampling Task. MW-26 and MW-605D need to be purged and sampled.		
QC REQUIREMENTS - None.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

CONTRACTORS QUALITY CONTROL REPORT (CQCR)		Report Number <u>_102412_</u>
DAILY LOG OF CONSTRUCTION		Page 1 of <u>1</u>
		Date 10/24/2012
PROJECT: Datagap Investigation, Former Guterl Steel FUSRAP Site		Contract W912QR-08-D-0013 DO DN03
Contractor: Shaw Environmental & Infrastructure, Inc.	Weather: AM; Mist, 54° F. PM; Cloudy, 60° F.	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim? - No.		
Activities In Progress: <ul style="list-style-type: none"> • Cronin/Smith finish 2012 – 4th Quarter Groundwater Sampling task; purged and sampled MW-605D (after freeing rental Troll 9500 unit from well), and MW-26 for Total U and Isotopic U (Total and Filtered). Collected VOCs at these wells for the USACE. Samples transported by TestAmerica courier in early afternoon. • Successfully freed Troll 9500 from MW-710DD in late afternoon. Unit transported to Shaw office for evaluation. 		
Were there any Delays in Work Progress today? - None.		
General Comments: - None.		
Verbal Instructions given by Government: - None – Six USACE personnel onsite today.		
Safety Inspection / Safety Meetings: - Tailgate meeting, documented separately.		
Safety: (Inspections Made, Deficiencies noted): - None.		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice) - None.		
ACTIVITY START/FINISH - Completed 2012 – 4 th Quarter Groundwater Sampling Task.		
QC REQUIREMENTS - Mark Hardner, PG, from Shaw Monroeville, PA office, onsite to conduct QC audit of sampling task.		
QA/QC PUNCH LIST - None.		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site) - None.		
LABOR HOURS -No Shaw hourly.		
EQUIPMENT HOURS - None.		
ACCIDENT REPORTING - None.		
Contractor Certification: On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date 		Superintendent's Initials and Date

6/15/11
C

0650 ONSITE

0700 MORNING MTR, FILL EYE WASH STATION @ PICKUP TRUCK ①
GO TO 706 DD DRIVE 4' LINDS TO DETERMINE TOR (~6.5') TRY AND COLLECT
2" ACETATE GELTECH SAMPLE - HAVE COARSE GRAVEL IN SHOT w/ ONLY ~6" OF
SOIL MOVE RIG ~1.5' TRY AGAIN. RECOVER ONLY ~0.9' 3RD USAGE PERSON
ONSITE. PERFORM NOISE SURVEY WHILE TURNING HSAS < 90 dB. GARY G
ONSITE. PLACE ~10.5' 4" STEEL CASING INSIDE HSAS. BEGIN CEMENTING CASING @

1005, FINISH @ 1010. PACK UP AND DECON HSAS @ PAD. MOVE RIG TO 709 DA (FRONT LANE)
LEVEL D.

BRING GRAB TO

BEGIN 4' MACRO CORE @ 709 DD @ 1110 - REFUSAL ON ROCK @ ~2.4'
BGL, RUN 3" SSP FROM 0-2' REC ~0.7' DUE TO COARSE GRAVEL IN SHOT
NOISE @ < 93 dB ~6' FROM RIG WHILE GRINDING HSAS ON BED ROCK.

KE OFFSITE FOR GENERATOR @ 1210 BACK ONSITE @ 1325. RIG FILLING
UP H₂O @ HYDRANT, PREPARING TO MOVE TO 701 DD TO BEGIN CORING. SET
UP AND ROLLER BIT GRAB @ BOTTOM OF CASING (~6' BGL). START
CORING ~1400 END CORING @ ~1620 @ ~30' BGL @ 701 DD.

6/16

BEGIN CORING @ 701 DD @ 0800 AFTER TAILGATE MTR / SET UP
CLEAR UTILITIES @ 702 DD. UPON BED ROCK CORE INSPECTION
GARY G SAYS TO RUN 10' SCREEN FROM ~30'-40' TO CAPTURE
FRACTURES ABOVE MASSIVE BEDDING OBSERVED BELOW ~37'

MARK (USACE) @ 701 DD @ 1115. SHOW KEN WHERE 711 DD LOCATION
IS TO BEGIN HAND CLEARING. FINISH CORING @ ~1400. GARY G.

OFFSITE TO MONROEVILLE. CHECK SOP RE USING BENTONITE TO BACKFILL
PAD SAMPLING BOREHOLE - GARY G SUGGESTS SURVEYING BENTONITE TO
GET READINGS FOR INFORMATION. TD @ 79.8' BGL MEASURED V @
21.52' BGL - CAN HEAR WATER FALLING IN BOREHOLE. INTRODUCE BENT.

(1111 EARS)

(10.5" 2" PM) 40' ON SAND FROM 28'-40', BENTONITE FROM ~26'-28'

AM SUNNY
PA CLOUDY
SHOWERS AFTER
1500

6/17
AM
M. CLOUDY
BREEZY

(2)

HOLD TAILGATE MTG @ 0700. WILL BEGIN BEDROCK CORING @ 709 DD. TOP OF CEMENT IS @ ~ 3' BGL BOTTOM OF CASING IS @ ~ 4' BGL WILL ROLL BIT TO ~ 5' BGL AND START 5' FOOT CORING RUNS THERE START @ 0850. LABEL DRUM OF SOIL CUTTINGS @ 709 DD. END @ 0910 - WATER COMING UP OUTSIDE OF CASING DUE TO FRACTURED BEDROCK. GARY SAYS HE'LL GROUT COREHOLE TO ~ 10' AND LET SIT OVER WEEKEND. WILL RUN CASINGS @ OTHER LOCATIONS (704 DD, 707 DD, 702 DD). TAKE RUN TO 705 D, DD TO BEGIN UTILITY CLEARING. GROUT ANNULUS @ 709 DD BACK TO SURFACE, MOVE OFF LOCATION @ 1000. MOVE TO 707 DD TO SOIL SAMPLE + COLLECT GEOTECH SAMPLE. DRIVE MACRO CORE @ 1035. REFUSAL @ ~ 2.5' BGL. RUN 3" SSP w/ LINK FROM ~ 0.5' - 2.5' GET ~ 0.8' FOOT RECOVERY IN ACETATE LINER. REG BURN WOULD LIKE 704 DD + 707 DD TO BE FLUSH MOUNTED PCS. FINISH GROUTING CASING (5' 3") @ 1130. DECON MOVE TO 704 DD AND DRIVE MACRO CORE TO ~ 3.2' BGL @ 1230 RECOVER ~ 1.1'. DRIVE 3" SSP FROM GL TO 2' (RECOVER ~ 0.8' OF FILL) RUN 6 1/4" HSAs. REFUSAL @ ~ 4' BGL. CASING LENGTH IS ~ 5.3' FINISH GROUTING @ 1300.

-3.2'
6/18
0.75 mi

6/20
AM
SUNNY 70°

ON SITE @ 0645, TAILGATE SAFETY MTG @ 0700. MOVE BACK TO 709 DD AND DRILL OUT GROUT FROM 4" CASING BEGINNING 0800. TR SETS UP AIR SAMPLING PUMPS. BEGIN BEDROCK CORING @ 0822 KEN HAND CLEARING LOCATIONS @ 710 D, DD. @ 1125 TR NOTES THAT FLUSH MTD PROTECTIVE CASING @ MW-604 D APPEARS WET. NW COVER WELL - GRIPPER CAP OFF 2" PVC w/ WATER INSIDE PC. @ 1145 @ WELL ~ 5.8' BTOC TO ~ 18.10' BTOC - ASSUME COMMUNICATION w/ CORING ACTIVITIES. CORE DOWN TO ~ 80' @ 1505. BEGIN FILLING w/ BENTONITE CHIPS; TAKE UP TO ~ 40' BGL AND LET HYDRATE OVER NIGHT. TR + KC GO OVER TO LOCATE 708 DD - ACROSS OH/ST + TO SOUTH OF MAPPED LOCATION AS PER KVK. LOOKS AS IF 710 D, DD WHERE STAKED IS WHERE 708 DD WOULD FALL - CALL KVK - WILL NEED TO REVISIT. DRIVE TO OFFICE FOR RAIN BAGS UPS @ AIRPORT TOM B'S BOX SENT.

710
711
705
708 D, DD
CACHED IN
FOR UPFO
THURSDAY
START

6/2

AM
P. cloudy,
70PM
M. cloudy
80°
↑ humidity

ONSITE @ 0645. PREP FOR TAILGATE, HAVE CROW SIGN (3)
 FORK LIFT TRAFFIC AWARENESS, PREPARE HOT WORK PERMIT
 FOR 709 DD CASING CUTTING. KC GOES w/ ILEN TO LOCATE
 703 DD. DRILLERS CUT 4" CASING AND INSTALL 2" PVC
 WELLS AS PER INSTRUCTIONS. TAKE WATER LEVELS @ 701 DD;
 ~ 5.45' BGL (~10.35' BTUC - UNCUT 2" PVC STICKUP). GET GAS FOR
 GENERATOR AND DO EQUIPMENT INVENTORY FOR PATRICK M.
 SET UP @ 707 DD AND DRILL OUT ~ 5' GROUT (3.5' CASING)
 START BEDROCK CORING @ 0950. HAVE WATER RETURN UP
 AROUND 4" CASING TO GROUND LEVEL. ROLLER BIT TO ~ 5' THEN
 CORE 5'-10' (RUN 1). STEVE WILL GROUT BACK TO SURFACE TO
 SEAL. LOST ~ 300 GAL OF WATER DURING 5' CORE RUN. MIX
 UP GROUT AND TREMMIE INTO BOREHOLE @ 1015, FINISH @ 1040. MOVE
 TO 704 DD. MOVE 701 DD CORE BOXES TO NEAR DECON PAD.
 ARRIVE @ 704 DD @ 1120 SET UP AIR SAMPLERS, NOTHAWALE DRILLING
 OUT GROUT FROM 4" CASING. SET UP TO CORE, BEGIN CORING @ 1130.
 @ 1140 WATER COMES UP AROUND 4" CASING. FINISH RUN 1 @ 1145.
 LOSE ~ 50 GALS OF WATER. REGROUT FROM SURFACE TO ~ 10'
 MOVE RIG TO 706 DD (BOTTOM OF CASING @ ~ 8' BGL, GROUT
 TO 3' IN CASING) RUN 1 IS FROM ~ 8' - 13'. TR + KC STAKE OUT
 708 + 710 LOCATIONS (CAN'T HAND CLEAR UNTIL 6/23 AS PER KVK).
 CORE FROM ~ 8' - 38' BGL. END CORING FOR DAY @ 1555. NOTHAWALE
 OFFSITE @ 1600. DO DAILY REPORTS, DOWNLOAD + LABEL TODAY'S PIX
 TRY AND SCAN BORING LOGS TO VIKAS TANDON

GROUT @ 3'
CASING @ 8'
8'-13'
20 gals

6/22/11

AM -

CLOUDY

W/ SHOWER

6:50

RAIN @

0830

RAIN ENDS

@ 1100

PM -

FUM (W)

BREEZY (S)

BROWN

M. CLOUDY

BREEZY (N)

ONSITE @ 0650. HOLD TAILGATE MTG @ 0700. ^{706 DD} START
CORING @ 0730. SKYSCAN STORM INDICATOR SENSES SEVERE
THUNDERSTORM @ 0740; NO RANGE GIVEN, RADAR HAD SHOWN

HEAVY RAIN OVER LAKE ERIE NEAR BUFFALO @ 0720, TRAVELING
NW @ 0755 NOT FLASHING SEVERE. CALL KVK TO DISCUSS SCREEN
DEPTH; @ 40' STILL MASSIVE MW-19 (ADJACENT) TD = ~23.25' BTOL
~20' BGL (? 10'-20' SCREENED INTERVAL). CALL KVK @ 0835 -
WOULD LIKE TO ~50' TO SEE IF FRACTURES PRESENT. START RUN 9
@ 0840 - IF UNFRACTURED PLUG BACK TO ~40' AND SCREEN 30'-40'. CALL
KVK @ 0905 - ROCK STILL MASSIVE - GO W/ PLAN TO
SCREEN 30'-40'. GET CALL FROM NORM (CITY OF LOCKPORT) RE
706 + 710 LOCATIONS - CLEAR W/ THEM. SAID TO WATCH SNAKE
ALONG BYPASS. START 706 WELL INSTALL @ 0920. PLUG BACK
FROM ~41'-50' W/ BENTONITE, SAND ~28'-41', BENTONITE ~26'-28'
GROUT ~26' - INTO 4" CASING. RIG OFF SITE TO DECON PAD @ 1020
MOVE BACK TO 704 DD @ 1115. START DRILLING GROUT @ 1135, DRILL
BACK TO ~10' START CORING @ 1200, END @ 1215. MARK A ANNIES
@ 704 DD @ 1415 W/ LOCATOR FROM PREMIER (UFPO) TO ✓ OFFSITE
LOCATIONS - SHOW HIM FIG 3-1 W/ OFFSITE LOCS. HE WILL
LOCATE. FINISH BEDROCK CORING @ 704 DD @ 1425. FLUSH OUT
COREABLE AND BREAK DOWN RODS / CORE BARREL. CALL KVK RE SCREEN
INTERVAL - ? SCREEN OR SAND PACK OVER BUSTED UP ZONE @
~28.8' BGL. TALK W/ KVK + VT + SEND PHOTOS OF BUSTED UP
ZONE @ ~28. OFFSITE @ 1700.

6/23/11

AM

M. SUNNY 6:50

(RAIN OVERNIGHT)

ONSITE @ 0645, HOLD TAILGATE MTG @ 0700. WILL SAMPLE SOIL +
SET CASING @ 702 DD (BEHIND RAD ROPE). THIS AM, SET
CASINGS / SAMPLE @ 711 DD ALSO. SET UP @ 702 DD, START
SOIL SAMPLING @ 0855. DRIVE 3" SSP @ 0910 TO ~4' (2'-4')
PID CALIBRATED (100 ppmv) @ TRAILER @ 0830. HSA REFUSAL @
~4' BGL; ROLLERBIT TO ~10' BGL. DRIVE ~11' OF 4"

7/7 3AM AL PALUMBO

(5)

CASING BUT IT BEGINS TO GO IN CROOKED SO PULL OUT AND CUT
~ 6' LONG PIECE OF 8" STEEL CASING (TEMPORARY). PULL HSA
SECTION AND DROP 8" CASING INTO BOREHOLE, DROP IN BENTONITE TO
SEAL AND SAND TO LOCK IN CASING THEN DRIVE TO ~4.5' BGL.
SWITCH TO 6" TRI-CONE BIT AND ^{DRILL W/} ROLLER CONE TO ~10' BGL (1050-1100)
MIX UP 2 BAGS OF GROUT AND PUMP DOWN RODS. DROP 4" CASING INTO
6" BOREHOLE AND PULL 8" CASING. BOTTOM OF 4" CASING SET @ ~
10' BGL. MOVE OFF 702 DD @ 1140. MOVE TO 711 DD, SET UP
AND SOIL SAMPLE @ 711 DD @ 1300. 3" SSP COLLECTED ~1'-3' BGL
AFTER MACKO CORE. TRY DRIVING 8" CASING - BOUNCE OFF ROCK
CUT DOWN 8" CASING TO PLACE AND ROLLER BIT THROUGH 8" CASING
SET @ ~3' BGL, PLACE W/ BENTONITE SEAL. ROLLER BIT W/ 6" TRI-CONE
BIT. MIX GROUT UP AND LOWER 4" CASING IN 8". BOTTOM OF 4"
IS SET @ ~7' BGL. PULL 8" CASING OUT. FINISH 711 DD CASING
@ 1410. MOVE RIG TO CASE 711 DD, DRIVE 8" CASING AND
ROLLER BIT W/ 6" TRI-CONE @ 1430. PLACE 9' 4" CASING IN 8" CASING
@ 1505, GROUT AND PULL CASING. BOTH 711 D+ DD HAVE ~2'
STICK UPS.

PM.
M. SUNNY
BREEZY
80°
BECOMING
M. CLOUDY
AFTER 1430
HEAVY
RAIN @
1510

FRIDAY
6/24

AM CLOUDY
Occ. LT
SHOWERS
FALLING @ 0845

ONSITE @ 0645 TAILGATE MTG @ 0700. NUTHWAGLE SETS UP
TO DRILL OUT GROUT @ 702 DD, BEGIN @ 0825. SET UP TO
CORE @ 0840, START @ ~10' BGL. HAVE T-STORM, RAIN
DRAYS. DRILL/CORE TO ~40' BGL. INSTALL GWMW @ 1145
SCREEN 30'-40', SAND FROM 28'-40' BENTONITE 26'-28'
GROUT. DRILERS OFFSITE @ 1315

(6)

Mon
 6/27
 AM -
 SUNNY
 65°
 65°
 PM
 SUNNY
 75°

ONSITE @ 0650, HOLD TAILGATE MEET @ 0700, STEVE L
 HAS DR'S APPT THIS PM SO NEEDS TO BE OFFSITE BY 1530.
 MOVE TO 708 DD LOCATION TO INSTALL 4" CASING DRIVE ⁰⁸¹⁵ MACRO
 CORE TO ~2.5' BGL, 3" SSP (832-44-100/3") REC ~1.4' IN ACETATE
 TUBE. SET UP TO DRILL W/ 6" TRY CORE BIT AFTER DRIVING 6"
 STEEL CASING, START DRILLING @ 0840. DRILL DOWN TO ~5' BGL
 STEVE SAYS ROCK IS HARD THERE SO CASING SHOULD SEAL WELL. GROUT
 4" @ 0905. MOVE OFF TO 710 DD @ 0925. MARK (USACE)
 ONSITE @ 0930 - GIVE HIM UPDATE ON PROGRESS SO FAR;
 EXPLAIN 6" CASING RATIONALE TO HIM, PLANNED ACTIVITIES.
 MOVE TO 710 DD POUND MACROCORE @ 1000 - REC ~2.3' OF FILL &
 SOIL, HAD TO CUT SOME POPLAR BRANCHES + BUSH FROM WELL LOCATIONS
 FOR ACCESS, FOOTING. ROLLERBIT DOWN TO ~7' BGL THROUGH 6" CASING.
 MOVE RIG TO ADVANCE 710 DD CASING, DRIVE MACROCORE TO ~3'
 BGL - REFUSAL @ ~3' (RECOVER ~2.9'). NO 3" SSP COLLECTED @
 710 CLUSTER (GEO TECH FOR ONSITE LOCATIONS ONLY). START 6" ROLLER
 BIT @ 1115. WELL LOGS ARE MASTER 2342, GIVE SET TO MARK
 - MARK (USACE) OFFSITE @ 1138. 7' CASING SET @ 710 DD.
 MOVE BACK TO 708 DD. MARK BACK @ 1242 START DRILLING
 OUT GROUT @ 1240. DRILL OUT GROUT BUT WATER STILL COMING
 UP ANNULUS SO NOTHING WILL PULL OUT 4" CASING (~5.3') TO
 DRIVE 8" CASING / 6" ROLLERBIT. START ROLLERBIT @ 1320. CUT ~11'
 OF 4" CASING. END 6" ROLLERBIT @ ~10' BGL @ 1345, PUMP
 THICK GROUT, END GROUTING @ 1400. CREW WILL FINISH 702 DD
 SURFACE. BILL FREDRICK (USACE) ONSITE @ 1420, ASKS IF VIKAS
 T WAS TO BE ONSITE TODAY - GOES TO BUCON PAD W/ MARK
 TO LOOK @ ROCK CORE. JEFF HALL ONSITE.

Tues
6/28/11

AM
CLOUDY,
BREEZY
65°

ONSITE @ 0650 HOLD TAILGATE MTR @ 0700 (T-STORMS PREDICTED)
CALIBRATE PID (101 ppmv). PLAN ON ATV RIG BEING DELIVERED THIS
AM. NOTHWAITE SETS UP TO CORE @ 705 DD. START DRILLING
GROUT @ 0800. MARK LEGERA (USACE) ONSITE @ 0810, GET ONLY
PARTIAL ROCK SECTIONS (COBBLE SIZED) IN 1ST 2 RUNS, GO BACK
IN AND COMPLETE CORING RUN TO ~10'. CONTINUE CORING. ATV
RIG ONSITE @ 0840 (CME-SS LC), UNLOAD OFF TRAILER, MARK LOMANT
"DRIVES" RIG OVER TO 705 DD LOCATION. AL CAMPISANO ⁷¹⁶⁻⁹⁵⁰⁻⁵¹⁵⁸ - CITY OF
LOCKPORT WATER DEPT STOPS BY - 2 LARGE WATER MAINS ALONG
CSX RR ROW THAT RUN TOWARDS RT 93. WOULD LIKE TO STOP OUT
WHEN 712 + 713 LOCATIONS ARE STAKED AND CALLED IN FOR
UFPO. FINISH CORING @ 1130, KARL VAN KUREN REQUESTS FLUSH
MOUNTED CASING FOR 705 DD. INSTALL GWMW, MOVE RIG OFFSITE
@ 1300. TO 707 DD. START DRILLING GROUT @ 1340. START HX
CORING @ ~10' BGL @ 1407. FINISH CORING FOR THE DAY @
1340 - NOTHWAITE OFFSITE @ 1345, MARK L (USACE) OFFSITE) TO

WED
6/29/11

AM
CLOUDY
WINDY
60°

ONSITE @ 0645, HOLD TAILGATE @ 0700. MARK LEGERA (USACE)
ONSITE @ 0705. START CORING @ 707 DD @ 0720, FINISH @ ~
40' BGL @ 0800. INSTALL GWMW, FINISH @ 0900, MOVE OFF TO
DECON, GO TO 705 DD TO SET CASINGS. DRIVE 4' MACRO CORE @
705 DD @ 0955. HAVE TO REPOSITION RIG AS 8" CASING NOT DRIVING
IN STRAIGHT. CUT ANOTHER LENGTH OF 8" AND DRIVE INTO TOP OF ROCK
SET UP TO MILL W/ 6" TRICONE. AT 1100 WHILE MIXING GROUT TO

(8)

SET 4" CASING IN BOREHOLE, TR + KC WERE
 RELOCATING AIR PUMP NEAR RIG DUE TO WATER ON
 GROUND APPROXIMATING PUMP KEN A. WAS MIXING GROUT IN
 55-GAL DRUM THAT WAS BEING CIRCULATED THROUGH RIG'S
 MOYNE PUMP AND 1" HI-PRESSURE HOSE. HOSE BECAME PLUGGED
 W/ SOLIDS AND THEN DISCHARGED SPRAY (MIXED GROUT +
 POTABLE WATER) IN TRENT RICHARD'S DIRECTION WHILE HE
 WAS REPOSITIONING AIR PUMP TRENT WAS SPRAYED W/ GROUT
 MIXTURE ON HIS FRONT SIDE WHICH COVERED HIS HARD HAT,
 SAFETY GLASSES, EXPOSED FACE / SKIN, COVERED ARMS, LEGS +
 SAFETY VEST. DRILLERS USED POTABLE WATER AND PAPER TOWELS
 TO CLEAN OFF MIXTURE. WET CLOTHING BEING WORN IN
 60° F WINDY CONDITIONS. MOVE RIG OVER AND RUN 8"
 CASING, THE CORE DRILL AND SET SECOND 4" CASING. FINISH
 GROUTING @ 1200. ONLY 1 MACROCORE SAMPLE COLLECTED @ THIS
 LOCATION. NOTHWADE SWITCHES OUT DRILLING SWIVEL OF 55 TO
 ALLOW CORING. DROP OFF 707 + 708 CORE BOXES BY DECON.
 STEVE CHECKS OUT 703 DD LOCATION AND DECIDES TO MOVE CME
 85 BACK TO 710 CLUSTER. CASINGS GROUTED @ 705 LOCATIONS
 EACH ~ 7' LONG SET @ ~ 5' BGL. START ROLLER BITING GROUT
 @ 710 DD @ 1335. START ROCK CORING @ ~ 7' BGL @ 1350.
 CORE TO ~ 32' BGL, NOTHWADE / USACE OFFSITE @ 1540

PM
 R. SUNNY,
 70°
 WINDY

THURS
 6/30

AM
 SUNNY, 60°

UPPER

ONSITE @ 0655, HOLD TAILGATE MTG W/R/T GROUTING.
 MOVE BACK TO 710 DD START CORING 0725, AFTER COMPLETING
 710 DD WELL INSTALL. STEVE WILL WAIT @ LEAST 24 HOURS TO
 LET BENTONITE / GROUT SET UP BEFORE DRILLING 710 D DUE TO
 FRACTURE ZONE / POSSIBLE COMMUNICATION BTWN WELLS. PARTIALLY GROUT WELL
 AFTER PLACING SAND / BENTONITE, WILL ✓ DEPTH LATHE IN DAY, MAY
 PLACE BENTONITE ACROSS ~ 13' FLOW ZONE TO STOP. 8/11 - MOVES //

PM
SUNNY,
80°

545-06-7103

FRIDAY
7/1/11

0905, TEAR DOWN AIR PUMPS, LOAD CORE BOXES. MOVE TO 703 DD LOCATION TO SET CASING, DRIVE MARK CORE TO ~2' BGL (REFUSAL), DRIVE 3" SSP, DRIVE 8" CASING. ROLLER BIT W/ 6" @ 0955. CUT 7' SECTION OF 4" CASING, GROUT IN PLACE, MOVE OFF 703 DD @ 1035; HAVE TO FRISK MY TIRE @ RAD ROPE, STEVE PLACES BENTONITE CHIPS FROM ~19' BGL IN 710 DD AND HYDRATES @ 1130. MOVE TO 705 DD. SET UP AND START MILLING OUT GROUT @ 705 DD @ 1145. STARTING CORING @ 1200. CORE BARREL PLUGS UP @ ~5' @ 1205, BACK CORING @ 1220. @ 1230 STEVE SAYS CASING IS LEAKING SO HE'LL REGROUT THIS CASING AND START CORING ON OTHER CASING. GROUT UP WHAT IS NOW 705 D AND REPOSITION CME 55 LC OVER OTHER 4" CASING. START DRILLING OUT GROUT IN THAT CASING W/ 3 5/8" TRI CONE BIT. GIVE OK TO DRILL DOWN TO ~10' BGL @ 705 DD BEFORE CORING TO FIND MORE COMPETENT ROCK TO CORE THROUGH. STARTING TO CORE BELOW @ 1335. FINISH CORING @ ~1540 @ ~40' BGL. INSTALL 705 DD WELL AFTERWARDS. DRIPS OFFSITE @ 1645.

ONSITE @ 0655, HOLD TAILGATE MTG. MOVE BACK TO 705 TO DRILL (CORE 705 D). START DRILLING @ 0820, TRENTON PULLS CORD TO START AND CORD BREAKS SO CAN'T USE GENERATOR. TRY PATRICK M- GET VM; OUT OF OFFICE, CALL HOLTZ - WILL SEND SOMEONE OUT TO REPAIR. DRILL OUT GROUT @ 705 D, BEGIN CORING @ ~0835. GET CALL FROM JOHN MOYER RE MW-7 WELL @ CSR BAYITT. END CORING @ ~20' BGL @ 0920. INSTALL 705 D WELL. MOVE CME 55 LC TO 703 DD LOCATION FOR WEEKEND. @ 1010. MOVE CME 65 BACK ONTO 710 DD TO CORE, AND

INSTALL GWMW. DRILL OUT GROUT TO ~7' BGL, SET UP TO CORE. CALLED HERTZ RE NEW LOCATION. START CORING @ 1120. HERTZ ONSITE TO REPLACE PULL CORD ON GENERATOR @ 1130, OFFSITE @ 1140. DRILL TO 20' AND INSTALL GWMW 7100. DRILLERS OFFSITE @ 1215. DO PAPERWORK, DOWNLOAD PHOTOS

7/5/11
MONDAY
AM
MSUNNY
75°
PM
P SUNNY →
cloudy
75-80°
becoming
HUMID

ONSITE @ 0650, HOLD TAILGATE MTR; DRILL 711 DD + 703 DD TODAY IF POSSIBLE. SET UP CME 85 @ 711 DD LOCATION. START DRILLING GROUT W/ 3" TRICONE TO ~7' BGL @ 0815. MARK L WORKING ON FLUSH MTD ROADBOX @ 707 DD. MARK LAGEBA (USACE) ONSITE @ 1010, GENERATOR SHUTS DOWN @ RANDOM TIMES (? TOO HOT, OIL LEVEL + FUEL OK). MARK L OFFSITE @ 1100, BACK @ 1140, OFFSITE @ 1150. INSTALL GWMW, RUN GROUT TO BELOW 15' AND BENTONITE ACROSS ZONE @ ~10' BGL WHERE WATER WAS BEGUN TO BE LOST, WILL TOP OFF GROUT LATER IN PM. RIG OFFSITE @ 1200. MOVE EQUIPMENT TO 703 DD LOCATION THROUGH NW GATE. START DRILLING GROUT @ 1310. FINISH CORING @ ~40' BGL @ 1515. INSTALL 703 DD. PACK UP AND MOVE OFFSITE @ 1600; SCAN TIRES OF VEHICLES @ RAD ROPE.

7/6/11
AM
SUNNY 70°
→ cloudy
PM
Showers
ARRIVE 1200
HUMIDITY
SUNNY
80°

ONSITE 0655 HOLD TAILGATE MTR @ 0700, T-STORMS PREDICTED. ASK KVK RE DEVELOPMENT H₂O. MOVE CME 85 TO 711 DD. START CORING @ 0815, FINISH @ 0900, INSTALL WELL, BEGIN DEMOBE OF DRILLING RIGS. TRANT-GOES TO PICK UP YSI METER @ HOTEL. START DEVELOPMENT @ 709 DD AND 708 DD - BOTH STABILIZE. REMOVE ~125 GALLONS TOTAL (~60 GALS @ 709 DD, ~65 GALS @ 708 DD) DRILLERS OFFSITE @ 1545.

7/7/11
AM
SUNNY
60

ONSITE @ 0650, HOLD TAILGATE MTG, WILL DEMOBE
DRILLING RIGS TODAY, CONTINUE WELL DEVELOPMENT (11
(710 DD, 707 DD, 706 DD - IF POSSIBLE [DR'S APPT THIS PM])
CALIBRATE YSI 6820; DO, pH, OTHERS GOOD. PREP NOISE
DOSIMETER FOR SHIPMENT BACK TO FINDLAY. DEVELOP 710 DD (~52
GALS), 710 D (~60 GALS). MOVE TO 707 DD @ 1115. - DRYING OUT, V.
TURBID. MOVE TO 706 DD ALSO TURBID / DRYING OUT, MOVE TO 704 DD
FINISH 704 DD @ 1335 (~60 GALS) KC OFFSITE @ 1400 (DR'S APPT)
DROP OFF NOISE DOSIMETER @ UPS AND BUY 3 GALS DISTILLED
16 MILES WATER

TO UPS

7/8/11
AM
M-SUNNY,
65

CONF
CALL @
1030

ONSITE @ 0645. HOLD TAILGATE MTG @ 0700. CALIBRATE
YSI METER (DO, pH (710), TURBIDITY). GO TO 707 DD - DRIES OUT ~1 IN
~30 SEC. GO TO 706 DD, THAT DRIES OUT AFTER ~6 GALS - LET RECOVER
DRY OUT 3X, GO OVER TO 711 LOCATION. BOTH WELLS DRY OUT -
LET RECOVER. CONF CALL (1030-1115), BURN CDS OF DRUG PIX
BACK @ 711 @ 1130. DRYING OUT - MOVE TO 705 DD. BOTH
DRY OUT SEVERAL TIMES. MOVE BACK TO 711 @ 1320. BOTH WELLS
DRY OUT, MOVE TO 707 DD, DRIES OUT AFTER ~5 GALS, LET RECHARGE.
DRIES OUT AGAIN - MARK L. TAKES ~75 GALS OF WATER BACK TO DRUM UP.
CLEAN METERS.

Monday
7/11/11

AM
M-SUNNY
75
BREEZY

ONSITE @ 0655, HOLD TAILGATE MTG w/ MARK LORANTY
- HE WON'T BE ONSITE 7/12 DUE TO FUNERAL. START @ 711
LOCATION AFTER CALIBRATING YSI 6280 (DO, pH (7+1)).
GO TO 702 DD (DRIES OUT),
DRY OUT BOTH WELLS GO TO 701 DD; COMPLETE THIS WELL.
GO TO 703 DD; COMPLETE THIS WELL; GO TO 706 DD (DRIES OUT)

PM

GO TO 707 DD; NOT ENOUGH WATER TO COVER PROBES, GO TO
705 DD. DRY OUT BOTH, LET RECHARGE, DRY OUT. GO TO
711; DRY OUT BOTH. GO BACK TO 706 DD (DRIES OUT), 705 DD

(BOTH DRY OUT), FILL D, D (BOTH DRY OUT). PACK UP FOR THE DAY. MARK LORANTY TURNS OVER WHOLE PUMP, OTHER TOOLS FOR 7/12/11 WORK.

THURS
7/12
AM
SUNNY
75°
PM
SUNNY
88°

ONSITE @ 0630 HOLD TAILGATE MTG W/ KEN ALMETER CALIBRATE YSI (pH, DO, TURBIDITY). TRENT PERFORMS RELEASE SURVEY ON GENERATOR TO RETURN TO HERTZ. GO TO 707 DD - VERY LITTLE WATER RECHARGE, MOVE TO 702 DD - DRIES OUT. GO TO 706 DD (DRIES OUT), GO TO 705 LOCATIONS (BOTH DRY OUT). KE OFFSITE @ 0935 TO DROP OFF GENERATOR @ HERTZ DROP OFF PAPERWORK W/ P. MULREADY @ OFFICE. BACK ONSITE @ 1135. GO TO 702 DD (DRIES OUT), GO TO 706 DD (DRIES OUT), GOT TO FILL DD (BOTH DRIES OUT), GO TO 705 DD (BOTH DRY OUT). GO BACK TO 702 DD (DRIES OUT), GO TO 706 DD (DRIES OUT - COMPLETED), GOT TO FILL (BOTH DRY OUT)

WED
7/13/11
AM
SUNNY
65°
PM
SUNNY
77°

ONSITE @ 0655, HOLD TAILGATE MTG, CALIBRATE YSI METER (pH, DO). GO TO 707 DD - TOO LITTLE WATER TO RUN THROUGH YSI. GO TO 702 DD; DRIES OUT AFTER 3.5 GAL. GOT TO FILL LOCATIONS, BOTH DRY OUT, GO TO 705 LOCATIONS, BOTH DRY OUT. GO TO TRAILER TO DO SAFETY INSPECTION. GO BACK TO 702 LOCATION (DRIES OUT), FILL LOCATIONS (DRY OUT). GO BACK TO 702 DD AFTER 1300 (DRIES OUT), GO TO FILL LOCATIONS (BOTH DRY OUT), GO TO 705 LOCATIONS (BOTH DRY OUT).

7/14/11
AM
SUNNY
70°

ONSITE @ 0655, HOLD TAILGATE MTG. CALIBRATE YSI (pH, DO). GO TO 707 DD - TOO LITTLE WATER TO DEVELOP. GO TO 702 DD, DRIES OUT AFTER ~ 4 GAL. GO TO FILL LOCATIONS (BOTH DRY OUT), GO TO 705 LOCATION (BOTH DRY OUT). GO TO TRAILER TO GET MAP TO LOCATE 712 + 713 LOCATIONS. VERY OVERGROWN + THICK VEGETATION ENCOUNTERED.

GO BACK TO 702 DD (DRIES OUT) GET CAN FROM (13)
TWOYER RE. TYCO. WORK SAT 7/23⁰⁷⁰⁰ IF POSSIBLE) GO TO 711 LOC
(BOTH DRY OUT), GO TO 705 LOC (DRY OUT). GO BACK TO 702 (DRIES
OUT, GO TO 711 LOCATIONS (DRY OUT), GO TO 705 LOCATION (DRIES OUT)

7/15/11
FRIDAY
AM SUNNY
55°
250
GND
TANK
SCANNED

ONSITE @ 0650, HOLD TAILGATE MTG, CALIBRATE YSI (PH, DO, TURB)
GO TO 707 DD - MEASURE, GO TO 702 DD (DRIES OUT), 711 DD
(BOTH DRY OUT), 705 DD (BOTH DRY OUT) GO GAS UP HERTZ TRUCK
TALK W/ TR, KVK RE SAMPLING PROGRAM, 712/713 LOCATIONS
GO BACK TO 702 DD (DRIES OUT), 711 DD (DRY OUT) AND
705 DD (DRY OUT), 16 EMPTY BEING TAKEN AT SITE.
58 DRUMS FILLED @ PAD, 8 EMPTY DRUMS LEFT BEHIND
FOR WELL PURGING OR ADDL DRUG. MARK L OFFSITE @
1405, MARK LORANTY (NOTHAWAY) OFFSITE @ 1415

MON
7/16

ONSITE @ 0655; ATE IS UNDERGOING SITE SHUTDOWN FOR
SCHEDULED MAINTENANCE, MARK LEGERA ATTENDING 40-HR OSHA
TRAINING THIS WEEK. TRY AND LOCATE SEWER LOCATIONS
FROM FIG 3-2 - CAN'T LOCATE ALONG OHIO ST. MOVE
AND INSPECT IN EXCISED AREA ALONG INSIDE FENCED
AREA - CAN'T FIND MANHOLES, TR CALLS AL CAMPISANO
(LOCKPORT WATER DEPT) - LEAVES VM TO SET UP INTL.
GO OUT AND STAKE KVK PROPOSED 712 + 713 LOCATIONS
TR SENDS COORDINATES TO CINCY OFFICE FOR PLOTTING

(14)

WED 7/27/11
 ONSITE @ 0655, HOLD TAILGATE MTE RE SEWER SAMPLING
 E-MAIL RE VS. TOP OF SCREEN ELEVATION AS PER KUK
 CALIBRATE PID (0.0 ppmv + 101 ppmv), 4 GAS METER CALIB-
 RATED @ PINE. DRIVE TO OTTO ST @ 1315 TO WAIT ON
 CITY OF LOCKPORT PERSONNEL. ROLAND M ONSITE @ 1335,
 ANOTHER WORKER JUST BEHIND, PID: 8.8 ppmv, O₂: 20.9, H₂S:
 0.0, LEL: 0.0, CO: 0.0 OPEN MANHOLE; COLLECT LIQUIDS @ SEWER
 LOCATION #1 (CLARK RIGGING) @ 1345 COLLECT SOLIDS @
 " " " " @ 1355. TR DOES SCANS @
 MH/SURFACE (ASPHALT), MOVE TO GRASS FIELD @ NEWFANE LUN
 -BER; @ SEWER LOCATION #2 (1420) PID 0.0 ppmv O₂: 21.7, H₂S
 0.0, LEL: 0.0, CO: 0.0 COLLECT LIQUIDS @ SEWER LOCATION #2 @
 1425, COLLECT SOLIDS @ " " " " @
 1435. NOTE RAINBOW SHEEN ON LIQUID FRACTION OF SLUDGE
 (DECANTED OFF BACK INTO SEWER) BACK @ TRUCK @
 1505, LABEL + PACK SAMPLES.

THURS 7/28/11
 ONSITE @ 0650, HOLD TAILGATE MTE FOR NORTHWAGLE (ONSITE
 @ 0745) PRIOR TO REMOVE TR PERFORMS RAD SURVEY ON
 RIG. NORTHWAGLE. THEY SET UP @ 713 D LOCATION (CME 85)
 DROVE 8" CASING TO ~ 4 1/2' BGL SET UP TO DRILL ROCK SOCKET
 w/ NEW VEXEL 5 7/8" TRICONE BIT. START DRILLING @ 0930
 DRILL TO ~ 7' BGL, PUT IN 4" CASING AND GROUT IN PLACE. MOVE
 TO 712 LOCATION @ 1005. INSPECT HAND CLOTHING - ONLY HAVE
 ≤ 6" OF GRAY SILT, GRAVEL, ASPHALT (FILL) AT ALL LOCATIONS
 TR DOES AREA SURVEY. CAN'T DRIVE 8" CASING DUE TO
 SHALLOW BEDROCK SO RUN 5 7/8" BIT ON RODS AND USE SURF. PUMP
 TO CAPTURE CIRCULATION WATER FROM BIT. BIT GETS PLUGGED
 UP, TRIP OUT TO CLEAR DRILL SOCKET TO ~ 5' BGL, SET 4"
 CASING. MOVE TO SECOND 712 LOCATION @ 1115. SET 2ND 4"

CASING AND PACK UP FOR DAY. DRILLERS OFFSITE

Friday

7/29/11

ONSITE @ 0645, HOLD TAILGATE @ 0700. MOVE BACK ONTO 713D AND BEDROCK CORE⁷ TO ~20' BGL. INSTALL 2" PVC well. MOVE TO 712DD @ 0910. CORE BEDROCK FROM ~5'-40', WORK STOPPAGE @ 0950 DUE TO HUNDOX - TRENT RICHARDS OFFSITE TO AIRPORT @ 1000. BEGIN CORING AGAIN @ 1025

FINISH CORING @ 1140. INSTALL 2" AC WELL TO ~40' BGL. MOVE RIG BACK ONTO PLANT @ 1220. DRILLERS OFFSITE @ 1245.

Monday

8/1/11

ONSITE @ 0700 HOLD TAILGATE. SET UP @ 712D. TOP OF CEMENT @ 712DD @ ~22' BGL. FIX HYDRAULIC FITTING @ HOSES INTO TOP DRIVE. PLACE BENTONITE CHIPS TO ~6' (INTO 4" CASING) THEN TOP OFF W/ SAND. DRILL OUT CEMENT @ 712D SET UP TO BEDROCK

PM

84°

CORE @ 0830. FINISH CORING @ 0925. INSTALL 2" PVC WELL SCREEN 6'-20', SAND TO ~8', BENTONITE TO ~5' (BTM OF CASING)

W. SUNNY

TAKE COREBOXES BACK TO DECON PAD. KC OFFSITE @ 1040 TO GET TUBING @ COOPER. BACK ONSITE @ 1220. GET GOOD PHONE SOIL SAMPLE @ 713D, CALL TA TO ARRANGE COOLER (SEND SAMPLES) PICKUP. START DEVELOPMENT @ 713D, END @ 1400. MOVE TO 712DD well FOR DEVELOPMENT. FINISH UP @ 1500.

Tuesday

8/2/11

AM
SUNNY
75°

ONSITE @ 0655. HOLD TAILGATE MTG W/ NOTHNAGLE. CALIBRATE YSI; DO, pH (7.0), NTU (0.0, 126.0). GO TO 712D LOCATION. MEASURE Σ - DRY, TD @ ~22.02' BTDC, WATER IN 712DD (~30.16' BTDC) - CALL K. VANK. RIG GOES OVER FOR

EXIT SCAN BY TR. RE PHOTOGRAPH SOME CORE BOXES DUE TO WRONG WELL # ON THEM (71200 - NOT 71300 ENOUGH DRILLED). HAVE CONF CALL @ 1100.

WED COMPLETED ROUND OF GW I LEVELS ACROSS SITE.

THURS ONSITE @ 0655, CALIBRATE YSI; DO: 98.0%, pH: 7.50, 10.01, TURBIDITY: (0.0, 125.9) ASSEMBLE BOTTLES, FORMS, ETC. GO TO MW-24, SET UP AND BEGIN PURGE @ 0855 SAMPLE @ 0925 (A04DMW240001) GO TO MW-23 PURGE @ 1023 SAMPLE @ 1040 (A04AMW230001) MOVE TO 713D (A04DMW713D0001) @ 1100. PURGE @ 1135 SAMPLE @ 1200 AFTER FITTING SMALLER Ø SILICONE TUBING TO LARGER TEFLON LINED TUBING. ORDERED 3/8" x 5/8" SILICONE TUBING (20') FROM PINE. GO TO MW-19 START PURGE @ 1312, SAMPLE @ 1330 (A04BMW190001). KARL V. ASKS FOR REVISED SAMPLING SCHEDULE GO BACK TO TRAILER, KC PLACES PURGE WATER INTO LABELED DRUM WHILE TR WORKS ON SCHEDULE. PREP SAMPLES FOR SHIPMENT, TA COURIER ONSITE @ 1610. KC TO TEXTRON @ 1715, TR TO COMPLETE PAPERWORK FOR SHIPMENT.

FRI 8/5 AM MSUNNY 68° ONSITE @ 0700, CALIBRATE YSI (DO: 98.5%, pH: 7.0, 10.0, TURBIDITY: 0.0, 126.0), PID (0.0, 101 ppmv). 'LOAD UP' AND SAMPLE 603D + MW-22 PRIOR TO CONF CALL. COLLECT MS/MSD 1 @ MW-22. GO TO MW-18, PURGE + SAMPLE @ 1245 (SHAWN A + LINDSEY B ONSITE FROM USACE) - COME BACK TO PACK SAMPLES, SMOKERS, ETC. PREP BOTTLES/LABELS WAIT ON TA COURIER

Monday
8/8/11
AM
M. Sunny
72° Humid

ONSITE @ 0645. VIKAS TANDON ONSITE, HOLD TAILGATE ⁽¹⁷⁾ MTR.
CALIBRATE YSI (DO: 97.5%, PH: 6.90, 10.0, NTU: 0.0, 126.0,
PID: 0.0, 101 ppmv) SHOW VIKAS SEEP LOC. @ LOCKPORT BYPASS
BRIDGE. USACE ONSITE (J. HALL, LINDSEY B) - GO OFF W/ VT
TO SAMPLE SEEPS. TR/KC SAMPLE GW @ MW-11 (A02MW110001)
@ 0910, A02MW090001 @ 1040, A02MW080001 @ 1140.
SEEP01 @ 1035, SEEP02 1130. UPDATE LOC - SEND TO TR
TO PRINT.

0835
0930

Tuesday
8/9/11

AM
Cloudy
68° RAIN
PM
Cloudy
RAIN.
73° F

ONSITE @ 0645, HOLD TAILGATE MTR w/ TR, CALIBRATE YSI 6200
(DO: 97.7%, PH 6.99, 10.01, NTU: 0.0, 126.0, PID: 0.0, 101 ppmv)
VIKAS. ONSITE @ 0730. SET UP TO PURGE/SAMPLE @ 705D, DD
(V04DWM180001) SAMPLE @ MW705D0001 @ 0835 SAMPLE
24HR BAKER @ 1315 DRAIN @ 1335

INCIDENTS 8/8

@ MW705D0001 @ 0930. WAIT ON 705D TO RECHARGE TO GET
FILTERED SAMPLES - GET CALL FROM REG BURNS - ALLVAC RE 2
INCIDENTS 8/8 @ 1236 + 1841(?) WHERE THEIR RAD DETECTION SYSTEM @
1040 @ 1055 DRAIN @ 1100 (V04DWM180001)
SAMPLE @ 0852 (V04DWM180001) @ 1100 - SB

735-
9769

SCALE TRIPPED ALTHOUGH NO TRUCKS WERE @ THE SCALE @
THE TIME (TR SPEAKS W/ HIM RE SEW PRACTICES) KC OFFSITE
@ 1055 TO COOPER FOR SILICONE TUBING, RETURN PINE
PERISTALTIC PUMP. BACK @ 1235. GO BACK TO FH1 CLUSTER TO
SAMPLE FH1, DD HAVE TUBING PROBLEMS, ORDER THINNER WALL
TUBING FROM FINDLAY FOR TEFLON LINED TUBING, GET
TUBING TO WORK W/ SMALL PIECE OF SILICONE TUBING AND PURGE
FH1 & SAMPLE A04DWM711D @ 1445

Wed
8/10
AM
M. Cloudy
65
M. Sunny
Breezy
PM
M. Sunny
M. Cloudy
Breezy,
75

~~ON SITE~~ ON SITE @ 0650, CALIBRATE METERS (PID: 0.0 + 100 ppmV, YSI: 97.0% D.O., TURBIDITY: 0.0, 125.9, pH: 7.00 + 10:00. MOVE TO 604/709. SURVEYORS ON SITE TO SURVEY WALLS (GARY ZIMPTER, STAN) TAKE ON TOUR. SAMPLE 604D (A04DMW604D0001) @ 1030 TAKE NYSDAC SPLIT #1. SET UP @ 709D, PURGE + SAMPLE (A04DMW709D0001) @ 1030. DRIVE OVER TO 605D/704DD TO PURGE AND SAMPLE @ 1015 (A04BMW605D0001) ALONG W/ 1ST DUPLICATE (MW605D) - (A04BMW9000) AND NYSDAC SPLIT #2. MOVE TO MW704DD @ 1040 TO PURGE AND SAMPLE @ 1115 (A04BMW704DD0001) ALONG W/ 2ND DUPLICATE (MW704DD) - (A04BMW9001) AND NYSDAC SPLIT #3. DROP OFF COLLECTED SAMPLES @ TRAILER @ 1155 FOR TR TO BEGIN SWAGS. KC TO MW26 TO PURGE + SAMPLE @ 1320 (A04BMW260001) AND NYSDAC SPLIT #4. DROP SAMPLES OFF @ TRAILER @ 1350 THEN WORK W/ MCINTOSH SURVEYING TO GET TO WALLS BEHIND RAD ROPE (MW701, 702 + 703), MCINTOSH OFFSITE @ 1535.

THURS
8/11
AM
M. Sunny,
65,
Breezy
PM
M. Cloudy
Breezy
75

ON SITE @ 0700, CALIBRATE PID (0.0, 102 ppm) JOHN MITCHELL ON SITE 0710 YSI: DO: 99.2, pH: 7.00, 10.00, TURBIDITY: 0.0, 126.5. MOVE TO 602D/702DD, SET UP TO PURGE/SAMPLE - GW VERY GRAY, TURBID (GRAY FROM 702DD); SAMPLE @ 0915 (A04AMW602D0001) NYSDAC SPLIT PURGE + SAMPLE @ 702DD @ 0945, SAMPLE @ 1005 (A04AMW702DD0001) LET WELL RECOVER @ 1040 WHEN FILLING LAST FILTERED BOTTLE. LET WELL SET TO RECHARGE PACK UP TO DROP OFF BOTTLES @ TRAILER MOVE TO MW-13D TO PURGE + SAMPLE, SAMPLE @ 1200 (NYSDAC SPLIT) GO BACK TO 702DD TO FINISH SAMPLING AFTER SCANNING TILES AND FEET @ RAD ROPE. VC 702DD @ ~14.90' BTCL @ 1250

BUT COULD NOT GET WATER THROUGH A FILTER - LET SIT SOME MORE. GO TO 708 DD AND SET UP TO PURGE/FILTER START @ 1340. SAMPLE @ 1410 (NYSDEC SPLIT / DUP #3) 1440 AB TO DROP ME 101 LBS @ 1410

WHEN FINISHING (42 LBS) SOURCE TO NOT BE AS OF BECAUSE

TRANSFER 7 1-GALLON PLASTIC JUGS OF GROUNDWATER TO JOHN MITCHELL (USE TA COC TO DOCUMENT TRANSFER).

IM OFFSITE @ 1500. I @ 702 DD @ 13.05 BOC @ 1510 TAKE REMAINING FILTERED SAMPLE. STOP OFF PURGE WATER - OPEN 2ND 4UM FILTER. TAKE SAMPLE BACK TO TR

FRI
8/12

ONSITE @ 0830 (BLOODWORK), TR @ MW-25 PURGING/SAMPLING WELL - SAMPLE @ 0845; A04B MW 25 0001, AND COLLECT 4TH DUPLICATE - A04B MW 9003. GO TO MW-06 PURGE + SAMPLE @ 1000 (A02 MW 06 0001), GO TO MW-10 PURGE + SAMPLE @ 1055 (A02 MW 10 0001), GO OVER TO MW-07 AND PURGE + SAMPLE @ 1135 (A02 MW 07 0001). PREP SAMPLES FOR SRT DELIVERY TO TA-ST LOUIS.

MONDAY
8/15
CLOUDY
70

ONSITE @ 0650, DO TALKING MTS, CALIBRATE PID: 0.0 ppm (100 ppm), YSI: DO: 97.7%, pH: 7.00, 10.00, NTU: 0.0, 125.9 START @ 706 DD @ 0810 SAMPLE @ 0840 (A04B MW 706 DD 0001) MOVE TO 710 CLUSTER, 710D 0.3 ppm, 710DD: 0.7, CAN'T GET FLOW @ DD w/ PERISTALTIC PUMP SO SET UP @ 710D, PURGE + SAMPLE @ 0955 (A04B MW 710D 0001). INSTALL GRUNFOS PUMP IN 710DD KEEP GETTING "GROUND FAULT" MESSAGE @ CONTROLLER BOX + HAVE REPORTED CIRCUIT BREAKER TRIPS - CALL PINE DI DIAGNOSTICS - MUST HAVE SHORE C/PUMP CABLE - PINE TO SHIP NEW PUMP FOR 8/16 AM DELIVERY @ COMFORT TANK MOVE TO 712 DD TO PURGE (1138) AND SAMPLE @ 1200

(A04 MW 7100 0001). RUN OUT OF AVAILABLE GW @ ~ 1210 @ ~ 18.5' BTOC AFTER FILLING VOAS + GEN CHEM BOTTLE PARTIALLY. LET WELL RECHARGES GO BACK TO TRAILER TO BEGIN SUGAR COUNTING. COLLECT REMAINING GEN CHEM SAMPLE @ 1415. PREP SAMPLES FOR SHIPMENT. PREP FOR 6/16.

TUES
6/16
AM -
CLEAR,
65°
PM -
SUNNY,
80°

ONSITE @ 0650, CALIBRATE YSI: DO 98.1% pH 10.00 + 7.0, NTU: 0.0, 126.0, PID: 0.0; 102 ppmv. GO TO 7100. GW WON'T LIFT IN TUBING @ ~ 15.8' BTOC CALL KVK - OK TO BAIL REMAINDER. GO TO MW 6060, MW-14 START 6060 @ 0830 SAMPLE @ 0845 (A03 MW 6060 0001)
" MW 14 @ 0900 " " 0915 (A03 MW 14 0001). MOVE TO MW 6060R START @ 0940 " " 0955 (A03 MW 6060R 0001). MOVE OF MW-15 (^{NOVA}CALL KVK RE VOCs), " " 1035 (A03 MW 15 0001). KC GOES BACK 7100 TO BAIL REST OF BOTTLES @ 1150. BACK TO TRAILER @ 1210 - GO TO MW-17 TO PURGE + SAMPLE, SAMPLE @ 1300 - (A03 MW 17 0001) GO BACK TO CONTAINOXIZE PURGE WATER, PREP SAMPLES, SMEAR CONTAINERS / ACETATE TUBES, GATHER BOTTLES + LABELS FOR 6/17. CALL CLIFF FOR PICK UP

WED
6/17

ONSITE @ 0700, ✓ ON GROWFOS PUMP MAKE CALLS; CALIBRATE YSI; DO: 98.8%, pH: 7.00, 10.00 NTUs: 0.0, 126.0. CALIBRATE PID; 0.0, 100.0 ppmv. TR PICKS UP PUMP @ HOLIDAY INN. GO TO 7100. SET-UP GROWFOS; GET UNDERVOLTAGE FAULT MESSAGE AS GENERATOR GEFI TRIPS REPEATEDLY. TR THINKS PROBLEM IS IN CONTROLLER PLUG. CALL PINE; WAIT FOR PINE NJ TO CALL - CLAUDIO CALLS @ 0835. HE SAYS GENERATOR PUTS OUT TOO WIDE A RANGE OF VOLTAGE FOR PUMP - SUGGESTS ANOTHER GENERATOR - CALL HORIZ TO ✓

1545

ON ANOTHER GENERATOR. DRIVE TO HOLTZ TO GET REPLACEMENT - TRY OUT 2ND GENERATOR, IT TOO TRIPS (2) WHEN PUMP LOAD ADDED TO IT. TAKE HOLTZ GENERATOR OFF RENT. DRIVE BACK TO SITE. PURGE 707D TO DRYNESS (~1.25 GALS) TAKE PARAMETERS - NO RECHARGE - CLOSE UP WELL. WAIT ON CALL FOR PINE ENV. DRIVE TO EXIT 45 TO GET REPLACEMENT CONTROLLER AND SMALL HONDA GENERATOR. TEST SET UP - OK, AND DRIVE BACK TO LOCKPORT - ARRIVE @ 1545 @ PLANT - GET BARNHILL KEY FOR LOCKED RR GATES TO MW-4. GO BACK BEYOND NW GATE AND BEGIN CLEANING VEGETATION BACK TO MW-600 LOCATION

THURS

AM
CLEAR
70°

PM
IN CLOUDS
occ showers
70°F
BREEZY

ONSITE @ 0650, CALIBRATE YSI DO: 98.2, pH: 7.00, 10.00, NTUS: -0.1, 125.9 P.D: 6.0, 100, PACK + MOVE BACK TO ROAD SET UP PINE'S HONDA GENERATOR GRUBBS PUMP START PURGE @ 0805 SAMPLE @ 0825 (A04D MW 710 DD 0001). MOVE TO MW 712D AFTER COLLECTING EQUIPMENT BLANK #1 @ 0850. START PURGE @ 712D (712D - dry) @ 0918. PUR SAMPLE @ 0935. (A04D MW 712D 0001) GO TO MW 707D. HAVE ~1.3' OF GW CALL KVK - HE WOULD LIKE VOLTS COLLECTED THEN KEEP COMING BACK TO COLLECT REMAINING ANALYTES. COLLECT 2 VGAS @ 1030 (A04B MW 707 DD 0001). MOVE TO MW 607D PURGE + SAMPLE @ 1110. MOVE TO MW-20 PURGE @ SAMPLE @ 1205 (A04A MW 20 0001). MOVE TO MW-21 PURGE + SAMPLE @ (A04A MW 21 0001) 1245

8/19
AM
SUNNY
68°

(22)

PM
SUNNY,
90° SE
Breeze

ONSITE @ 0655, CALIBRATE YSI (DO: 97.2%, pH: 7.0, 10.00, NTU: 0.7, 126). PID WON'T CALIBRATE - CLEAN + REPLACE SCREEN GET FAILED MESSAGE CALL FINDER - CLEAN w/ METHANOL - LET SIT ~ 1 HR - GO TO WELLS w/o AIR^{gtr} WELLS. GOT TO 607D (703D) SET UP @ 607D TO PURGE, SAMPLE @ 0845 (A03 MW 607D 0001), SET UP GRUNFOS @ 703D TO PURGE + SAMPLE. SAMPLE @ 0915 (A03 MW 703D 0001) COLLECT MS/MSD @ 703D AS WELL. GO TO MW-16 TO PURGE AND SAMPLE @ 1030 (A03 MW 16 0001 AND DUPLICATE # 5 - A03 MW 9004). DROP OFF BOTTLES @ TRAILER FOR TR TO BEGIN COUNTING, KC TO MW-4 TO PURGE + SAMPLE @ 1200 (A02 MW 4 0001) HAVE TO SEND PID BACK AS GET "FAILED" MESSAGE AFTER CLEANING. DUMP ACCUMULATED PURGE WATER AND CLOSE UP PURGE WATER DRUM #2; NEED LABEL FOR PURGE WATER DRUM #3. GO TO 701D TO PURGE AND SAMPLE @ 1340 (A04 MW 701D 0001). GO TO 707D TO TRY AND COLLECT ANIONS + GEN. CHEM. @ 1405

MONDAY
8/22/11

AM
P SUNNY,
60°

ONSITE @ 0650, CALIBRATE YSI (DO%: 97.9% pH: 7.00, 10.00, NTUs: 0.0, 126.0. ^{PID TO BE DELIVERED IN LATE AM} GOT BOTTLES READY. GO THROUGH NW GATE TO GET TO 600 CLUSTER, PURGE + SAMPLE MW 600D @ 0900 (A05B MW 600D 0001) MW 600S IS DRY. TALK w/ EVK + ED SHOCK RE HYD. TESTING. MAKE UP MS/MSD LABELS FOR MW-5. GO TO MW-5 TO PURGE + SAMPLE (A02 MW 5 0001, MS, MSD) SAMPLE @ 1105. GO BACK TO TRAILER FOR TR TO COUNT - KC PURGES + SAMPLES MW-12 (A02 MW 12 0001) @ 1230 GO TO MW-03 TO PURGE AND SAMPLE @ 1345 (A02 MW 03 0001)

TUES
8/23
SUNNY,
66°

- 712 DD ? 711 D
- 710 D
- 713 D - SOLID SLUG

8/23 FILTERS
DELIVERED

(23)

pH: 7.00, 10.00

ONSITE @ 0650, CALIBRATE YSI (DO: 99.2%, NTU5, C.O, 125.9) PID ARRIVES FROM FINELAY CALIBRATED. GET EQUIP-
MENT TOGETHER GO TO MW-1 TO PURGE AND SAMPLE, SAMPLE
@ (A02 MW010001) 0850. MOVE TO MW-2 (LAST WELL!)
TO PURGE + SAMPLE (A02 MW020001 AND DUPLICATE
A02 MW9005) @ 0930. SNEAK SAMPLES. GAS UP PINE
GENERATOR AND DRIVE IT W/ GRUNPOS. TO TYCO ROCHSTER
FOR J. MOYER TO DRIVE BACK TO PINE ON WAY HOME.
DRIVE BACK TO SITE (EARTHQUAKE @ 1351), COLLECT ~
700 ml FROM 707 DD FOR UNFILTERED TOTAL U. SHIP
SAMPLES.

mw 713 D 8/25
0953
8/23
0.9 PMW
7.12.20
7.12.20

713 DD TEST 4
IS ONLY
705 DD TEST 4

WED 8/24 SET UP FOR K TESTING w/ PNEUMATIC SLUG (PS)
@ MW-710 CLUSTER; COULD ONLY DO 710 DD AS I
HAD TO CONFIGURE 2" PVC EXTENSION DUE TO TOO LITTLE
ANNULAR SPACE BTWN 4" CASING + 2" PVC TO TIGHTEN
CLAMP. WORK ON GETTING RUGGED ROADER RECORDING

THURS 8/25 CALIBRATE PID (O.O, 100 ppmv) DO K TESTING
@ MW-708 DD (PS-K TESTING), MW-713 D (SS-K TESTING)
AND MW-712 DD (PS-K TESTING), 712 D STILL dry.

FRIDAY 8/26 CALIBRATE PID (O.O, 100 ppmv) DO K TESTING
@ MW-710 D w/ SOLID PVC SLUG w/ TRANSDUCER IN 710 DD
DURING TESTS

7.5'

0, 100 ppmv

MONDAY
8/29/11AM
CLEAR60°
PM
SUNNY,
BREEZY
75°

ONSITE @ 0650 CALIBRATE PID, TO TRAIL GATE MTG. GO OUT TO MW 706 DD TO PERFORM SOLID SLUG TEST. RUN 3⁺ SETS OF RISING/FALLING. GO TO MW-711 CLUSTER. PERFORM 3 SETS OF " " TESTS (VERY QUICK RECOVERIES) @ MW-711 D w/ MW-711 DD OFFSET TESTING GOING ON CONCURRENTLY. SET UP PS ASSEMBLY @ MW 711 DD - GO TO TRAILER TO CHARGE RUGGED READER. COME BACK TO MW 711 DD, PERFORM 3 PS TESTS (VERY FAST RECOVERY). MOVE TO 705 CLUSTER @ 1445. SET UP MW 705 DD OFFSET TEST THEN PERFORM MW 705 D PS TESTS (4). SET UP MW 705 D OFFSET TEST (START @ 1602) THEN PERFORM MW 705 DD PS TESTS (4), END TESTS @ 1630

TUESDAY
8/30/11AM
SUNNY,
68°
PM
BREEZY

ONSITE @ 0655, CALIBRATE PID (0.0, 100.0 ppmv) GOT TO MW 703/607 CLUSTER; SET UP 607 D OFFSET TEST, 703 DD PS TEST. OFF TO MW 701 DD @ 0905; START TESTING (PS) @ 0930. ORDER NON-AQ IDW SAMPLE BOTTLES FROM TH (C. FOX) END MW 701 DD TESTING @ 1005. MOVE TO MW 702 DD/602 D, PULL TUBING AFTER MEASURING I @ ~ 9.00' BTDC @ 702 DD, VERY SLOW RECHARGE. ATTEND TEAM CONF. CALL @ 1100, I @ 1125 @ 702 DD = -9.82' BTDC, W/STAFF SHALL FINISH UP TESTS, MOVE TO MW 704 DD AT 1525. FINISH

WED 8/31
AM

ONSITE @ 0700 CALIBRATE PID (0.0, 100.0 ppmv). HAVE CONF CALL @ 0730 w/ VIKAS RE SLUG TESTING. GO TO DRUM AREA AND SAMPLE 7 DRUMS OF DEVELOPMENT/PURGE WATER FOR IDW ANALYSIS; SAMPLE @ 0930, SAMPLE SOIL/ROCK CUTTINGS FROM 4 DRUMS FOR NON-AQUEOUS IDW ANALYSIS @ 1020 GO TO 705 CLUSTER TO DO SOLID SLUG TESTING AS PER V.T. GO TO MW 707 DD TO SAMPLE (PID; 0.1, I @ 38.21')

THURSDAY 1/26/12

1130 DRIVE TO TEXTKON

FOR DRUM TO STORE PURGED GW IN
(NEED LABELS).

IN 86,755 ✓

OUT 86,791 ✓

MONDAY JANUARY 30, 2012

AM - IN CLOUDY, 28°, 4"

PM - M SUNNY, 29°, WINDY SNOW

0800 LOAD UP TRUCK DRIVE TO

ALLIAC. GO TO MW-710 CLUSTER.

DOWNLOAD DATA @ MW-710 D+DD. SET
UP PERISTALTIC PUMP, YSI @ 710D - CANT

GET GW TO SURFACE, BEGIN BAILING @ 045

80,961

206

IN 86,755 ✓

OUT 86,755 ✓

5

COLLECT GW SAMPLE @ 1100. PURGE MW-710DD, GW SAMPLE @ 1140. BREAK FOR LUNCH - WARM UP. @ MW-713D @ 1240 - DOWNLOAD DATA. SET UP TO PURGE @ 1300. SAMPLE MW-713D @ 1325. MOVE OVER TO MW-708DD @ 1335. TAKE WATER OVER TO DRUM THAT IS STAGED OVER BY THE OLD GUARD HOUSE (LABELLED - NON-HAZ). BACK @ 1425. SAMPLE MW-708DD @ 1450 AFTER REMOVING ~17 GALS OF WATER. DRIVE TO OFFICE TO UNLOAD, CHARGE UP BATTERIES, J. SMITH OFFSITE @ 1600. KC ARRANGES SAMPLE DROP OFF. 8 HRS

TUESDAY JANUARY 31, 2012

AM - SUNNY, WINDY, 43°

PM - M. SUNNY → P. SUNNY, WINDY, 47°

0655 ARRIVE @ OFFICE, JEFF SMITH THERE SET UP CALIBRATION SOLNS FOR TROLL ESDD CALIBRATE MW-713D, MW-708DD (0745-0815), MW-710D, MW-710DD (0850-0910) LOAD TRUCK TO GO TO GUTELL, ARRIVE @ 1005, PICK UP BUCKETS/FILTERS, GO TO DOWNLOAD AND PULP REMAINING TROLLS. SHOVEL SNOW BANK (PLOWED UP SNOW) FROM OVER MW-26 - PIC WELL CAR FROZEN ONTO

5

PVC RISER PIPE, DOWNLOADED. GOT MW-707DD, DOWNLOAD LEVEL TROLL, BUT ESDD REPORTS "TEST IN ERROR!" SEEMS NO DATA TO RETRIEVE(?) - PULP TROLLS, MEASURE TD: (1 @ ~18.11 BTDC w/o TROLLS) TO ~39.62' BTDC. JEFF REMINDS ME WE HAD PROBLEM W/ THAT UNIT BEFORE - ✓ NOTES - HAD BATTERY + CONNECTION PROBLEMS. DOWNLOAD REMAINING TROLLS. OFFSITE FOR LUNCH @ 1215. ONSITE @ MW-710 CLUSTER TO REIN-STALL TROLLS @ 1245. REINSTALL MW-710D @ 1310; START TEST (TEST #1), MOVE TO MW-710DD, MOVE TO MW-708DD OFFSITE TO OFFICE @ 1410, LIBERTY TIRE IS ~0.3 MILE FROM SITE (TIRE FIRE THERE LAST FRIDAY, ~4 FIRE TANKS @ SITE TO COLLECT IMPACTED WATER). CALL KVK ABOUT FROM OFFICE @ 1500, BACK ONSITE TO CALIBRATE 6 REMAINING TROLLS ESDD, START W/ 709DD. MW-604D, MW-704DD, MW-26, MW-605D AND MW-707DD. CHECK BATTERY VOLTAGE - OK AND DISPLAY INDICATES TEST RUNNING - DOWNLOAD DATA AND CHANGE OUT BATTERIES THEN CALIBRATE. GET ERROR "WRITE ERROR"

6

ON RUGGED DO CAL REPORT. CALL IN-SITU - JOHN SUGGESTS REPEATING DO CAL. REPEAT DO CAL - GET NO MESSAGE SO END CALIBRATION @ 1715.

WEDNESDAY FEBRUARY 1, 2012

AM - CLOUDY, BREEZY, 40° (RAIN OVERNIGHT)
PM - " " "

0745 @ OFFICE, CALIBRATE YSI 6280
LOAD TRUCK AND DRIVE TO GUTERL, ON-SITE @ 0850 SET UP @ MW-26 AND MW-707 DD. SET UP PERISTALTIC PUMP / YSI SAMPLE MW-26 @ 0945 FOR TOTAL / FLY GRID U + 150 U. SETUP @ MW-707 DD - CAN'T GET WATER FLOWING w/ PERI PUMP HAVE TO BAIL INTO BUCKET THEN USE PUMP FOR FILTERED SAMPLES, NO YSI PARAMETERS COLLECTED @ THIS WELL SAMPLE FOR TOTAL U TOTAL 150 U @ 1020. TAKE FILTERED SAMPLES FROM WATER DAILED INTO BUCKET VIA PERISTALTIC PUMP TAKE TOTAL SAMPLES DIRECTLY FROM BAIKER. GO TO MW 605 D START PERISTALTIC PUMP @ 1100. SAMPLE 605 D / DUPLICATE (MW-9006) @ 1130. GO TO LUNCH @ 1150. CALL TA RE EXTRA BOTTLES / CARRIER SERVICE. BACK @ 1240 AFTER GETTING GAS / SUPPLIES

6

PURGE MW-704 DD @ 1245. PURGE AND SAMPLE @ 1330, COLLECT MS / MSD @ 704 DD. DRIVE TO DUMP GW INTO DRUM. MOVE TO MW-604 D + MW-709 DD. SAMPLE 604 D @ 1455. TA VAN ONSITE @ 1500 w/ ADDL BOTTLES FOR 709 DD SAMPLE 709 DD @ 1505. TEAR DOWN AND DUMP GW INTO DRUM (DRUM IS FULL). 9 FILTERS LEFT. OFFSITE @ 1530, @ OFFICE @ 1600 UNLOAD.

THURSDAY FEBRUARY 2, 2012

AM - CLOUDY, 30°, LT SNOW FLURRIES
PM -

0730 @ OFFICE, LOAD TRUCK, LEAVE @ 0830 TO GUTERL TO RE-INSTALL 9500 TROLLS / LEVEL TROLLS INTO 6 WELLS ONSITE @ 0900. REINSTALL @ 0917 MW-26, MW-707 DD (0917), MW-704 DD (0928), MW-605 D (0935), MW-709 DD (0956), MW-604 D (0950). DRIVE BACK TO OFFICE TO DECON EQUIPMENT / SHIP BACK TO SHAW + PINE. OFFSITE @ 1005, @ OFFICE @ 1030, UNLOAD.

WEDNESDAY MAY 2, 2012 IN 92,555'
0915 GOTO HARRISON BROS OUT 92,509'
FOR 2 DRUMS (1A2/Y) @ 32'
APPENHEIMER AVE. BALD, NY 14214.

THURSDAY MAY 3, 2012 IN 92,674
 AM - M. CLOUD, 50°F OUT 92,579
 PM - M. SUNNY, 75° WINDY 92,674
 0730 LOAD TRUCK W/ SAMPLING EQUIP.
 MENT. ARRIVE @ GUTERL @ 0825.
 GET DEDICATED TUBING FROM GUARD
 HOUSE AND GO TO MW 710 CLUSTER TO
 PURGE/SAMPLE. CAN'T GET GW TO RISE
 UP TUBING VIA PERISTALTIC PUMP, USE
 DISPOSABLE BAILEYS TO PURGE WELLS, SAMPLE
 MW-710 D @ 0935 FOR TOTAL + ISOTOPIC
 U (FILTERED + UNFILTERED), MW 710 DD @
 USACE STOPS BY WHILE @ MW 710 DD 1035
 (M. LEGERA, S. HINT, CONTRACTS PERSON) -
 DISCUSS SEEP SAMPLING. DROP 710 DD
 GW AND GO TO MW-713 D. PURGE W/
 PERISTALTIC PUMP, SAMPLE @ 1145. DROP
 OFF PURGED GROUNDWATER, OFF FOR
 LUNCH @ MW-708 @ 1245, SET UP TO
 PURGE SAMPLE @ 1400. DROP OFF 1120.
 GO TO MW-605 D/704 DD CLUSTER.
 BEGIN PURGE OF 605 D @ 1433. SAMPLE
 @ 1515 + ^{DUP-01} MOVE TO MW 704 DD, SAMPLE @
 1605. STORE EQUIPMENT + OFFSITE TO

TONAWANDA @ 1630. @ OFFICE @
 1700, UNLOAD TRUCK.

FRIDAY MAY 4, 2012

AM - CLOUDY, 61°, WINDY

PM - P. SUNNY, 72°F

0700 @ OFFICE, LOAD TRUCK, OFF-
 SITE @ 0715, BIG BACKUP ON 290 E
 (4 CAR ACCIDENT) ARRIVE @ GUTERL @
 0800. GO TO MW-26/MW-707 DD.
 SAMPLE 707 DD @ 0840, MW-26 PURGED
 AND SAMPLED @ 0935. GO TO MW 709 DD
 604 D CLUSTER. PURGE + SAMPLE MW-
 604 D (+ MS(MSD)) @ 1040. PURGE MW-709 DD
 W/ BAILEY, SAMPLE @ 1130. TEAR DOWN
 EQUIPMENT, DECON. CLIFF (TA) ONSITE
 @ 1150, SIGN OFF COCS, HE LEAVES
 @ 1205. DRUM WATER AND SECURE LID.
 LEAVE BOTTLES/COOLER/LABELS + COCS
 IN OLD GUARD HOUSE FOR USACE
 SEEP SAMPLING. OFFSITE @ 1210. BACK
 @ OFFICE 1245, UNLOAD TRUCK, DECON
 EQUIPMENT.

USACE/GUTELL FUSRAP 3Q 2012 GW 12 15F
THURSDAY AUGUST 2, 2012 IN 98, 917
DRIVE TO HARRISON'S OUT 98758
FOR DRUM TO CONTAINERIZE GROUND
WATER. PREPARE FORMS/LABELS, GATHER
SUPPLIES.

FRIDAY AUGUST 3, 2012

0745 @ OFFICE, LOAD TRUCK, CALLS. HWT

AM - M SUNNY, 80°

PM - SUNNY, 95°

OFF TO SITE. JEFF S. WILL BRING BOTTLES
WHEN DELIVERED. DROP OFF DRUM/PALLET @
OLD GUARD HOUSE. GET TUBING, ETC. GO TO
MW 710 CLUSTER TO DOWNLOAD DATA.

DOWNLOAD MW-710 DD + MW-710D. JEFF
ONSITE W/ BOTTLES @ 1025. PURGE +
SAMPLE MW-710D, MW-710DD. MOVE

TO MW-713D @ 1210, DOWNLOAD

MW-713D, ~~LAUNCH~~ ^{GO TO} MW-713D - JEFF

DISCOVERS WATER IN BATTERY COMPARTMENT
(LIKE 709 - COMPARTMENT WAS TIGHT -

"O" RINGS GOOD - CAN'T FIGURE HOW WATER
IS GETTING IN) CALL KARL. HE SAYS TO
SEND GSD + CABLE BACK TO IN-SITU.

SHEILA H + ANOTHER GUY FROM USACE
ONSITE @ 1305 TO TRY OUT WHALE

PUMP @ MW-710DD. RE-INSTALL 9500

13

IN MW-709DD @ 1515 - SET TO TAKE
 READINGS BEGINNING @ 1800 AS OTHERS
 SAMPLE MW 708DD @ 1520. PACK
 UP AND TAKE GW TO DRUMS. JS OFF
 SITE @ 1545. KC DUMPS WATER, UN
 LOAD BOTTLES + EQUIPMENT. OFF FOR
 OFFICE @ 1600. @ OFFICE @ 1630 - UN
 LOAD.

MONDAY AUGUST 6, 2012

AM - SUNNY, 70°

PM - SUNNY, 83°

0700 @ OFFICE, LOAD TRUCK. DRIVE TO
 GUTERL - GET EQUIPMENT @ GUTERL HOUSE
 GO TO MW-605D / MW 704DD DOWNLOAD
 DATA AND SET UP TO PURGE / SAMPLE. MW-
 605D WILL BE DUPLICATE OZ. GO TO
 MW-26 @ 1045. SAMPLE MW-26 +
 MW-707DD (1225) - USED NARROW DIAMETER
 TEFLON TUBING PROVIDED BY S. HINT / PETER
 LOREY (USACE) ON FRIDAY. KARL V. RE-
 QUESTS MW-710D + MW-710DD BE RE-
 SAMPLED USING THIS TUBING, SAMPLE MS
 MSD @ MW-604D, SAMPLE MW-709DD.
 MW 710D : MW-710DD. 3 DRUMS FULL
 OF PURGED GW, NEW DRUM ~ 1/4 FULL
 12 FILTERS REMAIN FROM NEW SHIPMENT.

13

OFFSITE TO OFFICE @ 1640. BACK @
 OFFICE @ 1710, UNLOAD TRUCK. D.S

TUESDAY AUGUST 7, 2012

AM - SUNNY 73°

0900 CALL CANDY FOX @ TA RE TIME
 OF SAMPLE PICKUP - SHE'S OUT OF
 OFFICE - CALL LISA SHAFER, SHE'LL ✓
 W/ COURIER - HE'S ON HIS WAY TO
 SITE (DID NOT CALL ME AS C. FOX SAID
 HE WOULD 8/6) DRIVE TO GUTERL + MEET
 W/ JAY (716-807-8729), SIGN CUCS
 OFF SITE @ 1000

8/7/12

MONDAY OCTOBER 22, 2012

AM - SUNNY, BREEZY 49°
PM - SUNNY, 60°

IN 104,500¹⁶⁷
OUT 103,533

0645 @ OFFICE TO LOAD TRUCK, JEFF SMITH @ OFFICE ALREADY. GATHEX AND LOAD EQUIPMENT. DRIVE TO GUTAIL @ 0740 ON-SITE @ 0820, RETURNED TROLL 9500 S/Ns. LOAD EQUIPMENT FROM GUARD HOUSE + GO TO MW-704DD; DOWN LOAD LEVEL TROLL + TROLL 9500 (RENTAL SN 50112). GET MESSAGE ABOUT RUGGED DO ERROR, BATTERY 55% CALL EVK RE TEST STOP, BATTERY %. "UNKNOWN RUGGED DISSOLVED OXYGEN SENSOR CAP ERROR HAS OCCURRED." START MW-704DD PURGE W/ 95% DOWNLOAD MW-605 D: 2 @ ~2.45' BTDC DOWNLOAD LEVEL TROLL + TROLL 9500 (RENTAL S/N 48193) TEST RUNNING. TAKE PARAMETERS @ MW-704DD. INSTALL RDO SENSOR ON REFURBISHED 704DD TROLL 9500 (S/N 50689) @ 1000 FOR REDEPLOYMENT. SAMPLE MW-704DD @ 1030 FOR TOTAL U/ISOTOPIC U (FILTERED/UNFILTER) SETUP TROLL 9500 ORIGINAL S/N 50689 @ MW-704DD CALL IN-SITU RE SYNCING TROLL + COMPUTER.

GO TO S/N UNIT, CLICK EDIT, CHOOSE CLOCK + SYNC W/ COMPUTER

16

REINSTALL CORE TROLL + 9500 @ 1100.

GO TO GUARD HOUSE TO DUMP 704DD 420

GET CALL FROM USACE TO MEET @

MW-710 CLUSTER. P. LOREY ON-SITE -

DOWNLOAD DATA @ MW-710 D +

WHILE HE OBSERVES. HE HANDS OVER VOCS JARS. SET UP TO PURGE

MW-710 D - CAN'T GET WATER UP

THROUGH LARGER DIAMETER TEFLON-LINED TUBING / THICKER WALL SILICON. ASK PL

IF THEY HAVE ANY. PL BRINGS NARROW TEFLON TUBING - ABLE TO GET WATER

FLOWING W/ THIS TUBING. PURGE WELL TILL 1250 THEN COLLECT SAMPLES; 3 VOLS

FOR 8260 FOR USACE (TURN OVER TO P. LOREY) AND RAD SAMPLES. REINSTALL TROLL 9500

(S/N 50684) @ MW-710D - SHOW LOREY

HOW TO SET UP TEST. MOVE TO MW-708DD

@ 1335, DOWNLOAD TROLLS. GET ERROR MESSAGE FROM TROLL 9500 ^{REFURBISHED} ~~RENTAL~~ ^{EC} UNIT. TRY 3X

TO CONNECT - PULL UNIT - WATER IN

BATTERY COMPARTMENT (!) P. LOREY OBSERVES CALL EVK RE. DRY OUT AND REFURGE

BATTERIES. THIS UNIT WAS PUT BACK IN

SERVICE 9/5/2012. GET NOTICE THAT "RDO SENSOR CAP EXPIRES IN 10 DAYS" CALL IN-SITU

17

(ROB) AND ASK IF WE CAN SWITCH OUT CAP W/ ONE FROM RENTAL UNIT - HE SAYS IT WOULD BE OK. LET KVK KNOW THAT 708DD IS NOT A RENTAL UNIT - SO IT'S HAD WATER PROBLEM 2X. TEST STOPPED ON 10/18/12. (CALL KVK). SWITCH OUT CAP - ~~JEFF~~ GREASES RDO CAP O-RINGS + BATTERY COMPARTMENT O-RINGS. SET TEST TO START @ 1800, SYNC'D CLOCK W/ COMPUTER. PURGE 708DD @ 1435, SAMPLE @ 1515. MOVE TO MW-710DD @ 1540. TRY AND USE TRUCK BATTERY FOR PERI. PUMP - WON'T RUN - USE RECHARGEABLE BATTERY. CALL THA FOR PM COOKIES ON 10/23/12! REPLACE RDO CAP ON MW710DD TROLL 9500 W/ ONE FROM RENTAL UNIT; COMPUTER BATTERY RUNS OUT DURING TEST SET UP. HOOK UP COMPUTER TO AC/DC CONVERTER TO POWER UP W/ TRUCK. COMPLETE MW710DD TEST SET UP. @ 1700 TROLL 9500 IS DROPPED DOWN WHEN AS KNURLED CONNECTION NOT SECURE - TOP OF TROLL IS ~40' BGL - CALL KVK - NO IDEA HOW TO GET OUT SUGGESTS CALLING IN-SITU - TALK W/ JENNY MANN - CAN ONLY SUGGEST FISHING OUT. GO TO GUARD HOUSE TO GET BAILER LINE. TRY TO FISH W/ TREBLE HOOK

17

WORK ON FISHING FROM 1710 - 1855 UNSUCCESSFUL; NO WHERE TO GRAB ONTO TOP OF TROLL AND TROLL IS TOO WIDE TO FIT SOMETHING DOWN ALONG SIDE OF PVC SCREEN. NEED A CLAMP OR LASSO OF SOME SORT TO ATTACH ONTO TOP NUB. OFFSITE @ 1900, BACK @ OFFICE @ 1930

TUESDAY OCTOBER 23, 2012

AM - RAIN (HEAVY OVERNIGHT), 54°

PM - RAIN, MIST, 56°

0700 @ OFFICE, LOAD TRUCK, OFFSITE TO GUTELL @ 0935, ARRIVE ONSITE @ 0945. TALK W/ JIM GRAMZA (NATURE'S WAY), RE TROLL - SEND HIM PICS OF RENTAL UNIT ON JEFF'S PHONE. PLAN TO PULL TROLLS @ MW-708 AND LOWERED INSIDE GUARD SHACK LINE TO RGIN. TOO HUMID FOR PFD USE. GET CALL FROM B SCOVILLE RE TUBING, SEND HIM PHOTOS TOO.

JAMIE 860-2444, NICKY 863-5044

TALK W/ GRAMZA - HE'D LIKE UNIT TO LOOK @ - DROP ONE OFF @ NEW, WALMART SITE BTWN 10-11 AM. TALK W/ BILL S RE RENTAL TROLL UNIT BEING STUCK IN, ~~FACE~~

18

@mw-6050 (TOP OF TROLL ~ 13.15' BLOC)
 CALL GRAMZA RE STUCK TROLL. ABLE
 TO PULL MW-26 RENTAL TROLL OUT
 ABLE TO PULL MW-6040 RENTAL OUT. MARK
 LEGERA CALLS FOR WELL KEYS - DIRECT HIM
 TO OLD GUARD HOUSE FOR SOME. JEFF
 OFFSITE @ 1000 TO DELIVER RENTAL
 TROLL + CABLE TO NATURE'S WAY SUPS.
 CHONIN DOWNLOADED TROLLS. (6040); RENTAL
 S/N 48742 (ERROR # 6084 - "UNKNOWN FAILURE
 OCCURRED. CONNECTION WILL BE DROPPED." 4X
 CALL IN-SITU; TRY NEW BATTERIES SWITCH
 OUT CABLE - GET ERROR # 6146 - PROBABLY
 BATTERY NEEDED - J. SMITH TO GET SUPPLIES
 HE'S OFFSITE @ 1035. DOWNLOAD MW-26
 TROLL 9500 - GET ERROR # 6084 MESSAGE
 AGAIN. RESTART COMPUTER. DOWNLOAD MW-26
 LEVEL TROLL DATA, MW-70900 LEVEL TROLL
 DATA, MW-70900 TROLL 9500 DATA (BATTERY @
 80%), MW-71300 LEVEL TROLL GET ERROR
 # 6084 ON RENTAL TROLL 9500 @ MW-71300
 (BATTERY @ 64%). JS BACK ONSITE @ 1100.
 CHANGE TO FRESH BATTERIES IN MW-6040R.
 LAST READING 10/23 @ 0600. DOWNLOAD MW-
 26R TROLL 9500; LAST READING ALSO 10/23 @
 0600. REPLACED BATTERIES + GREASED O-RINGS
 IN MW-70900 TROLL 9500. SET UP TEST

18

FOR MW-70700 TROLL 9500, MW-6050 TROLL
 9500, MW-26 (NEEDS NEW RDO CAP) MW-
 6040 (ALSO NEEDS NEW RDO CAP) - BOTH
 EXPIRE IN 8 DAYS. TALK W/ BILLS RE
 CAPS. SOME BEING ORDERED. PUT
 MW-26 BACK IN WELL, PULL MW-70700
 LEVEL TROLL TO DOWN LOAD. REINSTALL
 MW-6040 + MW-70900. BILL S SAYS
 MARK HARDNER WILL BE ONSITE 10/24 TO
 QC US. START PURGE @ MW-71300 @ 1305 -
 NO PARAMETERS TAKEN DUE TO LNAPL
 FILM ON PROBE WHEN GEARING. SAMPLE
 MW-71300 @ 1330. GIVE 3 VOAS TO MARK.
 LEGERA. GO TO MW-6040 (20 MS/M53 +
 DUPLICATE [INSTEAD OF 6050 WHERE TROLL
 IS HUNG UP IN] - AS PER BILLS APPROVAL
 START PURGE @ 1420. SAMPLE @ 1505.
 MOVE TO MW-70900; PURGE + SAMPLE @
 1640. MOVE TO MW-70700 @ 1710. IT
 DROPS QUICKLY IN WELL. SAMPLE @ 1750
 COLLECTED ~ $\frac{1}{8}$ OF FILTERED ISOPOAC U
 BUT NO FILTERED TOTAL U - LAB WILL NEED
 TO SPLIT SAMPLE. M 70700 DRIES
 OUT. OFFSITE @ 1830 @ OFFICE @ 1900

19

E WEDNESDAY OCTOBER 24 2012

AM - CLOUDY, MISTY '52° RAIN

PM - CLOUDY, 65°

0645 @ OFFICE, DECON WC METER, CAL-
IBRATE YST 6920, DO TAILGATE MTR, GET
SUPPLIES TO RETRINE TROLL. OPEN

DRIVE TO GUTELL (MARK HARDNER @ SITE). ON

SITE @ 0630. GET W/ MARK HARDNER.

LOAD UP TRUCK. GO TO MW-605D

USE 15' OF 1" PVC SCREEN TO PUSH
DOWN ON TOP OF TROLL - FREES UP
AND OUT OF HOLE @ 0905. CALL BS.PURGE + SAMPLE MW-605D @ 1015. COLLECT
3 VOAS FOR USAGE. GO BACK TO GUARD HOUSE
FOR TROLL FOR 605D; FIND @ " "THINK MW-713D + 605D TROLL ARE SWITCHED
SWITCH ON TROLL 9500S AND SET UP NEW
TESTS TO START @ 1400. REINSTALL TROLLS@ MW-713D AND MW-605D MOVE TO
MW-26 @ 1145. PURGE AND SAMPLE @ 1245.

HAND VOAS OVER TO P. LOKEY/USAGE.

CALL TA FOR COURIER - BE HERE ~

1330. DROP EQUIPMENT OFF @ GUARD SHED

DUMP WATER, 4 FULL DRUMS AND 1

DRUM W/ <10 GALLONS W. TA COURIER

ONSITE @ 1340 - SIGN COCS AND TRANSFER

SAMPLES. JEFF AND MARK FASHION GILL

19

NETTING TO 1" PVC SCREEN SECTIONS

GO TO MW-713D @ 1405. TRY

DIFFERENT CONFIGURATIONS OF GILL

NETTING ATTACHED TO 1" PVC. @

1620 GET TROLL 9500 OUT OF
HOLE W/ NETTING(!) BREAK DOWN
PVC + EQUIPMENT. MARK HARDNER

OFFSITE @ 1700. JEFF/KEVIN OFFSITE

@ 1710 GAS UP TRUCK. BACK @

OFFICE @ 1740 - UNLOAD TRUCK.

DONE @ 1800 11.25

APPENDIX B

Sample Collection Logs

(Provided on same CD as Appendix A)



Project Number: 140416

Well/Piez No.: MW 1

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.09

(B) Total Depth: 16.89

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.5

Equipment: Periscope

Purge Start Date/Time: 8-23-11 / 0835

Serial No: LVE 002920

Sample Date/Time: 8-23-11 / 0850

Equipment: YSE 650

Weather: Clear, calm, 65°, 50% humid

Serial No: 85281

Sampling Parameters: (circle) ~~VOCs~~, mth, U, & gen den

Comments: Water contains Red flocculant ($\approx 20\%$ by volume) water is clear.

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0836	7.88	.2	7.00	14.66	2.614	2.41	120.6	90.1
0840	8.04	.8	6.87	14.26	2.595	0.57	72.8	5.7
0843	7.75	1.0	6.87	14.56	2.666	0.46	58.9	23.2
0845	7.72	1.2	6.87	14.56	2.756	0.53	56.7	7.3
0846	7.73	1.3	6.86	14.54	2.769	0.58	55.3	3.9
0847	7.72	1.4	6.86	14.53	2.770	0.58	55.4	3.7
0848	7.76	1.5	6.86	14.54	2.771	0.59	55.3	3.9
8-23-11								

[illegible]



WELL SAMPLING FORM

Comments: REDDISH SLT TURBID. CLEARING UP

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-4

Personnel: [REDACTED]

Casing Dia. (in): 2" PVC

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: ~ 6.19' BTDC

(B) Total Depth: ~ 16.40'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = ~ 1.7

Equipment: PERISTALTIC PUMP

Purge Start Date/Time: 8/19/11 1145

Serial No: LVE 002920

Sample Date/Time: 8/19/11 1200

Equipment: YSI 6280

Weather: SUNNY, 75°

Serial No: 85281

Sampling Parameters: (circle) VOCs, GEN CHM/ANIONS, (TAL METALS TOTAL + ISOTOPIC U; FILTERED + UNFILTERED)

Comments: CLEAR

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	^{mg/l} DO	ORP (mV)	Turb. (NTU)
1148	6.85	0.1	7.51	16.72	0.605	1.99	53.6	64.3
1150	6.83	0.3	7.36	16.02	0.648	1.79	71.8	193.7
1152	6.85	0.5	7.30	15.85	0.649	1.32	84.8	17.7
1154	6.84	0.7	7.30	15.66	0.647	0.67	90.3	-10.9
1156	6.83	1.0	7.30	15.69	0.642	0.73	93.6	86.6
1158	6.82	1.2	7.28	15.75	0.639	0.51	96.3	198.4

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-05

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 5.44'

(B) Total Depth: _____

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = _____

Equipment: Peristaltic

Purge Start Date/Time: 8-22-11 / 1047

Serial No: LVE-002920

Sample Date/Time: 8-22-11 / 1105

Equipment: YSI-650

Weather: Partly cloudy 65, 5 mph, wind 70% humidity Serial No: 85281

Sampling Parameters: (circle) VOCs, metals, U, & organochlorine

Comments: water is clear collected MS/MSD @ THIS LOCATION

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-06

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: ~ 7.67'

PW: 0.2 ppmv

(B) Total Depth: ~ 19.0'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.8

Equipment: Peristaltic

Purge Start Date/Time: 8/12/11 0940

Serial No: LVE 002920

Sample Date/Time: 8/12/11 1000

Equipment: YSI-650

Weather: SUNNY 70°

Serial No: 85287

Sampling Parameters: (circle) VOCs ^{7/28-12/11}

Mtbs, U, & gen chem

Comments: Water is clear

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0942	8.22	0.2	7.30	14.30	1.138	3.08	88.1	46.4
0946	8.22	0.5	7.01	13.66	1.067	0.87	86.9	150.5
0948	8.23	0.7	6.98	13.68	1.058	0.46	89.3	8.9
0950	8.25	1.0	6.97	13.69	1.035	0.36	90.2	73.9
0952	8.27	1.2	6.96	13.70	1.018	0.41	91.2	0.6
0954	8.28	1.5	6.96	13.78	1.017	0.39	91.4	21.0
0955	8.28	1.7	6.96	13.76	0.994	0.27	93.0	79.2
0956	8.27	1.8	6.96	13.78	0.993	0.27	93.3	80.9




Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: NW-07

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.90

PID reading 0.3 ppm

(B) Total Depth: 20.18

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.9

Equipment: Peristaltic

Purge Start Date/Time: 8-12-11 / 1115

Serial No: LVE 002920

Sample Date/Time: 8-12-11 / 1135

Equipment: YSE 650

Weather: Clear, calm, 80°, humidity 70% Serial No: 85287

Sampling Parameters: (circle) ~~VOCs~~ meth, U, & gen chem

Comments: First 15 galts - very red, flocculant & Fe.

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1118	8.00	.52	7.67	24.68	0.005	7.03	43.0	49.5
1122	8.09	.8	7.86	25.67	0.005	7.12	43.4	29.5
1123	8.09	.8	7.20	16.00	0.895	1.07	43.4	29.5
1127	8.12	1.2	7.03	15.43	0.887	0.28	35.1	13.1
1129	8.15	1.4	7.02	15.37	0.886	0.25	32.9	6.0
1130	8.17	1.6	7.01	15.35	0.883	0.23	31.5	6.3
1131	8.13	1.8	7.01	15.38	0.882	0.22	30.4	6.4
1132	8.14	2.9	7.01	15.37	0.881	0.20	29.9	6.5
<u>8-12-11</u>								

Slightly
cloudy
(Red)

Clear and
chamber

Water
clear

7/12 8-12-11



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-08

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 9.19'

PID reading = 1.1 ppm

(B) Total Depth: 20.16'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: Peristaltic Pump

Purge Start Date/Time: 8-8/1116

Serial No: LVE 002920

Sample Date/Time: 8-8/1140

Equipment: YSI 650

Weather: Partly cldy, 80°, 5 mph breeze 80°

Serial No: 85281

Sampling Parameters: (circle) VOCS, mtls, U, & gen chem

Comments: [REDACTED]

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	mg/L DO	ORP (mV)	Turb. (NTU)
1117	9.91	~0.1	6.91	14.64	1.996	2.30	-77.5	-1.8
1122	10.12	~0.3	6.81	14.25	1.975	1.38	-77.5	-1.5
1123	10.30	~0.6	6.80	14.24	1.950	0.73	-74.8	-0.6
1125	10.65	~1.0	6.80	14.24	1.947	0.63	-73.5	3.0
1128	10.55	~1.2	6.80	14.20	1.963	0.42	-73.7	-2.0
1130	10.50	~1.4	6.80	14.24	1.967	0.35	-76.3	-0.2
1133	10.49	~	6.80	14.37	1.971	0.24	-81.2	-0.8



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-09

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 8.38'

PID reading = 0.2 ppm

(B) Total Depth: 19.13'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: Peristaltic Pump

Purge Start Date/Time: 8-8/1018

Serial No: LVE 002920

Sample Date/Time: 8-8/1040

Equipment: YSI 650

Weather: Cldy, 80°, calm, humid 80%

Serial No: 85281

Sampling Parameters: (circle) VOCs, mels, U, & gen chem.

Comments: Water is clear

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1018	8.77	.2	7.38	17.58	0.235	2.00	746.3	28.9
1022	8.78	.5	7.06	15.68	0.692	0.36	718.0	19.9
1026	8.80	1.0	7.06	15.69	0.681	0.32	748.0 765.0	5.2
1027	8.79	1.1	7.06	15.66	0.680	0.27	766.2	4.3
1028	8.79	1.2	7.07	15.66	0.679	0.27	766.7	4.6
1029	8.80	1.3	7.07	15.63	0.678	0.22	767.0	4.5



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW10

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: ~ 8.69' BTOC

PID: 0.0 ppm

(B) Total Depth: 20.18

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = _____

Equipment: YSI 6820

Purge Start Date/Time: 8/12/11 1032

Serial No: 85287

Sample Date/Time: 8/12/11 1055

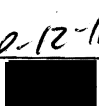
Equipment: GEOPUMP

Weather: SUNNY, 75°

Serial No: WE002920

Sampling Parameters: (circle) VOCs TRAC METALS, TRAC U, ISOTOPIC U (FILTERED + UNFILTERED)

Comments: Clear with high % of flocculated iron (red).

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1033	9.79	.2	7.18	14.01	0.867	2.40	-49.4	988.7
1037	10.02	.6	6.89	13.09	0.849	0.69	-40.6	1132.7
1042	9.87	1.2	6.93	13.48	0.834	1.11	-27.0	21.1
1044	10.00	1.4	6.88	13.33	0.816	0.51	-26.4	11.6
1046	10.05	1.6	6.87	13.35	0.818	0.51	-25.6	8.0
1047	10.00	1.7	6.87	13.55	0.819	0.51	-25.5	8.5
1048	10.00	1.8	6.86	13.58	0.819	0.49	-25.4	7.4
1049	9.98	1.9	6.87	13.59	0.820	0.49	-25.8	4.6
								

Cleaned out chamber water slightly cloudy



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-11

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

PID reading 1.5 ppm

(A) Depth to Water: 9.58'

(B) Total Depth: 21.16'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.9

Equipment: Peristaltic Pump

Purge Start Date/Time: 8/8/08 0840

Serial No: LVE 002920

Sample Date/Time: 8/8/08 0910

Equipment: YSI 650

Weather: Cloudy, 75°, calm, 90% Humidity Serial No: 85281

Sampling Parameters: (circle) VOCs, mtb, Ur, gen chem

Comments: Water is clear

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0842	10.30	0.2	6.79	16.15	1.203	1.98	25.2	9.9
0844	10.57	0.4	6.70	16.09	1.211	0.76	39.8	758
0846	10.72	0.6	6.68	16.25	1.210	0.41	85.8	1391
0848	10.78	0.8	6.69	16.42	1.207	0.34	101.4	1430
0850	10.81	1.0	6.61	16.48	1.148	0.60	109.5	1433.1
0852	10.81	1.2	6.61	16.44	1.052	0.52	115.6	1451
0854	10.83	1.5	6.62	16.42	1.096	0.48	115.7	2.8
0856	10.83	1.7	6.62	16.27	1.026	0.35	120.2	2.7
0857	10.83	1.8	6.63	16.31	1.023	0.35	121.8	2.9
0858	10.89	1.9	6.64	16.31	1.024	0.36	122.7	9.3
0859	10.89	2.0	6.64	16.14	1.026	0.35	123.8	10.1



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-12

Personnel: [REDACTED]

Casing Dia. (in): 2" PVC

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: ~ 6.24' BTOC

(B) Total Depth: _____

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = _____

Equipment: GED PUMP

Purge Start Date/Time: 8/22/11 1215

Serial No: LVE

Sample Date/Time: 8/22/11 1230

Equipment: YSE 6280

Weather: A. SUNNY, BREEZY, 70°

Serial No: 85281

Sampling Parameters: (circle) VOCs, ANIONS/GEN. CHEM, [TAL METALS, TOTAL & ISOTOPIC U - FILTERED + UNFILTERED]

Comments: CLEAR WATER

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	mg/l DO	ORP (mV)	Turb. (NTU)
1218	6.50'	0.2	7.24	14.77	0.439	1.63	-11.7	35.0
1220	6.49'	0.3	7.18	14.88	0.433	0.90	-12.7	35.6
1222	6.52'	0.6	7.13	15.07	0.425	0.65	-11.0	12.2
1225	6.53'	1.0	7.12	15.08	0.427	0.42	-12.9	5.2
1227	6.53'	1.5	7.12	15.07	0.430	0.36	-16.2	-0.1
1228	6.53'	1.9	7.12	15.05	0.430	0.32	-17.8	0.6



Shaw Environmental & Infrastructure, Inc.

NYSDAC SPLIT TAKEN

WELL SAMPLING FORM

Project Number: ^{kc} ~~MW-13~~ 140416

Well/Piez No.: MW-13D

Personnel:

Casing Dia. (in): 2

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: ~8.32' BDC

PID: 0.5 ppmv

(B) Total Depth:

Purge Method: (circle) Bailer Grundfos Peristaltic Other

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) =

Equipment:

Purge Start Date/Time: 8/11/11 1143

Serial No:

Sample Date/Time: 8/11/11 1200

Equipment:

Weather: SUNNY, WINDY

Serial No:

Sampling Parameters: (circle) VOCs, TAL METALS (FILTERED/UNFILTERED) TOTAL U +
ISOTOPIC U (FILTERED/UNFILTERED), ANIONS, GEN CHAM.

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1143	~8.32'	<0.1	7.74	17.40	1.263	1.75	52.2	7.1
1145	9.59'	0.2	7.32	17.42 ^{16.24}	1.192	0.61	46.6	5.4
1147	9.58'	0.3	7.27	15.74	1.206	0.48	48.7	1.3
1149	9.58'	0.4	7.26	15.61	1.240	0.46	47.1	-2.7
1151	9.62'	0.6	7.26	15.57	1.271	0.33	45.2	-3.7
1153	9.64'	0.8	7.26	15.61	1.272	0.32	42.3	-3.6
1155	9.66'	1.1	7.27	15.60	1.280	0.31	41.7	-4.3
1157	9.68'	1.3	7.26	15.58	1.288	0.36	40.2	-4.4



Project Number: 140416

Well/Piez No.: NW-14

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 8.61

PID reading 0.3

(B) Total Depth: 6' 7 1/2 ~~22.5~~ 19.58

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: peristaltic

Purge Start Date/Time: 8-16 / 0902

Serial No: 74 JS UE 002920

Sample Date/Time: 8-16/0915

Equipment: YSI 650

Weather: Clear, 70°, 5 mph.

Serial No: 85281

Sampling Parameters: (circle) ~~VOCs~~, mals, U, & gen chem

Comments: Slightly cloudy water (gray)

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0907	9.30	.2	7.37	15.57	1.477	2.80	-57.9	52.1
0908	9.29	.6	7.26	15.69	1.487	1.12	-67.7	25.6
0910	9.28	1.0	7.24	15.77	1.491	0.70	-69.8	18.5
0912	9.28	1.2	7.21	15.74	1.511	0.88	-70.6	16.6
0913	9.28	1.3	7.21	15.79	1.516	0.96	-69.9	17.0
0914	9.28	1.4	7.20	15.73	1.518	0.98	-68.9	9.5
0915	9.28	1.5	7.21	15.72	1.519	0.92	-69.1	9.2
8-16-11								

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-15

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 12.11'

(B) Total Depth: 76/5 23.08'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: Peristaltic

Purge Start Date/Time: 8-16/1018

Serial No: LVE 002920

Sample Date/Time: 8-16 / 1035

Equipment: V57 650

Weather: Clear, 80°, 50 mph, 70% humidity Serial No: 85281

Sampling Parameters: (circle) ~~VOCs~~ mths, U, & gen chng

Comments: Clear water to begin

[illegible]

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-17

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 9.38'

PID reading 0.0 ppm

(B) Total Depth: 20.09'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: Peristaltic

Purge Start Date/Time: 8-16 / 1240

Serial No: LVE 002920

Sample Date/Time: 8-16 / 1251300

Equipment: YSI 650

Weather: Clear, 80°, 5mph, 70% humid. Serial No: 85281

Sampling Parameters: (circle) ~~VOCS~~ Mtbs, U, & gen dom Fe

Comments: Water very cldy, rust color, abundant flocculant

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1242	10.05	0.2	7.16	18.16	1.820	0.82	-91.4	833.7
1246	10.62	0.5	7.13	16.90	1.821	0.57	-28.2	150.7
1250	10.08	0.9	7.10	16.38	1.814	0.38	-17.0	161.0
1252	11.44	1.2	7.09	15.90	1.803	0.34	9.6	43.7
1254	11.60	1.5	7.09	15.82	1.794	0.30	-5.1	29.3
1255	11.66	1.6	7.09	15.79	1.793	0.30	-3.0	73.6
1256	11.71	1.7	7.09	15.78	1.790	0.31	-2.9	73.2
<div>Water getting clear</div>								
			8-16-11					



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-18

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.48'

PID reading 0.0

(B) Total Depth: 18.06'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: Peristaltic

Purge Start Date/Time: 8-5-11/1232

Serial No: 002920

Sample Date/Time: 8-5-11/12

Equipment: YSI 6820

Weather: 85°, partly cloudy, calm, humid

Serial No: 85281

Sampling Parameters: (circle) ~~VOCS~~ 712 85% metals, U, & gen chem

Comments: Water is clear.

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1234	7.95	0.2	7.60	18.08	1.151	1.98	44.3	18.2
1236	8.05	0.4	7.18	16.85	1.140	0.87	37.1	40.7
1238	8.28	0.8	7.11	16.51	1.138	0.57	43.2	82.6
1239	8.30	1.0	7.09	16.49	1.132	0.50	43.7	51.6
1240	8.32	1.2	7.07	16.35	1.122	0.37	57.9	0.1
1241	8.32	1.4	7.07	16.36	1.120	0.33	62.1	0.2
1243	8.32	1.6	7.06	16.40	1.116	0.29	66.6	1.0
1244	8.40	1.8	7.05	16.36	1.117	0.26	66.9	0.9
1245	8.40	2.0	7.05	16.35	1.114	0.24	66.8	1.1



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-19

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 10.06'

PID reading 0.0

(B) Total Depth: 19.63'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 16.5 1.53

Equipment: Peristaltic

Purge Start Date/Time: 8-4-11 / 1312

Serial No: LVE 002920

Sample Date/Time: 8-4-11 / 1330

Equipment: Peristaltic

Weather: 85° Partly Cldy, 5 mph breeze 80%

Serial No: LVE 002920

Sampling Parameters: (circle) VOCs lum

Comments: Uranium, Gen Chem, T&L mths.

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1312	11.05	0.25	9.45	19.02	0.709	1.50	72.3	42.3
1314	12.4	0.5	9.44	18.17	0.695	1.00	76.3	45.1
1316	12.8	0.7	9.35	18.15	0.689	1.00	13.0	45.0
1318	13.0	1.0	9.32	18.20	0.674	1.34	21.3	44.8
1319	13.7	1.1	9.30	18.39	0.668	1.33	26.9	50.3
1320	14.2	1.2	9.30	18.68	0.655	3.25	37.9	120.2
1321	14.3	1.4	9.24	18.65	0.665	3.35	40.1	418.5
1322	14.8	1.5	9.17	18.50	0.683	3.09	55.7	1383
1324	15.0	1.65	9.00	17.94	0.702	2.61	70.8	1390
1325	15.4	1.70	8.99	17.90	0.709	2.58	70.2	1397
1326	15.8	1.9	8.98	17.88	0.711	2.56	71.1	1398



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 190416

Well/Piez No.: MW-20

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 9.66

PID reading 1.2 ppm

(B) Total Depth: 20.19

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.6

Equipment: Peristaltic

Purge Start Date/Time: 8-18 / 1148

Serial No: LVE-002220

Sample Date/Time: 8-18 / 1205

Equipment: YSI 650

Weather: cloudy, 85°, 5 mph, 80% humidity Serial No: 85281

Sampling Parameters: (circle) VOCs mtls, U, & gen chem

Comments: clear water.

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1149	10.28	.2	7.60	19.62	0.750	5.50	39.7	3.1
1154	11.86	.7	7.21	19.12	0.838	5.90	60.6	36.9
1156	12.57	1.0	7.11	18.29	0.864	1.68	71.0	58.8
1158	12.88	1.4	7.09	18.25	0.877	1.49	75.4	126.9
1200	13.18	1.6	7.09	18.00	0.878	1.45	81.8	45.3
1201	13.28	1.7	7.09	17.79	0.874	1.44	83.8	57.1
1202	13.29	1.8	7.10	17.81	0.875	2.1.49	83.0	57.3
<u>8-18-11</u>								



Project Number: 140416

Well/Piez No.: NW-21

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 13.47

(B) Total Depth: 24.20

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: peristaltic

Purge Start Date/Time: 12-8-18 / 1232

Serial No: LVB 002

Sample Date/Time: 8-18-11 / 1245

Equipment: YSE 650

Weather: Cldy, light rain, 85°, calm, 90° Humid

Serial No: 85281

Sampling Parameters: (circle) VOCs

Comments: Clear water

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1234	14.48	.2	7.50	16.10	1.330	2.50	-54.0	-2.9
1239	14.74	.8	7.16	14.77	1.358	0.76	-27.7	-6.9
1241	14.81	1.0	7.16	14.80	1.488	0.65	-29.8	-7.0
1243	14.92	1.2	7.16	14.90	1.491	0.63	-44.9	-7.0
1244	14.95	1.3	7.16	14.97	1.499	0.62	-45.4	-7.0
8-18-11								
[REDACTED]								



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-22

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.24'

PID reading = 0.5

(B) Total Depth: 20.20'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.1

Equipment: PERISTALTIC pump

Purge Start Date/Time: 0910 8/5/11

Serial No: 002920

Sample Date/Time: 0930 8/5/11

Equipment: YSI 6820

Weather: 70°, partly cldy, 5mph breeze

Serial No: 85281

Sampling Parameters: (circle) VOCs - mths, Uranium, Gen Chem

Comments: Water is initially very brown

MS/MSD # 1 COLLECTED

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0912	7.75	0.2	8.00	17.20	0.705	3.01	-159.7	121.2
0914	7.80	0.4	7.46	15.58	0.705	0.91	-142.0	149
0916	7.87	0.5	7.33	15.79	0.702	0.46	-116.3	1423
0918	7.90	1.0	7.29	15.98	0.700	0.40	-96.0	1.8
0919	7.92	1.2	7.27	16.08	0.700	0.50	-87.4	2.8
0920	7.94	1.4	7.25	16.33	0.698	0.42	-76.4	9.7
0921	7.96	1.7	7.25	16.46	0.697	0.38	-73.6	8.9
0922	7.98	2.0	7.24	16.63	0.696	0.30	-74.8	8.7
0923	7.80	2.2	7.23	16.68	0.699	0.29	-73.8	8.6
0924	7.90	2.4	7.23	16.69	0.696	0.28	-74.7	8.4

water clear



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-23

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 6.01'

PID reading = 0.0

(B) Total Depth: 19.05

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.1

Equipment: Peristaltic

Purge Start Date/Time: 8-4-11

Serial No: LVE 002920

Sample Date/Time: 8-4-11

Equipment: Peristaltic

Weather: 75°, Partly Cloudy, Calm, Hum=75%

Serial No: LVE 002920

Sampling Parameters: (circle) VOCs Uranium, Gen chem, & TAL met

Comments: _____

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1025	6.30	0.5	7.52	16.37	0.798 28.3	1.30	72.1	7.2
1028	6.30	1.0	7.13	16.60	0.789	0.44	20.6	1.0
1030	6.31	1.5	7.12	16.64	0.773	0.40	23.7	0.1
1032	6.31	2.0	7.11	16.64	0.760	0.34	27.3	1.8
1035	6.30	2.25	7.11	16.68	0.740	0.27	28.2	2.2
1037	6.30	2.50	7.11	16.65	0.738	0.26	30.4	2.1
1038	6.30	2.6	7.12	16.66	0.736	0.25	30.3	2.2
1039	6.30	2.75	7.12	16.66	0.734	0.25	30.9	2.3



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-24

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 3.99'

PID reading 6.1

(B) Total Depth: 16.65'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.03

Equipment: Peristaltic

Purge Start Date/Time: 8/9/11 0855

Serial No: LVE 002920

Sample Date/Time: 8/4/11 0925

Equipment: Peristaltic

Weather: 70°, cloudy, calm, Humidity 80%

Serial No: LVE 002920

Sampling Parameters: (circle) VOCs

Comments: _____

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond. <u>nk</u>	DO	ORP (mV)	Turb. (NTU)
0855	3.99	0.5 2.5	7.9	15.27	1.072	1.00	52.0	0.7
0858	4.01	1.0	7.40	14.90	1.06	0.88	53.0	0.6
0901	4.04	1.5	7.36	14.72	1.048	0.77	53.7	2.3
0904	4.06	2.0	7.33	14.72	1.059	0.30	54.0	0.3
0906	4.05	2.5	7.31	14.75	1.070	0.28	54.3	0.2
0908	4.05	2.8	7.31	14.76	1.071	0.28	54.4	0.3



Comments: water - clear DUPLICATE 9003 COLLECTED AS WELL

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-26

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: ~ 3.25' BTOC

PID: 0.2 ppmv

(B) Total Depth: _____

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = _____

Equipment: YSI 6280

Purge Start Date/Time: 8/10/11 1257

Serial No: 85281

Sample Date/Time: 8/10/11 1320

Equipment: GRO PUMP

Weather: W SUNNY, BREEZY

Serial No: LVE 002920

Sampling Parameters: (circle) VOCs TAL METALS, TOTAL + 150 V (FILTERED + UNFILTERED), ANIONS, GRW CHEMISTRY

Comments: COLLECTED BY MISTAKE

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	mg/l DO	ORP (mV)	Turb. (NTU)
1258	3.55'	< 0.1	7.52	19.49	2.366	3.06	9.6	4.0
1300	3.57'	~ 0.3	7.29	17.91	2.334	2.14	0.5	-3.9
1302	3.58'	~ 0.5	7.27	17.51	2.317	1.55	0.1	-7.3
1304	3.56'	~ 0.7	7.29	17.24	2.297	0.46	1.1	-5.5
1306	3.59'	~ 1.1	7.33	16.83	2.278	0.37	1.8	175.5
1308	3.59'	~ 1.3	7.34	16.93	2.269	0.36	2.9	-27.9
1310	3.59'	~ 1.6	7.36	16.88	2.269	0.26	4.6	23.2
1312	3.58'	~ 1.8	7.37	16.91	2.266	0.28	5.5	-28.4
1314	3.58'	~ 2.1	7.37	16.86	2.262	0.27	7.9	-28.1
1316	3.60'	~ 2.5	7.37	16.61	2.259	0.29	9.4	138.0
1318	3.55'		7.37	16.88	2.258	0.26	11.9	-29.5

? AIR BUBBLE

24

WELL SAMPLING FORM

Project Number: 1404/6

Well/Piez No.: MW 600 S

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: Dry - no water.

(B) Total Depth: 10.43

Purge Method: (circle) Bailer Grundfos Peristaltic Other NA

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) =

Equipment: _____

Purge Start Date/Time: NA

Serial No: _____

Sample Date/Time: NA

Equipment: _____

Weather: cloudy, 65°, calm 70% humidity Serial No: _____

Sampling Parameters: (circle) ~~VOCs~~

Comments: _____

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW 601D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 10.70

(B) Total Depth: 22.15

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.8

Equipment: Peristaltic

Purge Start Date/Time: 1059

Serial No: LV5 002920

Sample Date/Time: 11

Equipment: YSI 650

Weather: Partly cloudy, 80°, 5 mph, 70% humidity

Serial No: 85281

Sampling Parameters: (circle) VOCs mtls, U, & gen chem

Comments: Water is clear

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1058	11.52	.2	7.60	18.70	1.601	3.67	-179.6	4.0
1100	11.80	.6	7.13	16.18	1.565	0.74	-167.4	154.1
1102	11.88	1.0	7.13	16.15.98	1.463	0.59	-158.4	82.6
1103	11.65	1.1	7.13	15.98	1.464	0.53	-153.2	79.2
1104	11.65	1.3	7.13	15.93	1.420	0.52	-151.0	101.3
1105	11.65	1.5	7.13	15.89	1.390	0.43	-146.1	93.8
1106	11.65	1.7	7.13	15.83	1.387	0.41	-145.9	89.9
1107	11.65	1.9	7.13	15.82	13.86	0.40	-144.9	87.8
8-18-11								

water became cloudy (gray)



Shaw Environmental & Infrastructure, Inc.

NYSDOT
SPLIT TAKEN

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW 602 D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 9.70'

PID reading 0.0

(B) Total Depth: 22.08'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.9

Equipment: Peristaltic

Purge Start Date/Time: 8-11/0842

Serial No: LVE002920

Sample Date/Time: 8-11/0915

Equipment: YSI 650

Weather: Clear, 70°, 5 mph, humidity 75% Serial No: 85287

Sampling Parameters: (circle) VOCs mth, U, &

Comments: Beginning primarily grout color, sampled @ 0850 - clear lines & YSI & grout

Grout
so far
very
cloudy

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0833	9.86	0.2	7.65	16.05	1.835	3.27	86.3	105.9
0902	9.97	0.5	7.43	15.28	1.107	0.96	48.6	177.9
0904	9.96	0.7	7.37	15.07	1.093	0.58	35.7	118.8
0908	9.97	1.2	7.29	15.13	1.099	0.36	23.7	78.6
0909	9.97	1.3	7.29	15.22	1.107	0.33	23.2	75.7
0911	9.97	1.4	7.30	15.56	1.105	0.32	22.9	78.3
0912	9.97	1.5	7.31	15.16	1.111	0.33	22.0	58.7
0913	9.97	1.6	7.31	15.19	1.107	0.32	21.8	56.9



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-603 D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.26'

PID reading 1.7

(B) Total Depth: 22.61'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID) Peristaltic

Well Volume (gal) = 2.4

Equipment: LVE 0029202

Purge Start Date/Time: 8/5/08 11

Serial No: _____

Sample Date/Time: 8/5/08 10

Equipment: YSI 6820

Weather: 25°, partly cloudy

Serial No: 85281

Sampling Parameters: (circle) VOCs

Comments: Water - very Red (Iron Pbc) @ 1 gallon clean chamber

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0812	7.32	0.2	7.55	15.10	1.149	3.08	-29.3	1371
0814	7.90	0.4	7.15	14.41	1.152	1.02	-27.8	1407
0817	7.95	0.7	6.98	13.46	1.137	0.39	-28.8	245
0820	7.88	1	7.14	13.55	1.102	2.18	-14.3	625
0823	8.1	1.4	6.99	Flushed Chamber				
0826	7.85	2.0	7.21	13.56	1.080	2.60	-13.5	53.2
clearing 0828	7.80	2.2 ^{2.5}	7.06	13.47	1.083	1.25	-18.5	41.4
0830	7.95	2.7	7.02	13.18	1.080	0.60	-22.7	36.6
0831	7.97	3.0	7.02	13.16	1.078	0.53	-23.8	42.8
0832	7.97	3.2	7.01	13.14	1.071	0.51	-24.1	10.7
0833	7.98	3.3	7.02	13.15	1.069	0.52	24.4	9.3



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140916

Well/Piez No.: MW 609D

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.30'

PID reading 0.6 ppm

(B) Total Depth: 18.09'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.7

Equipment: Peristaltic

Purge Start Date/Time: 8-10/0812

Serial No: LVE 002920

Sample Date/Time: 8-10/0830

Equipment: YSI 650

Weather: Clear, 5-10 mph, 70°

Serial No: 85281

Sampling Parameters: (circle) VOCs, U, mth, & gen chem.

Comments: Water Cloudy (gray), Cloudy to end - never clear

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0815	7.6	.2	8.08	16.85	2.090	3.2	48.8	5.2
0818	7.75	.5	7.30	16.66	2.611	1.28	56.3	5.8
0820	7.72	.8	7.23	16.85	2.619	0.97	59.2	5.7
0822	7.65	1.0	7.23	16.99	2.569	0.77	59.6	7.2
0823	7.62	1.2	7.23	17.11	2.563	0.73	60.2	6.9
0824	7.62	1.4	7.23	17.09	2.493	0.63	61.9	22.9
0825	7.60	1.5	7.23	17.06	2.450	0.69	63.1	19.5
0826	7.60	1.6	7.23	17.05	2.451	0.70	63.7	18.8
0827	7.60	1.7	7.23	16.99	2.389	0.69	66.2	16.9
0828	7.60	1.8	7.23	16.89	2.379	0.68	66.8	16.2



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW605D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 3.34

(B) Total Depth: 17.40

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.2

Equipment: Peristaltic

Purge Start Date/Time: 8-10/0958

Serial No: LVE 002920

Sample Date/Time: 8-10/

Equipment: YSI 650

Weather: Partly cldy, 10-20 mph wind, 75°

Serial No: 85281

Sampling Parameters: (circle) VOCs, mths, U, & gen chem

Comments: Water slightly cloudy

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0958	3.60	0.2	7.83	16.40	0.925	2.01	38.3	5.1
1002	3.68	0.5	7.34	15.65	0.872	0.73	9.3	14.0
1004	3.68	0.7	7.30	15.83	0.867	0.41	3.1	55.0
1006	3.68	0.9	7.29	15.90	0.867	0.34	-1.6	99.9
1007	3.68	1.0	7.29	15.97	0.866	0.33	-2.9	99.9
1008	3.68	1.1	7.29	16.13	0.867	0.31	-3.0	106.9
1009	3.68	1.2	7.29	16.14	0.863	0.31	-3.1	106.2
1010	3.68	1.3	7.29	16.18	0.861	0.30	-3.4	106.7

Water clear



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-606D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 8.13

PID reading 0.7

(B) Total Depth: 8.16 19.58 22.57

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.3

Equipment: Peristaltic

Purge Start Date/Time: 8-16/0827

Serial No: LVE 002920

Sample Date/Time: 8-16/0845

Equipment: YSI 650

Weather: Clear, 70°, 5 mph breeze, 70% humidity

Serial No: 85281

Sampling Parameters: (circle) VOCs, metals, U, & gen chem

Comments: Clear water

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0828	8.65	.2	7.27	14.05	1.584	3.56	-7.8	22.4
0832	8.79	.5	7.15	14.16	1.550	0.71	-37.5	22.5
0834	8.74	.8	7.16	14.62	1.549	0.60	-46.4	20.8
0836	8.76	1.1	7.18	14.69	1.554	0.46	-52.5	16.0
0838	8.80	1.4	7.22	14.68	1.555	0.39	-58.9	9.8
0840	8.80	1.6	7.25	14.79	1.539	0.61	-60.4	4.8
0842	8.82	1.8	7.24	14.81	1.536	0.60	-60.9	4.3
0843	8.82	1.920	7.23	14.80	1.537	0.60	-61.1	4.3
0844	8.83	2.1	7.23	14.81	1.538	0.61	-61.0	4.0
<hr/>								
<hr/>								
<hr/>								

8-16-11



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-606DR

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 8.23'

PIP reading 0.1 ppm

(B) Total Depth: 22.47

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.2

Equipment: Peristaltic

Purge Start Date/Time: 8-16/0940

Serial No: LVE-002920

Sample Date/Time: 8-16/0955

Equipment: YSI 650

Weather: clear, 75°, 5 mph, 70% humidity

Serial No: 85281

Sampling Parameters: (circle) VOCs metals, Al, & gen chem

Comments: Very clear water

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0941	8.89	0.2	7.51	15.16	1.566	2.50	74.9	9.2
0945	7.04	0.6	7.10	13.43	1.769	0.71	-96.9	197.5
0948	9.06	0.8	7.06	13.25	2.099	0.39	-114.4	8.5
0950	9.07	1.2	7.07	13.25	2.131	0.33	-116.3	54.6
0951	9.07	1.4	7.07	13.24	2.134	0.32	-117.0	53.0
0952	9.09	1.6	7.07	13.23	2.140	0.33	-118.0	10.4
0953	9.09	1.8	7.07	13.21	2.141	0.31	-119.0	10.3
<u>8-16-11</u>								



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-607 D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 8.85'

PID reading 1.3 ppm

(B) Total Depth: 19.79'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.8

Equipment: peristaltic

Purge Start Date/Time: 8-19 0829

Serial No: LVE 002920

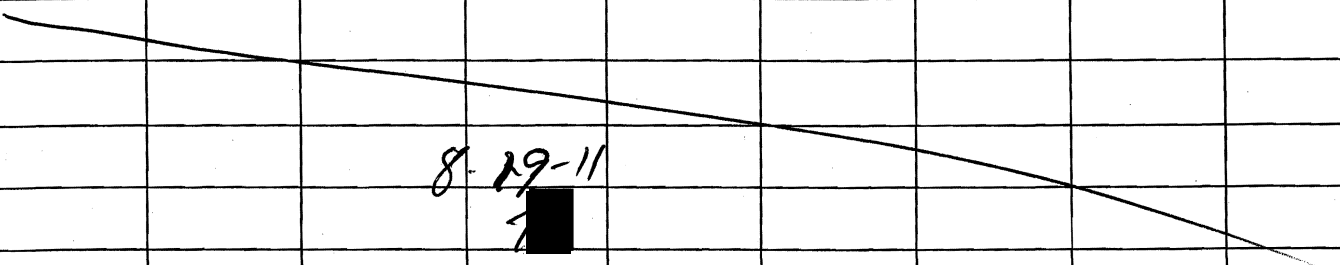
Sample Date/Time: 8-19 0845

Equipment: VSI 650

Weather: Clear, 70°, calm, humidity 80% Serial No: 85281

Sampling Parameters: (circle) ~~VOCS~~ mtb, U, & gen chem

Comments: Water very cloudy (grey) at start. Water never cleared up.

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0830	9.1	0.2	7.09	15.50	1.316	3.47	-124	200.1
0835	9.32	0.7	7.07	15.16	1.336	0.77	-149.7	180.2
0837	9.35	0.9	7.10	15.33	1.318	0.56	-151.1	212.0
0839	9.34	1.1	7.13	15.35	1.279	0.44	-149.8	575.5
0841	9.30	1.3	7.15	15.39	1.270	0.46	149.5	570.1
0842	9.28	1.4	7.15	15.42	1.269	0.45	150.3	572.3
								

Very grey (ground) influence

W

8-19-11

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-701DD

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 11.95

(B) Total Depth: 42.8

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.9

Equipment: Peristaltic

Purge Start Date/Time: 8-19-11 / 1329

Serial No: LVE-002920

Sample Date/Time: _____

Equipment: VSI - 650

Weather: Partly Cldy, 85° Calm, 80% humidity Serial No: 85281

Sampling Parameters: (circle) VOCs mths, U, & gen chem

Comments: water slightly cldy

[illegible]



Project Number: 140416

Well/Piez No.: NW702DP

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 9.44

PID reading 0.2 ppm

(B) Total Depth: 41.46

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 5.1

Equipment: Peristaltic

Purge Start Date/Time: 8-11 / 0958

Serial No: LVE 002920

Sample Date/Time: 8-11 / 1015

Equipment: YSI 650

Weather: Partly Cloudy, 5-10 mph, 75°

Serial No: 85287

Sampling Parameters: (circle) VOCs, mtb, u, & gen chem

Comments: Water is clear

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-203 DD

Personnel: 

Casing Dia. (in): _____

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 25.40'

PID reading: 0.9 ppm

(B) Total Depth: 41.78'

Purge Method: (circle) Bailer Grundfos

~~Peristaltic~~

Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.6

Equipment: Grundfos

Purge Start Date/Time: 8-19 0900

Serial No: 11511

Sample Date/Time: 8-19 0915

Equipment: YSI 650

Weather: clear, calm, 70°, 80% humidity

Serial No: 85281

Sampling Parameters: (circle) VOCs, mtb, U, & gen chem

Comments: water very cloudy (grey)

Time	Water Level (ft to)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0901	25.67	.2	6.93	12.02	2.655	2.30	-62.7	1828.4
0906	25.55	.7	6.77	12.56	2.657	0.50	-69.8	1602.5
0910	25.55	1.1	6.77	12.88	2.644	0.36	-65.8	200.2
0911	25.55	1.2	6.77	12.89	2.643	0.34	-66.1	180.1
0912	^{11h} 25.55	1.3	6.77	13.05	2.640	0.33	-67.2	148.2
0913	^{11h} 25.55	1.4	6.77	13.11	2.634	0.33	-70.1	157.6
0914	^{11h} 25.55	1.5	6.77	13.12	2.637	0.33	-70.8	158.1



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-704DD

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 3.30'

(B) Total Depth: 38.79'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 5.7

Equipment: Peristaltic Pump

Purge Start Date/Time: 8-10 / 1051

Serial No: LVE 002920

Sample Date/Time: 8-10 /

Equipment: YSI 650

Weather: Partly cloudy, 10-20 mph wind 75° Serial No: 85287

Sampling Parameters: (circle) VOCs, nths, U, & gen chem

Comments: Water is clear

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1052	4.2	.2	8.71	17.07	3.882	3.32	62.4	24.1
1058	4.45	.5	8.38	13.78	4.944	0.59	69.6	69.9
1059	4.68	.8	8.21	13.38	3.860	0.32	68.3	109.5
1101	4.68	1.0	7.88	13.36	2.739	0.27	70.2	178.9
1103	4.70	1.2	7.89	13.32	2.640	0.23	69.9	30.7
1105	4.72	1.5	7.87	13.22	2.599	0.21	71.0	73.1
1106	4.74	1.6	7.85	13.19	2.562	0.20	71.4	100.4
1107	4.65	1.7	7.82	13.20	2.558	0.19	72.1	-4.4
1108	4.68	1.8	7.80	13.19	2.552	0.18	72.8	-4.1
			8-10-11					



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-705D

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.63

PID reading = 0.4

(B) Total Depth: 21.43

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 2.2

Equipment: Peristaltic

Purge Start Date/Time: 8-9/0812

Serial No: LVE002920

Sample Date/Time: 8-9/0835

Equipment: YSE 650

Weather: 70°, light rain, calm

Serial No: 85281

Sampling Parameters: (circle) VOCs, mals, ll, & gen chem.

Comments: Clear water - Raining

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0814	10.31	.4	7.28	13.05	2.663	2.18	-207.3	2.7
0816	10.55	.6	7.26	13.26	2.657	1.30	-215.4	1.5
0818	10.87	.8	7.27	13.72	2.639	0.89	-222.6	2.0
0820	11.78	1	7.27	14.43	2.675	0.62	-223.8	5.5
8822	12.37	1.3	7.30	14.29	2.671	0.39	-229.8	5.6
8823	12.73	1.4	7.31	14.30	2.689	0.36	-230.2	5.7
8824	12.84	1.5	7.32	14.42	2.662	0.32	-233.3	5.8
8825	12.90	1.6	7.35	14.48	2.660	0.77	-233.4	3.7
8826	12.80	1.7	7.36	14.49	2.660	0.74	-234.1	3.9
8827	13.15	1.9	7.37	14.45	2.659	0.71	-234.5	3.6
8828	13.330	2.0	7.38	14.48	2.657	0.72	-234.6	3.4



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-705 DD

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 7.60

PID reading 0.5 ppm

(B) Total Depth: 91.54

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 5.4

Equipment: Peristaltic

Purge Start Date/Time: 8-9/0859

Serial No: LVE 002920

Sample Date/Time: 8-9/0930

Equipment: YSI 650

Weather: RAIN

Serial No: 85281

Sampling Parameters: (circle) VOCs, mth, U, gen chem

Comments: Clear water

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0900	9.56	.7	9.58	12.16	8.150	3.90	161.1	56.3
0904	13.32	.7	8.85	11.97	6.728	3.82	139.0	93.9
0906	13.94	1	8.92	12.70	5.996	4.31	126.2	172.3
0908	14.44	1.2	9.03	13.20	6.926	4.21	120.1	142.0
0910	15.15	1.4	9.10	13.72	5.942	4.46	114.6	39.4
0912	15.60	1.6	9.29	14.12	6.075	3.92	112.2	152.6
0914	15.97	1.9	9.27	14.19	6.208	3.67	112.7	138.6
0916	16.43	2.1	9.30	14.16	6.203	2.69	113.1	98.1
0918	16.64	2.3	9.36	14.19	6.242	3.64	113.9	112.1



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-706DD

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 10.26'

PID reading 0.6 ppm

(B) Total Depth: 42.30'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 5.1

Equipment: Peristaltic

Purge Start Date/Time: 8-15/0812

Serial No: LVE 002920

Sample Date/Time: 8-15/0840

Equipment: VSI 650

Weather: cloudy, 68°, 5 mph, humid*

Serial No: 85281

Sampling Parameters: (circle) VOCs, mtls, U, gan chem.

Comments: Very cloudy water (gray)

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0813	11.9	.2	7.32	16.01	3.860	3.60	130.2	156.8
0816	12.62	.5	7.42	14.52	7.605	2.13	3.8	155.9
0819	13.00	.8	7.43	14.73	7.341	0.70	-41.5	109.0
0822	13.23	1.2	7.25	14.75	6.401	0.69	-39.6	44.5.7
0825	13.39	1.5	7.16	14.87	5.587	0.58	-32.8	178.1
0828	13.49	1.8	7.11	14.80	5.054	0.51	-25.3	110.1
0831	13.53	2.1	7.10	14.89	4.349	0.54	-18.7	89.9
0833	13.65	2.4	7.15	14.90	3.710	0.51	-14.8	124.8
0837	13.59	2.7	7.15	14.89	3.542	0.50	-12.1	44.1
0838	13.59	2.8	7.16	14.90	3.507	0.49	-12.0	44.6

8-11
very cldy
H2O

8-15-11
12.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-207 DD

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 33.62

PID reading 7.6 ppm

(B) Total Depth: 39.58

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 9

Equipment: VSI 650

Purge Start Date/Time: 8-17/1125

Serial No: 85281

Sample Date/Time: 5/1

Equipment: _____

Weather: *Partly Cldy, 80°, 5 mph SE* Serial No: *1*

Sampling Parameters: (circle) VOCs, npl, 11, & Gen Chem

Comments: Very cloudy (grey) & strong sulfur smell.

[illegible]



Shaw Environmental & Infrastructure, Inc.

NYSDEC SPLIT +
3RD DUPLICATE TAKEN

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW 708011

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: -8.24' BTOC

PH: 2.7 ppmv

(B) Total Depth: _____

Purge Method: (circle) Peristaltic Bailer Grundfos Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = _____

Equipment: GEO PUMP

Purge Start Date/Time: 8/11/11 1339

Serial No: CVE 002920

Sample Date/Time: 8/11/11 1410

Equipment: YSI 9260

Weather: P. SUNNY, BREEZY, 75°

Serial No: _____

Sampling Parameters: (circle) VOCs TAL METALS + TOTAL + ISOTOPIC (FILTERED/UNFILTERED)
ANIONS GROW CYAN

Comments: NYSDEC SPLIT + DUPLICATE COLLECTED VERY TURBID, GRAY @ START CHEM. UP

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1339	8.68'	<0.1	8.93	18.27	2.006	5.81	18.3	1592
1341	8.88'	0.3	8.11	14.41	3.256	3.20	10.1	1549
1343	8.92'	0.4	8.02	14.37	3.232	2.30	4.4	1547
1345	8.96'	0.7	7.91	14.14	3.153	1.14	1.2	1061
1347	8.98'	1.0	7.70	14.00	2.852	0.75	-1.6	626.9
1350	9.02'	1.2	7.54	13.87	2.229	0.52	0.7	265.8
1352	9.01'	1.5	7.49	13.88	2.101	0.42	1.2	172.8
1354	9.03'	1.7	7.46	13.62	1.974	0.35	0.0	210.7
1356	9.04'	1.9	7.44	13.44	1.929	0.32	-0.4	571.3
1359	9.05'	2.2	7.44	13.24	1.895	0.31	-0.2	122.5
1401	9.05'	2.5	7.43	13.32	1.881	0.26	-1.1	141.1

1403 9.05' 2.8 7.43 13.44 1.873 0.24 -1.7 128.8
1405 9.06' 3.0 7.43 13.51 1.860 0.23 -1.6 119.4



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW 709 DP

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 8.07'

PID reading 1.5 ppm

(B) Total Depth: 40.25'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 5.1

Equipment: Peristaltic

Purge Start Date/Time: 8-10 / 0908

Serial No: LVE 002920

Sample Date/Time: 8-10 / 0930

Equipment: YSI 650

Weather: Clear, calm, 75°

Serial No: 85281

Sampling Parameters: (circle) VOCs, mths, U, & gen chem

Comments: cloudy (gray)

Clear water

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0909	8.25 ⁷⁵	.2	7.94	16.20	2.889	5.40	75.2	152.6
0912	8.85	.4	7.45	14.20	4.401	2.98	23.8	88.9
0914	8 ⁷⁵ 9.10	.6	7.37	14.10	3.940	2.14	16.0	350.5
0916	9.15	.8	7.28	13.36	3.101	1.84	21.9	139.9
0918	9.15	1.0	7.24	13.08	2.820	1.14	34.7	25.9
0920	9.15	1.2	7.24	12.96	2.742	0.70	40.8	12.0
0922	9.15	1.4	7.33	13.07	2.145	0.93	46.9	103.2
0923	9.15	1.5	7.34	13.03	2.072	0.90	48.6	7.1
0924	9.15	1.6	7.35	13.01	2.070	0.59	47.5	7.3
0925	9.15	1.8	7.35	13.00	2.071	0.38	47.8	7.7


7/2



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-710 D

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 12.20

PID reading 0.3

(B) Total Depth: 21.37

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.5

Equipment: Peristaltic

Purge Start Date/Time: 8-15 / 0938

Serial No: LVE 002920

Sample Date/Time: 8-15 / 0950


Equipment: VSI 650

Weather: Cldy, 70°, 5 mph, Humid: 60%

Serial No: 85281

Sampling Parameters: (circle) VOCs, metals, H, & sea chem.

Comments: Clear water

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0939	12.39	.2	7.65	14.53	1.880	5.37	48.1	19.2
0941	12.44	.5	7.28	13.42	1.868	3.53	-29.1	69.9
0945	12.44	.8	7.22	12.96	1.843	2.76	18.1	80.2
0948	12.44	1.0	7.21	12.89	1.827	0.68	11.4	-2.5
0952	12.44	1.2	7.21	12.87	1.827	0.68	10.9	-2.9
0953	12.44	1.3	7.21	12.87	1.828	0.66	10.7	-2.1
<div>8.15-11</div> 								

slightly
cldy
H₂O



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-710 DD

Personnel: 

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 22.11 20.74

(B) Total Depth: 41.97

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 3.4

Equipment: Peristaltic Pump (PINE)

Purge Start Date/Time: 8-18 0805

Serial No: LVE 002920 05009 7R

Sample Date/Time: 8-18 0825

Equipment: VSI 650 11511 8/18/11

Weather: cldy, 20°, 5 mph, Humid 60% Serial No: 85281

Sampling Parameters: (circle) VOCs mtb, U, 8 gon chem

Comments: Water is clear

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
0805	21.37	.2	7.56	13.20	2.202	4.51	137.5	2.6
0810	21.22	.6	7.18	12.44	2.239	2.92	72 875.6	29.8
0812	21.22	.8	7.16	12.45	2.254	2.81	64.3	40.0
0815	21.22	1.1	7.14	12.46	2.282	2.19	57.5	17.4
0816	21.23	1.2	7.14	12.49	2.308	2.07	55.0	12.1
0817	21.23	1.3	7.14	12.48	2.308	2.03	54.6	9.9
0818	21.23	1.5	7.14	12.50	2.309	1.93	52.3	6.5
0819	21.	1.6	7.14	12.52	2.303	1.90	52.6	6.0

→ water become cloudy (gray)

8-18-11



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-711 D

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 12.54'

PID Reading 0.2 ppm

(B) Total Depth: 21.95'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.5

Equipment: Peristaltic

Purge Start Date/Time: 8-9/14

Serial No: LVE 002920

Sample Date/Time: 8-9

Equipment: YSE 650

Weather: RAIN, 75°

Serial No: 85281

Sampling Parameters: (circle) VOCs, metals, U, & gen chem

Comments: _____

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1425	12.50	1.2	7.72	18.29	2.092	3.46	-4.2	9.5
1427	12.58	1.4	7.62	14.34	2.103	1.96	-12.9	8.0
1429	12.70	1.7	7.55	14.50	2.01990	0.82	-13.9	5.9
1431	12.80	1.0	7.42	15.07	1.919	0.90	-8.4	4.6
1433	12.91	1.2	7.36	15.24	1.884	1.13	-4.3	4.1
1435	13.08	1.4	7.28	15.28	1.816	4.38	5.6	2.5
1437	13.78	1.7	7.26	15.79	1.720	1.08	8.2	1.4
1438	14.05	1.9	7.28	15.81	1.716	1.07	8.8	1.5



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-711DD

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 11.41'

PID Reading NR 8-5-11
0.2 ppm
13.8

(B) Total Depth: 42.21

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 4.9

Equipment: Peristaltic

Purge Start Date/Time: 8-9-11 131138

Serial No: LVE 002920

Sample Date/Time: 8-15-11 1200

Equipment: VSI 650

Weather: RAIN, 75°

Serial No: 85281

Sampling Parameters: (circle) VOCs, MTL, U, & gen chem

Comments: Water is clear - "dries" out (CAN'T LIFT WATER W/ GEOPUMP) FINISH

COLLECTED AND DISPOSED 1145 w/ DISPOSABLE BAYONET, COLLECT REMAINING UNFILTERED SAMPLES (THE METALS TOTAL U + ISOTOPE U AND FILTERED THE METALS, TOTAL + ISOTOPE U)

Time	Water Level (ft to c)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1141	12.50	0.2	8.8	17.75	6.104	5.01	66.7	22.8
1145	15.18	0.5	9.08	14.32	6.255	2.60	74.8	26.3
1147	16.1	0.8	9.07	14.71	6.202	2.33	77.8	26.9
1148	16.75	1.0	9.06	14.73	6.159	2.28	79.6	24.4
1149	16.90	1.2	9.04	14.72	6.158	2.26	80.3	24.7
1150	17.52	1.4	9.02	14.71	6.157	2.28	81.2	25.2

VOCs AND ANIONS/GEN. CHEM COLLECTED 8/15/11 VIA GEOPUMP PRIOR TO BEING UNABLE TO LIFT WATER W/ GEOPUMP

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: NW-712D

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 22.02 (DRY)

(B) Total Depth: 22.02

Purge Method: (circle) Bailer Grundfos Peristaltic Other None - Dry Hole

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = NA

Equipment:

Purge Start Date/Time: NA

Serial No:

Sample Date/Time: NA

Equipment:

Weather: Cldy, 65°, 5 mph

Serial No:

Sampling Parameters: (circle) ~~VOCs~~

Comments: Dry well.

[illegible]

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-712 DD

Personnel:

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 30.26'

PID reading 0.4 ppm

(B) Total Depth: 41.76

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.8

Equipment: YSI 650

Purge Start Date/Time: 8-18 / 0917

Serial No: 85281

Sample Date/Time: 8-18 / 0935

Equipment: Ground Fos (Pine Bg)

Weather: Clear, 70°, 5 mph, 60% Hum Serial No: 11511

Sampling Parameters: (circle) VOCs, metals, U, & gen chem

Comments: Water very cloudy (gray)

[illegible]



Shaw Environmental & Infrastructure, Inc.

WELL SAMPLING FORM

Project Number: 140416

Well/Piez No.: MW-713 D

Personnel: [REDACTED]

Casing Dia. (in): 2"

Well Type: (circle) Flushmount Stickup

(A) Depth to Water: 12.23'

PID reading = 2.4

(B) Total Depth: 21.99'

Purge Method: (circle) Bailer Grundfos Peristaltic Other _____

Well Volume = (B-A)*conversion factor (see below)

(0.04 gal/ft for 1" ID, 0.16 gal/ft for 2" ID, 0.65 gal/ft for 4" ID)

Well Volume (gal) = 1.56

Equipment: Peristaltic

Purge Start Date/Time: 8/4/11

Serial No: LVE 002920

Sample Date/Time: 8-4-11

Equipment: Peristaltic

Weather: 80°, Partly Cloudy, Calm, 80% Hum Serial No: LVE 002920

Sampling Parameters: (circle) VOCs, Uranium, Gen Chem, & TAL mls

Comments: _____

Time	Water Level (ft toc)	Well Volume / Gallons Removed	pH	Temp. (°C)	Cond.	DO	ORP (mV)	Turb. (NTU)
1135	12.71	0.2	7.37	14.88	1.595	3.02	-149.2	1356.8
1137	12.70	0.4	7.27	13.52	1.554	2.04	-158.7	14.2
1140	12.70	0.75	7.24	13.58	1.549	0.94	-164.9	5.1
1142	12.71	1.0	7.23	13.92	1.546	0.78	-168.9	16.9
1144	12.70	1.2	7.23	13.50	1.536	0.72	-172.9	16.8
1146	12.71	1.5	7.24	13.47	1.534	0.71	-175.6	16.7
1147	12.70	1.7	7.24	13.46	1.533	0.72	-175.7	16.9
1149	12.71	1.9	7.24	13.47	1.534	0.72	-175.6	16.8

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: N SUNNY, WINDY 40'

PID upon opening: 0.0 ppmv

Water Level Data

Date: 01/31 /2011 Start Time: 1150

Well ID: MW-6040

Initial Total Casing Length ~17.07 (feet)

Depth to Water (from top of casing) ~4.28' (feet)

a) Height of Water Column 12.79 (feet)

Well Volume ([a] x volume factor *) = (feet) x 0.163 gallons/foot = 2.1 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Purge Data

Date: 01/31 /2011 Time: 1405 (start) 1455 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1406	1414	1420	1432	1450	1455
Volume	gals	0.1	1.0	2.1	3.0	4.0	4.5
Specific Conductivity	mS/cm	1.763	1.407	1.345	1.364	1.407	1.378
pH	S.U.	7.45	7.28	7.30	7.41	7.27	7.27
Turbidity	NTU	379.4	159.6	58.2	63.9	24.3	22.7
Temperature	°C	8.55	8.38	8.34	8.35	8.32	8.35
ORP	mV	154.7	147.6	145.1	65.7	95.9	100.0
DO	mg/L	4.70	3.64	3.62	4.47	2.95	2.96

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~4.5 (gallons)

Sampling Data

Sample Date: 01/31 /2011

Sample Time: 1455

Appearance (visual) CLEAR

Color CLEAR Odor None

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel:

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutel Specialty Steel FUSRAP
Weather: PSUNNY
Water Level Data

Project Number: 140416.09040100
PID upon opening: 0.0 ppmv

Date: 01/31/2011 Start Time: 1115

Well ID: MW-605D

Initial Total Casing Length ~17.45 (feet)

Depth to Water (from top of casing) ~0.80' (feet)

a) Height of Water Column 16.65 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = _____ (feet) x 0.163 gallons/foot = 2.7 gallons

Purge Data

Date: 02/01/2011 Time: 1100 (start) 1130 (finish)

Method: Geopump peristaltic pump
(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1101	1108	1116	1130		
Volume	gals	0.1	1.0	2.5	4.0		
Specific Conductivity	mS/cm	0.956	0.931	0.932	0.934		
pH	S.U.	7.45	7.21	7.21	7.21		
Turbidity	NTU	12.3	17.9	24.2	30.8		
Temperature	°C	9.95	10.17	10.14	10.04		
ORP	mV	150.8	141.7	132.6	121.0		
DO	mg/L	2.04	0.45	0.50	0.32		

Did well dry out? (If yes, how many times) _____ Actual Volume Removed 4 (gallons)

Sampling Data

Sample Date: 02/01/2011
Appearance (visual): CLEAR
Sampling Method: Low Flow Sampling

Sample Time: 1130
Color: CLEAR Odor: None

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: [REDACTED]
COMMENTS: DUPLICATE (MW-9006) COLLECTED @ THIS WELL.

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: _____

PID upon opening: 0.0 ppmv

Water Level Data

Date: 01/31/2011 Start Time: 1115

Well ID: MW-70400

Initial Total Casing Length ~38.87' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~0.64 (feet)

a) Height of Water Column 38.23 (feet)

Well Volume ([a] x volume factor *) = _____ (feet) x 0.163 gallons/foot = 6.2 gallons

Purge Data

Date: 01/31/2011 Time: 1245 (start) 1330 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1245	1309	1320	1330		
Volume	gals	0.1	6.0	10.0	13.0	13.0	
Specific Conductivity	mS/cm	1044	2.854	2.879	2.880		
pH	S.U.	9.86	7.60	7.28	7.24	cc	
Turbidity	NTU	20.2	162.3	149.0	147.8	23.7	
Temperature	°C	7.79	9.90	10.64	10.09		
ORP	mV	84.2	147.6	149.0	147.8		
DO	mg/L	10.66	8.57	8.18	5.16		

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~13 (gallons)

Sampling Data

Sample Date: 01/31/2011

Sample Time: 1330

Appearance (visual) CLEAR

Color CLEAR

Odor None

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: _____

COMMENTS: MS MSD COLLECTED

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP
Weather: SUNNY, WINDY, 45°
Water Level Data

Project Number: 140416.09040100
PID upon opening: 0.0 ppmv

Date: 01/31/2011 Start Time: _____

Well ID: MW-70700

Initial Total Casing Length 39.50 (feet)

Depth to Water (from top of casing) ~16.25' (feet)

a) Height of Water Column 23.25 (feet)

Well Volume ([a] x volume factor *) = _____ (feet) x 0.163 gallons/foot = 3.8 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Purge Data

Date: 01/01/2011 Time: 0950 (start) 1020 (finish)

Method: ~~Geopump peristaltic pump~~ BAILER COULD NOT GET WATER TO MOVE THROUGH PERISTALTIC PUMP
(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	NM					
Volume	gals						
Specific Conductivity	mS/cm						
pH	S.U.						
Turbidity	NTU						
Temperature	°C						
ORP	mV						
DO	mg/L						

Did well dry out? (If yes, how many times) BEGINNING TO Actual Volume Removed ~4 (gallons)

Sampling Data

Sample Date: 01/01/2011 Sample Time: 1020
Appearance (visual) V. SLIGHT TURBID @ Color Cloudy Odor NONE
Sampling Method: Low Flow Sampling ~4 Gals

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Discription

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

USED PERISTALTIC PUMP FOR FILTERED SAMPLE, COLLECTED TOTAL SAMPLE W/ BAILER.

Personnel: _____

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Cloudy, 33° WINDY

PID upon opening: 0.0 ppmv

Water Level Data

Date: 01/30/2011 Start Time: 1345

Well ID: MW-708 DO

Initial Total Casing Length ~39.72' (feet)

Depth to Water (from top of casing) ~6.51' (feet)

a) Height of Water Column 33.21' (feet)

Well Volume ([a] x volume factor *) = 33.21 (feet) x 0.163 gallons/foot = 5.4 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Purge Data

SOFT ON BOTTOM

Date: 01/30/2011 Time: 1400 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1400	1402	1405	1415	1420	1440	1445
Volume	gals	0.1	1.5	3.0	7.0	10.0	15.0	16.0
Specific Conductivity	mS/cm	1.224	1.215	1.372	1.479	1.492	1.661	1.666
pH	S.U.	8.10	7.73	7.50	7.36	7.36	7.31	7.28
Turbidity	NTU	707.8	537.2	273.7	651.2	297.6	226.5	411.9
Temperature	°C	9.60	9.57	9.95	10.13	9.99	10.24	11.37
ORP	mV	-115.6	-101.5	-79.8	-72.6	-75.5	-42.1	-52.5
DO	mg/L	9.01	10.36	8.71	9.82	9.83	8.80	6.82

Did well dry out? (If yes, how many times) 0 Actual Volume Removed ~17 (gallons)

Sampling Data

LT GRAYISH, TURBID

Sample Date: 01/30/2011

Sample Time: 1450

Appearance (visual) V.S. TURBID

Color LT GRAY

Odor None

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Discription

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: _____

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: M. SUNNY, WINDY, 40

PID upon opening: 0.0 ppmv

Water Level Data

Date: 01/31/2011 Start Time: 1150

Well ID: MW-70920

Initial Total Casing Length ~40.28' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~5.76' (feet)

a) Height of Water Column 34.52 (feet)

Well Volume ([a] x volume factor *) = _____ (feet) x 0.163 gallons/foot = 5.6 gallons

Purge Data

Date: ^{or} 01/1/2011 Time: 1420 (start) 1505 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1425	1435	1505			
Volume	gals	~5.0	~10.0	~15.0			
Specific Conductivity	mS/cm	1.691	1.673	1.698			
pH	S.U.	7.47	7.44	7.49			
Turbidity	NTU	18.3	32.8	17.2			
Temperature	°C	9.52	11.03	10.49			
ORP	mV	114.1	16.8	17.4			
DO	mg/L	4.00	4.31	3.86			

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~15.5 (gallons)

Sampling Data

Sample Date: 01/ /2011

Sample Time: 1505

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: XXXXXXXXXX

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: PCLOUDY, 24°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 01/30/2011 Start Time: 0945

Well ID: MW-710D

Initial Total Casing Length ~16.38' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~11.48' (feet)

a) Height of Water Column 4.90' (feet)

Well Volume ([a] x volume factor *) = 4.90 (feet) x 0.163 gallons/foot = 0.76 gallons

Purge Data

Date: 01/30/2011 Time: 1027 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1046	1048	1050	1053	1055	1057
Volume	gals	0.1	0.5	1.0	1.5	2.0	2.5
Specific Conductivity	mS/cm	1.569	1.569	1.569	1.556	1.556	1.562
pH	S.U.	7.04	7.11	7.16	7.17	7.17	7.18
Turbidity	NTU	102.5	74.5	69.0	52.5	83.8	30.5
Temperature	°C	9.81	10.17	10.48	10.51	10.52	10.37
ORP	mV	101.5	85.5	80.9	78.8	81.6	87.2
DO	mg/L	8.93	8.91	8.27	8.11	9.06	7.51

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~3.5 (gallons)

Sampling Data

Sample Date: 01/30/2011

Sample Time: _____

Appearance (visual) _____

Color _____ Odor _____

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: _____

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: M. SUNNY, 24° WINDY (W/C ~15°)

PID upon opening: 0.0 ppmv

Water Level Data

Date: 01/30/2011 Start Time: 1012

Well ID: MW-71030

Initial Total Casing Length ~ 37.23' (feet)

Depth to Water (from top of casing) ~ 30.58' (feet)

a) Height of Water Column ~ 6.67 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 6.67 (feet) x 0.163 gallons/foot = 1.1 gallons

Purge Data

Date: 01/30/2011 Time: 1125 (start) 1138 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1126	1128	1131	1133	1135	1138
Volume	gals	0.1	0.5	1.5	2.0	3.0	4.0
Specific Conductivity	mS/cm	1.720	1.718	1.719	1.714	1.714	1.721
pH	S.U.	7.69	7.32	7.27	7.28	7.29	7.29
Turbidity	NTU	27.4	41.7	1320	27.2	27.5	31.4
Temperature	°C	10.26	10.94	11.01	11.04	11.01	11.01
ORP	mV	137.7	125.2	118.0	114.8	114.3	112.4
DO	mg/L	7.32	7.06	7.12	6.74	6.26	6.76

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~40 (gallons)

Sampling Data

Sample Date: 01/30/2011

Sample Time: 1140

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: XXXXXXXXXX

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: M. SUNNY 29° WINDY

PID upon opening: 6.0 ppmv

Water Level Data

Date: 01/30/2011 Start Time: 1252

Well ID: MW-713D

Initial Total Casing Length ~16.95' (feet)

Depth to Water (from top of casing) ~11.10' (feet)

a) Height of Water Column ~5.85' (feet)

Well Volume ([a] x volume factor *) = 5.85 (feet) x 0.163 gallons/foot = 0.95 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Purge Data

Date: 01/30/2011 Time: 1300 (start) _____ (finish)

Method: Geopump peristaltic pump

(Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1308	1310	1315	1317	1320	
Volume	gals	0.1	0.75	2.50	3.0	4.5	
Specific Conductivity	mS/cm	1.441	1.411	1.418	1.407	1.388	
pH	S.U.	7.07	7.03	6.99	7.00	7.03	
Turbidity	NTU	29.3	60.0	44.6	81.6	30.9	
Temperature	°C	9.73	9.78	9.79	9.67	9.57	
ORP	mV	-255.9	-237.4	-229.9	-218.7	-222.1	
DO	mg/L	10.17	8.56	5.18	9.09	8.15	

Did well dry out? (If yes, how many times) No Actual Volume Removed ~4.5 (gallons)

Sampling Data

Sample Date: 01/30/2011

Sample Time: 1325

Appearance (visual) V.S. TURBID

Color GRAYISH

Odor SLIGHT H2S odor

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: _____

COMMENTS:

Equipment: YSI 6280-0; SN 04D1234AZ, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Partly Cloudy, 60° Humid

PID upon opening: NM

ppmv - Humidity
TOO HIGH TO GET
ACCURATE READING
(BACKGROUND) > 60
ppmv

Water Level Data

Date: 05/4/2012 Start Time: 0815

Well ID: MW-26

Initial Total Casing Length ~16.95' (feet)

Depth to Water (from top of casing) ~1.94' (feet)

a) Height of Water Column 15.01 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor) = 15.01 (feet) x 0.163 gallons/foot = 2.4 gallons

Purge Data

Date: 05/4/2012 Time: 0900 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

~5.05' ~5.06' ~5.09' ~5.09' ~5.09'

Time	0000	0900	0909	0920	0930	0935	
Volume	gals	0.2	~1.5	~2.5	~3.0	~3.5	
Specific Conductivity	mS/cm	3.683	4.167	1.573	1.550	1.570	
pH	S.U.	7.50	7.61	7.60	7.59	7.55	
Turbidity	NTU	206.7	28.6	8.9	3.0	1.9	
Temperature	°C	12.41	11.43	11.62	11.78	11.89	
ORP	mV	-27.3	34.1	73.5	98.2	113.2	
DO	mg/L	4.64	2.19	2.26	2.76	2.16	

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~4 (gallons)

Sampling Data

Sample Date: 05/4/2012

Sample Time: 0935

Appearance (visual) _____

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: _____

COMMENTS:

Equipment: YSI 6920 V2; SN 07f00012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP
 Weather: Cloudy, Windy, 60°
 Water Level Data

Project Number: 140416.09040100
 PID upon opening: 3.0 ppmv
BACKGROUND ~2.3 ppmv

Date: 05/4/2012 Start Time: 1000

Well ID: MW-6040

Initial Total Casing Length ~17.05' 5.0' (feet)

*Volume Factors:
 1-inch well = 0.041 gal/ft
 1.5-inch well = 0.092 gal/ft
 2-inch well = 0.163 gal/ft
 3-inch well = 0.367 gal/ft
 4-inch well = 0.653 gal/ft
 6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~7.90' (feet)

a) Height of Water Column ~9.15 (feet)

Well Volume ([a] x volume factor *) = 9.15 (feet) x 0.163 gallons/foot = 1.50 gallons

Purge Data

Date: 05/4/2012 Time: 1015 (start) 1040 (finish)

Method: Geopump peristaltic pump
 (Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~8.25'</u>	<u>~8.35'</u>	<u>~8.36'</u>	<u>~8.37'</u>		
Time	0000	<u>1015</u>	<u>1025</u>	<u>1030</u>	<u>1038</u>		
Volume	gals	<u><0.1</u>	<u>~1.0</u>	<u>~2.0</u>	<u>~3.0</u>		
Specific Conductivity	mS/cm	<u>0.026</u>	<u>1.724</u>	<u>1.754</u>	<u>1.740</u>		
pH	S.U.	<u>9.33</u>	<u>7.07</u>	<u>7.05</u>	<u>6.98</u>		
Turbidity	NTU	<u>~8.4</u>	<u>113.2</u>	<u>25.7</u>	<u>24.2</u>		
Temperature	°C	<u>23.04</u>	<u>10.22</u>	<u>10.23</u>	<u>10.22</u>		
ORP	mV	<u>91.5</u>	<u>165.5</u>	<u>181.5</u>	<u>200.6</u>		
DO	mg/L	<u>7.91</u>	<u>2.74</u>	<u>1.73</u>	<u>1.43</u>		

Did well dry out? (If yes, how many times) NO Actual Volume Removed 3.0 (gallons)

Sampling Data

Sample Date: 05/4/2012
 Appearance (visual) _____
 Sampling Method: Low Flow Sampling

Sample Time: 1040
 Color CLEAR Odor NONE

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel [REDACTED]
[REDACTED] @ THIS WELL

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: _____

PID upon opening: 0.1 ppmv

Water Level Data

Date: 05/3 /2012 Start Time: 1425

Well ID: MW-605D

Initial Total Casing Length ~17.46' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~1.21' (feet)

a) Height of Water Column ~16.25 (feet)

Well Volume ([a] x volume factor *) = 16.25 (feet) x 0.163 gallons/foot = 2.6 gallons

Purge Data

Date: 05/3 /2012 Time: 1433 (start) 1310 (finish)

Method: Geopump peristaltic pump

(Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Cloudy

		<u>~1.21'</u>	<u>~1.35'</u>	<u>~1.36'</u>	<u>~1.35'</u>	<u>~1.37'</u>	<u>~1.36'</u>
Time	0000	<u>1434</u>	<u>1442</u>	<u>1450</u>	<u>1456</u>	<u>1505</u>	<u>1510</u>
Volume	gals	<u><0.1</u>	<u>1.0</u>	<u>2.5</u>	<u>3.0</u>	<u>5.0</u>	<u>5.5</u>
Specific Conductivity	mS/cm	<u>0.65</u>	<u>0.597</u>	<u>0.593</u>	<u>0.596</u>	<u>0.593</u>	<u>0.600</u>
pH	S.U.	<u>7.29</u>	<u>7.01</u>	<u>6.95</u>	<u>6.90</u>	<u>6.85</u>	<u>6.83</u>
Turbidity	NTU	<u>122.4</u>	<u>151.1</u>	<u>60.8</u>	<u>11.1</u>	<u>7.4</u>	<u>9.1</u>
Temperature	°C	<u>11.65</u>	<u>10.74</u>	<u>10.76</u>	<u>10.86</u>	<u>10.83</u>	<u>10.85</u>
ORP	mV	<u>52.7</u>	<u>126.3</u>	<u>159.3</u>	<u>187.2</u>	<u>216.1</u>	<u>225.0</u>
DO	mg/L	<u>4.76</u>	<u>0.55</u>	<u>0.45</u>	<u>0.40</u>	<u>0.36</u>	<u>0.35</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed 5.5 (gallons)

Sampling Data

Sample Date: 05/3 /2012

Sample Time: 1515

Appearance (visual) _____

Color CLEAR

Odor NO

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: _____

COMMENTS: DUP-01 COLLECTED @ THIS WELL @ 1515.

Equipment: YSI 6920 V2; SN 07f00012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: _____

PID upon opening: 0.1 ppmv

Water Level Data

Date: 05/3 /2012 Start Time: 1530

Well ID: MW-70400

Initial Total Casing Length ~ 38.85' (feet)

Depth to Water (from top of casing) ~ 0.90' (feet)

a) Height of Water Column ~ 37.95' (feet)

Well Volume ([a] x volume factor *) = 37.95 (feet) x 0.163 gallons/foot = 6.2 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Purge Data

Date: 05/3 /2012 Time: 1532 (start) 1603 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~ 2.75'</u>	<u>~ 2.08'</u>	<u>~ 2.10'</u>	<u>~ 2.10'</u>	<u>~ 2.07'</u>	
Time	0000	<u>1533</u>	<u>1540</u>	<u>1545</u>	<u>1555</u>	<u>1603</u>	
Volume	gals	<u>< 0.1</u>	<u>2.0</u>	<u>3.5</u>	<u>4.5</u>	<u>6.5</u>	
Specific Conductivity	mS/cm	<u>7.420</u>	<u>7.718</u>	<u>2.176</u>	<u>2.374</u>	<u>2.349</u>	
pH	S.U.	<u>8.38</u>	<u>6.95</u>	<u>6.65</u>	<u>6.52</u>	<u>6.48</u>	
Turbidity	NTU	<u>50.2</u>	<u>586.3</u>	<u>240.8</u>	<u>610.0</u>	<u>208.0</u>	
Temperature	°C	<u>12.77</u>	<u>12.24</u>	<u>11.89</u>	<u>12.18</u>	<u>12.12</u>	
ORP	mV	<u>174.6</u>	<u>251.5</u>	<u>280.3</u>	<u>311.6</u>	<u>326.7</u>	
DO	mg/L	<u>5.19</u>	<u>4.60</u>	<u>7.14</u>	<u>5.38</u>	<u>7.03</u>	

Did well dry out? (If yes, how many times) _____ Actual Volume Removed _____ (gallons)

Sampling Data

Sample Date: 05/3 /2012

Sample Time: 1605

Appearance (visual) _____

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Personnel: _____

COMMENTS:

Equipment: YSI 6920 V2; SN 07f100012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP
Weather: _____
Water Level Data

Project Number: 140416.09040100
PID upon opening: NM ppmv

*Humidity 700
High to get
ACCURATE READINGS*

Date: 05/4 /2012 Start Time: 0825

Well ID: MW- 707 DD

Initial Total Casing Length ~ 39.59' (feet)

Depth to Water (from top of casing) ~ 21.34' (feet)

a) Height of Water Column 18.25' (feet)

*Volume Factors:
1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 18.25 (feet) x 0.163 gallons/foot = ~ 3.0 gallons

Purge Data

Date: 05/4 /2012 Time: 0830 (start) 0840 (finish)

Method: Geopump peristaltic pump
(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	<u>0835</u>					
Volume	gals	<u>~ 3.5</u>					
Specific Conductivity	mS/cm	<u>19.04</u>					
pH	S.U.	<u>7.32</u>					
Turbidity	NTU	<u>428</u>					
Temperature	°C	<u>11.64</u>					
ORP	mV	<u>-67.7</u>					
DO	mg/L	<u>5.05</u>					

Did well dry out? (If yes, how many times) CLOSE TO DRYING OUT Actual Volume Removed ~ 3.5 (gallons)
FINAL LEVEL ~ 38.36' BTOC

Sampling Data

Sample Date: 05/4 /2012
Appearance (visual) _____
Sampling Method: Low Flow Sampling

Sample Time: 0840
Color CLOUDY Odor STALE "citomical?" odor - NOT H₂S

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: _____

COMMENTS: CAN'T GET WATER UP TUBING, BAIL WELL, SAMPLE W/ PERISTALTIC PUMP FROM CLEAN BUCKET

Equipment: YSI 6920 V2; SN 07ff00012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: CLEAR 73°; WINDS PICK UP @

PID upon opening: 0.7 ppmv

Water Level Data 7 1305

Date: 05/3 /2012 Start Time: 1450

Well ID: MW- 70800

Initial Total Casing Length ~ 39.72' soft (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~ 6.83' (feet)

a) Height of Water Column ~ 32.89 (feet)

Well Volume ([a] x volume factor *) = 32.89 (feet) x 0.163 gallons/foot = 5.4 gallons

Purge Data

Date: 05/3 /2012 Time: 1305 (start) 1359 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

SOMewhat CLOUDY

Purge Volume (3 to 5 well volumes): Low Flow Sampling

~ 6.83' ~ 7.60' ~ 7.85' ~ 7.61' ~ 7.75' ~ 7.70' ~ 7.89'

Time	0000	1305	1311	1315	1322	1331	1342	1351
Volume	gals	~0.1	~1.0	~1.5	~2.0	~3.0	~4.0	~4.5
Specific Conductivity	mS/cm	0.351	0.353	0.487	1.166	1.239	1.237	1.264
pH	S.U.	8.94	~8.40	7.83	6.82	6.91	7.01	7.05
Turbidity	NTU	0.6	~8.46	44.3	55.0	32.6	14.7	29.8
Temperature	°C	14.91	12.91	13.13	13.46	13.40	13.84	13.24
ORP	mV	-3.1	155.6	177.6	68.1	53.4	44.0	37.7
DO	mg/L	8.77	5.73	5.31	2.11	0.80	0.67	0.54

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~ 5.0 (gallons)

Sampling Data

Sample Date: 05/3 /2012

Sample Time: 1400

Appearance (visual)

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

COMMENTS:

Equipment: YSI 6920 V2; SN 07100012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Cloudy, Windy, 60°

PID upon opening: 2.7 ppmv

Water Level Data

Background ~2.3 ppmv

Date: 05/4/2012 Start Time: 1005

Well ID: MW- 709 DD

Initial Total Casing Length ~40.32' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~9.42' (feet)

a) Height of Water Column ~30.90' (feet)

Well Volume ([a] x volume factor *) = 30.9 (feet) x 0.163 gallons/foot = 5.0 gallons

Purge Data

Date: 05/4/2012 Time: 1105 (start) 1025 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~15.04'</u>	<u>NM</u>	<u>~14.26'</u>	<u>~14.39'</u>		
Time	0000	<u>1110</u>	<u>1115</u>	<u>1120</u>	<u>1025</u>		
Volume	gals	<u>~2.0</u>	<u>~5.0</u>	<u>~8.0</u>	<u>~12.0</u>		
Specific Conductivity	mS/cm	<u>1.238</u>	<u>1.278</u>	<u>1.336</u>	<u>1.343</u>		
pH	S.U.	<u>7.58</u>	<u>7.40</u>	<u>7.36</u>	<u>7.40</u>		
Turbidity	NTU	<u>21.2</u>	<u>31.3</u>	<u>31.2</u>	<u>25.5</u>		
Temperature	°C	<u>10.40</u>	<u>10.75</u>	<u>11.33</u>	<u>11.31</u>		
ORP	mV	<u>127.5</u>	<u>86.9</u>	<u>31.8</u>	<u>25.8</u>		
DO	mg/L	<u>6.07</u>	<u>4.49</u>	<u>4.14</u>	<u>3.79</u>		

Did well dry out? (If yes, how many times) NO Actual Volume Removed 12 (gallons)

Sampling Data

Sample Date: 05/4/2012

Sample Time: _____

Appearance (visual) _____

Color _____

Odor _____

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: _____

COMMENTS: WATER NOT COMING UP TUBING, BAIL INTO CLEAN BUCKET;

Equipment: YSI 6920 V2; SN 07f00012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: _____

PID upon opening: ~0.4 ppmv

Water Level Data

BACKGROUND ~ 0.5 p/mv

Date: 05/3 /2012 Start Time: 0845

Well ID: MW- 710-D

Initial Total Casing Length ~ 21.42' (feet) (HAW)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~ 11.49' (feet)

a) Height of Water Column ~ 9.71 (feet)

Well Volume ([a] x volume factor *) = 9.71 (feet) x 0.163 gallons/foot = 1.6 gallons

Purge Data

Date: 05/3 /2012 Time: 0900 (start) 0930 (finish)

Method: Geopump peristaltic pump

(Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

2 ~ 12.19' ~ 12.20' ~ 12.25'

Time	0000	0915	0923	0929			
Volume	gals	~4.0	~7.0	~10.0			
Specific Conductivity	mS/cm	1.244	1.237	1.243			
pH	S.U.	7.20	7.17	7.22			
Turbidity	NTU	13.9	5.2	1.2			
Temperature	°C	10.52	10.29	10.43			
ORP	mV	73.1	74.6	65.0			
DO	mg/L	3.52	3.70	3.71			

Did well dry out? (If yes, how many times) No Actual Volume Removed ~ 10 (gallons)

Sampling Data

Sample Date: 05/3 /2012

Sample Time: 0935

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: _____

COMMENTS: GROUNDWATER WOULD NOT COME UP TUBING, BAIL WELL + COLLECT READINGS FROM BUCKET. RED (Fe) SPECKS IN 1ST BUCKET. SAMPLES COLLECTED VIA PERISTALTIC PUMP

Equipment: YSI 6920 V2; SN 07f00012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Clear, 55°

PID upon opening: ~1.0 ppmv

Water Level Data

BACKGROUND ~ 0.5 ppmv

Date: 05/3 /2012 Start Time: 0845

Well ID: MW- 71020

Initial Total Casing Length ~42.03' (feet) Soft

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~23.41' (feet)

a) Height of Water Column ~18.62' (feet)

Well Volume ([a] x volume factor *) = 18.62 (feet) x 0.163 gallons/foot = 3.0 gallons

Purge Data

Date: 05/3 /2012 Time: 1000 (start) 1030 (finish)

Method: Geopump peristaltic pump

(Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

8-23.50' ~ 26.54' ~ 26.58'

Time	0000	1005	1010	1015			
Volume	gals	<u>~3.0</u>	<u>~6.0</u>	<u>~9.0</u>			
Specific Conductivity	mS/cm	<u>1.387</u>	<u>1.424</u>	<u>1.425</u>			
pH	S.U.	<u>7.27</u>	<u>7.12</u>	<u>7.12</u>			
Turbidity	NTU	<u>17.1</u>	<u>23.8</u>	<u>17.6</u>			
Temperature	°C	<u>11.48</u>	<u>11.42</u>	<u>11.44</u>			
ORP	mV	<u>117.2</u>	<u>116.5</u>	<u>117.8</u>			
DO	mg/L	<u>5.94</u>	<u>3.81</u>	<u>3.70</u>			

Did well dry out? (If yes, how many times) No Actual Volume Removed ~9.5 (gallons)

Sampling Data

Sample Date: 05/3 /2012

Sample Time: 1035

Appearance (visual)

Color Clear

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Discription

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: [REDACTED]

COMMENTS: UNABLE TO LIFT GW W/ PERISTALTIC PUMP/TUBING, BAIL WELL INTO CLEANED BUCKETS FOR PARAMETERS

Equipment: YSI 6920 V2; SN 07100012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP
Weather: Clear, 68°
Water Level Data

Project Number: 140416.09040100
PID upon opening: ~0.9 ppmv
BACKGROUND: ~0.6 ppmv

Date: 05/3/2012 Start Time: 1110

Well ID: MW-713D

Initial Total Casing Length ~21.99' (feet)

Depth to Water (from top of casing) ~11.52 (feet)

a) Height of Water Column ~10.47 (feet)

Well Volume ([a] x volume factor *) = 10.47 (feet) x 0.163 gallons/foot = 1.70 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Purge Data

Date: 05/3/2012 Time: 1110 (start) 1144 (finish)

Method: Geopump peristaltic pump
(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>1111</u>	<u>1116</u>	<u>1123</u>	<u>1130</u>	<u>1136</u>	<u>1143</u>
Time	0000						
Volume	gals	<u><0.1</u>	<u>~1.0</u>	<u>~2.0</u>	<u>~3.0</u>	<u>~3.5</u>	<u>~4.0</u>
Specific Conductivity	mS/cm	<u>1.157</u>	<u>0.964</u>	<u>0.917</u>	<u>0.898</u>	<u>0.910</u>	<u>0.885</u>
pH	S.U.	<u>7.20</u>	<u>6.89</u>	<u>6.80</u>	<u>6.72</u>	<u>6.62</u>	<u>6.55</u>
Turbidity	NTU	<u>466</u>	<u>49.9</u>	<u>26.3</u>	<u>15.9</u>	<u>10.6</u>	<u>6.5</u>
Temperature	°C	<u>16.01</u>	<u>11.53</u>	<u>11.32</u>	<u>11.19</u>	<u>11.26</u>	<u>11.56</u>
ORP	mV	<u>-238.1</u>	<u>-304.1</u>	<u>-313.0</u>	<u>-261.2</u>	<u>-266.3</u>	<u>-254.2</u>
DO	mg/L	<u>7.56</u>	<u>1.46</u>	<u>1.54</u>	<u>1.60</u>	<u>1.02</u>	<u>1.32</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~4 (gallons)

Sampling Data

Sample Date: 05/3/2012
Appearance (visual) _____
Sampling Method: Low Flow Sampling

Sample Time: 1145
Color CLEAR Odor H₂S

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: _____

COMMENTS: H₂S odor noted while pulling trolls, water is initially black - clears up slight when seen on water.

Equipment: YSI 6920 V2; SN 07100012, Minirae 2000 PID, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Mostly Sunny, 15

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/6/2012 Start Time: 1100

Well ID: MW-26

Initial Total Casing Length ~16.95 (feet)

Depth to Water (from top of casing) ~4.22 (feet)

a) Height of Water Column ~12.73 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 12.73 (feet) x 0.163 gallons/foot = 2.1 gallons

Purge Data

Date: 08/6/2012 Time: 1100 (start) 1145 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>1120</u>	<u>1125</u>	<u>1140</u>	<u>1145</u>		
Time	0000						
Volume	gals	<u>~0.5</u>	<u>~2.0</u>	<u>~3.0</u>	<u>~</u>		
Specific Conductivity	mS/cm	<u>1.500</u>	<u>1.628</u>	<u>1.626</u>	<u>1.622</u>		
pH	S.U.	<u>7.74</u>	<u>7.54</u>	<u>7.57</u>	<u>7.56</u>		
Turbidity	NTU	<u>62.6</u>	<u>~0.1</u>	<u>9.7</u>	<u>24.7</u>		
Temperature	°C	<u>16.91</u>	<u>17.00</u>	<u>16.85</u>	<u>16.64</u>		
ORP	mV	<u>15.0</u>	<u>~4.5</u>	<u>~5.6</u>	<u>~4.6</u>		
DO	mg/L	<u>3.07</u>	<u>6.06</u>	<u>0.75</u>	<u>0.64</u>		

Did well dry out? (If yes, how many times) _____ Actual Volume Removed _____ (gallons)

Sampling Data

Sample Date: 08/6/2012

Sample Time: 1145

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: [REDACTED]

COMMENTS:

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: SUNNY 75°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/6/2012 Start Time: 1350

Well ID: MW 6040

Initial Total Casing Length ~ 17.05 (feet)

Depth to Water (from top of casing) ~ 8.15 (feet)

a) Height of Water Column 8.90 (feet)

Well Volume ([a] x volume factor *) = 8.9 (feet) x 0.163 gallons/foot = 1.5 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Purge Data

Date: 08/6/2012 Time: 1350 (start) 1425 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~ 8.60'</u>	<u>~ 8.82'</u>	<u>~ 8.83'</u>	<u>~ 8.81'</u>	<u>~ 8.82'</u>
Time	0000	<u>1400</u>	<u>1407</u>	<u>1415</u>	<u>1420</u>	<u>1425</u>
Volume	gals	<u>-1.0</u>	<u>-2.0</u>	<u>-3.0</u>	<u>-4.0</u>	<u>-4.5</u>
Specific Conductivity	mS/cm	<u>1.945</u>	<u>1.893</u>	<u>1.895</u>	<u>1.895</u>	<u>1.865</u>
pH	S.U.	<u>7.73</u>	<u>7.56</u>	<u>7.48</u>	<u>7.43</u>	<u>7.42</u>
Turbidity	NTU	<u>319.2</u>	<u>64.5</u>	<u>15.8</u>	<u>2.7</u>	<u>-1.7</u>
Temperature	°C	<u>18.46</u>	<u>18.03</u>	<u>17.98</u>	<u>17.81</u>	<u>17.90</u>
ORP	mV	<u>68.6</u>	<u>80.4</u>	<u>85.9</u>	<u>90.8</u>	<u>94.1</u>
DO	mg/L	<u>2.78</u>	<u>2.93</u>	<u>2.80</u>	<u>2.80</u>	<u>2.79</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~4.5 (gallons)

Sampling Data

Sample Date: 08/6/2012

Sample Time: 1430

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: [REDACTED]

COMMENTS: COLLECT MS/MSD @ THIS WELL.

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: M Sunny, 75°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/6/2012 Start Time: 0625

Well ID: MW 6050

Initial Total Casing Length ~ 17.39' (feet)

Depth to Water (from top of casing) ~ 4.42' (feet)

a) Height of Water Column ~ 12.97 (feet)

Well Volume ([a] x volume factor *) = 12.97 (feet) x 0.163 gallons/foot = ~ 2.1 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Purge Data

Date: 08/6/2012 Time: 0933 (start) 1005 (finish)

Method: Geopump peristaltic pump

(Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): ~ 4.41' Low Flow Sampling

Time	0000	0935	0940	0945	0955	1005	
Volume	gals	~0.2	~0.5	~1.0	~2.5	~3.0	
Specific Conductivity	mS/cm	0.714	0.751	0.629	0.628	0.632	
pH	S.U.	7.95	7.64	7.56	7.52	7.49	
Turbidity	NTU	300.0	233.7	110.1	47.4	29.0	
Temperature	°C	17.27	16.77	16.97	17.15	17.15	
ORP	mV	75.2	75.7	70.4	64.7	63.1	
DO	mg/L	4.38	1.15	0.66	0.50	0.43	

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~ 3 (gallons)

Sampling Data

Sample Date: 08/6/2012

Sample Time: 1005

Appearance (visual) CLEAR

Color CLEAR

Odor NO odor

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: [REDACTED]

COMMENTS: DUPLICATE OZ Collected @ this well

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: _____

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/6/2012 Start Time: 0830

Well ID: MW-70420

Initial Total Casing Length ~ 38.86' (feet)

Depth to Water (from top of casing) ~ 4.60' (feet)

a) Height of Water Column 34.26 (feet)

Well Volume ([a] x volume factor *) = 34.26 (feet) x 0.163 gallons/foot = 5.6 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Purge Data

Date: 08/6/2012 Time: 0835 (start) 0915 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>Σ</u>	<u>~ 5.17'</u>	<u>~ 5.19'</u>	<u>~ 5.20'</u>	<u>~ 5.20'</u>	<u>~ 5.19'</u>	<u>~ 5.18'</u>	<u>~ 5.19'</u>
Time	0000	<u>0838</u>	<u>0845</u>	<u>0850</u>	<u>0855</u>	<u>0900</u>	<u>0905</u>	<u>0915</u>	
Volume	gals	<u>~ 0.3</u>	<u>~ 2.5</u>	<u>~ 3.5</u>	<u>~ 4.5</u>	<u>~ 5.0</u>	<u>~ 6.0</u>	<u>~ 7.5</u>	
Specific Conductivity	mS/cm	<u>11.88</u>	<u>2.105</u>	<u>2.000</u>	<u>1.932</u>	<u>1.905</u>	<u>1.892</u>	<u>1.857</u>	
pH	S.U.	<u>9.47</u>	<u>8.50</u>	<u>7.99</u>	<u>7.76</u>	<u>7.62</u>	<u>7.56</u>	<u>7.47</u>	
Turbidity	NTU	<u>641.9</u>	<u>663.4</u>	<u>130.0</u>	<u>42.0</u>	<u>27.0</u>	<u>23.3</u>	<u>18.5</u>	
Temperature	°C	<u>13.91</u>	<u>13.31</u>	<u>13.18</u>	<u>13.17</u>	<u>13.19</u>	<u>13.16</u>	<u>13.09</u>	
ORP	mV	<u>67.2</u>	<u>50.4</u>	<u>65.8</u>	<u>73.1</u>	<u>75.6</u>	<u>80.1</u>	<u>83.9</u>	
DO	mg/L	<u>3.90</u>	<u>2.60</u>	<u>1.40</u>	<u>0.85</u>	<u>0.78</u>	<u>0.90</u>	<u>1.02</u>	

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~ 8.0 (gallons)

Sampling Data

Sample Date: 08/6/2012

Sample Time: 0920

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: _____

COMMENTS: WATER GETS TURBID WHILE COLLECTING TOTAL SAMPLES (?)

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Sunny, 80°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/6/2012 Start Time: 1200

Well ID: MW-7070D

Initial Total Casing Length ~ 39.56' (feet)

Depth to Water (from top of casing) ~ 21.93 (feet)

a) Height of Water Column 17.63 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 17.63 (feet) x 0.163 gallons/foot = 2.9 gallons

Purge Data

Date: 08/6/2012 Time: 1203 (start) 1225 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

~ 24.74' - 26.11' - 26.65' - 27.40' - 28.19'

Time	0000	1205	1207	1210	1215	1220	
Volume	gals	<0.1	0.3	0.4	0.5	0.8	
Specific Conductivity	mS/cm	9.072	9.241	9.350	9.684	10.45	
pH	S.U.	7.33	7.37	7.34	7.36	7.40	
Turbidity	NTU	3.0	-1.7	-2.3	-4.6	-4.8	
Temperature	°C	17.65	17.42	17.31	18.56	20.15	
ORP	mV	156.3	132.2	125.5	117.5	114.9	
DO	mg/L	2.61	4.05	4.42	4.52	4.56	

Did well dry out? (If yes, how many times) NO ^{DRAWING DOWN} Actual Volume Removed 0.9 (gallons)

Sampling Data

Sample Date: 08/6/2012

Sample Time: 1225 - 1320

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel:

COMMENTS: INSTALLED NARROW Ø TEFLON TUBING (USACE) TO PURGE + SAMPLE
END SAMPLING @ 1320 AFTER FILLING 2-1L AND 1-250 ml BOTTLE PUMP
COULD NOT PULL ANY MORE FLUID FINAL @ ~ 30.8' BTL

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: SONNY 94°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/4/2012 Start Time: 1430

Well ID: MW-708DD

Initial Total Casing Length ~39.72 (feet) B70C

Depth to Water (from top of casing) ~8.59 (feet)

a) Height of Water Column 31.13 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 31.13 (feet) x 0.163 gallons/foot = ~5.0 gallons

Purge Data

Date: 08/4/2012 Time: 1430 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>9.55'</u>	<u>9.77'</u>	<u>9.80'</u>	<u>9.83'</u>	<u>9.89'</u>	<u>9.90'</u>
Time	0000	<u>1440</u>	<u>1445</u>	<u>1455</u>	<u>1501</u>	<u>1510</u>	<u>1515</u>
Volume	gals	<u>-1.0</u>	<u>~3.0</u>	<u>~3.5</u>	<u>24</u>	<u>25</u>	<u>~5.5</u>
Specific Conductivity	mS/cm	<u>0.961</u>	<u>1.192</u>	<u>1.224</u>	<u>1.208</u>	<u>1.183</u>	<u>1.175</u>
pH	S.U.	<u>9.16</u>	<u>7.88</u>	<u>7.49</u>	<u>7.33</u>	<u>7.14</u>	<u>7.10</u>
Turbidity	NTU	<u>415.5</u>	<u>57.4</u>	<u>13.8</u>	<u>2.9</u>	<u>3.1</u>	<u>3.4</u>
Temperature	°C	<u>13.74</u>	<u>13.47</u>	<u>13.43</u>	<u>13.45</u>	<u>13.34</u>	<u>13.37</u>
ORP	mV	<u>5.3</u>	<u>-3.6</u>	<u>-4.6</u>	<u>13.8</u>	<u>25.5</u>	<u>31.8</u>
DO	mg/L	<u>1.35</u>	<u>0.64</u>	<u>0.45</u>	<u>0.38</u>	<u>0.33</u>	<u>0.32</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~6 (gallons)

Sampling Data

Sample Date: 08/4/2012

Sample Time: 1520

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: _____

COMMENTS: NOTE WATER IN BATTERY COMPARTMENT OF 9500 TROLL

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP
 Weather: SUNNY, 80°
Water Level Data

Project Number: 140416.09040100
 PID upon opening: 0.0 ppmv

Date: 08/ 6 /2012 Start Time: 1450

Well ID: MW 709DD

Initial Total Casing Length ~ 40.29' (feet)

Depth to Water (from top of casing) ~ 8.79' (feet)

a) Height of Water Column 31.50 (feet)

Well Volume ([a] x volume factor *) = 31.5 (feet) x 0.163 gallons/foot = ~5.1 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft
 1.5-inch well = 0.092 gal/ft
 2-inch well = 0.163 gal/ft
 3-inch well = 0.367 gal/ft
 4-inch well = 0.653 gal/ft
 6-inch well = 1.468 gal/ft

Purge Data

Date: 08/ 6 /2012 Time: 1450 (start) 1520 (finish)

Method: Geopump peristaltic pump
 (Watterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~ 9.59'</u>	<u>~ 9.75'</u>	<u>~ 9.78'</u>	<u>~ 9.76'</u>	<u>~ 9.77'</u>	<u>~ 9.77'</u>
Time	0000	<u>1455</u>	<u>1500</u>	<u>1505</u>	<u>1510</u>	<u>1520</u>	
Volume	gals	<u>0.2</u>	<u>~ 1.0</u>	<u>~ 1.5</u>	<u>~ 2.5</u>	<u>~ 3.0</u>	<u>~ 4.0</u>
Specific Conductivity	mS/cm	<u>1.460</u>	<u>1.444</u>	<u>1.560</u>	<u>1.478</u>	<u>1.453</u>	<u>1.453</u>
pH	S.U.	<u>8.17</u>	<u>7.82</u>	<u>7.62</u>	<u>7.52</u>	<u>7.47</u>	<u>7.44</u>
Turbidity	NTU	<u>~ 1.8</u>	<u>~ 3.4</u>	<u>2.3</u>	<u>~ 3.9</u>	<u>~ 5.0</u>	<u>~ 5.4</u>
Temperature	°C	<u>14.76</u>	<u>13.53</u>	<u>13.12</u>	<u>13.15</u>	<u>13.05</u>	<u>12.98</u>
ORP	mV	<u>50.1</u>	<u>-9.0</u>	<u>-33.4</u>	<u>-34.4</u>	<u>-27.3</u>	<u>-22.9</u>
DO	mg/L	<u>3.57</u>	<u>1.17</u>	<u>0.66</u>	<u>0.52</u>	<u>0.43</u>	<u>0.37</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~ 4 (gallons)

Sampling Data

Sample Date: 08/ 6 /2012
 Appearance (visual) CLEAR
 Sampling Method: Low Flow Sampling

Sample Time: 1520
 Color CLEAR Odor NONE

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel [REDACTED]

COMMENTS:

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutel Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: P. SUNNY 78°F

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/4/2012 Start Time: 1005

Well ID: MW-7101

Initial Total Casing Length ~21.43 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~12.49 (feet) BSOC

a) Height of Water Column 8.94 (feet)

Well Volume ([a] x volume factor *) = 8.94 (feet) x 0.163 gallons/foot = ~1.5 gallons

Purge Data

Date: 08/4/2012 Time: 1030 (start) 1045 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

IV ~13.10' ~12.96' ~12.91' ~12.66'

Time	0000	1034	1036	1040	1045		
Volume	gals	~3.0	~4.5	~5.5	~6.0		
Specific Conductivity	mS/cm	1.226	1.204	1.203	1.200		
pH	S.U.	8.29	8.02	7.72	7.58		
Turbidity	NTU	10.4	7.9	5.0	1.2		
Temperature	°C	14.67	14.30	14.92	14.71		
ORP	mV	54.2	55.1	54.0	51.5		
DO	mg/L	4.90	4.28	3.90	3.65		

Did well dry out? (If yes, how many times) No Actual Volume Removed ~6.0 (gallons)

Sampling Data

Sample Date: 08/4/2012

Sample Time: 1050

Appearance (visual) CLEAR

Color CLEAR

Odor None

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: [REDACTED]

COMMENTS:

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: P. SUNNY, 70°F

PID upon opening: 0.8 ppmv

Water Level Data

Date: 08/4/2012 Start Time: 1600

Well ID: MW 710 Di

Initial Total Casing Length ~42.00 (feet)

Depth to Water (from top of casing) ~25.26 (feet) Broc

a) Height of Water Column 16.74 (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 16.74 (feet) x 0.163 gallons/foot = ~2.7 gallons

Purge Data

Date: 08/4/2012 Time: 1100 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~27.37'</u>	<u>~27.00'</u>	<u>~27.41'</u>	<u>~27.66'</u>	<u>~25.77'</u>	<u>~27.97'</u>	<u>NM</u>
Time	0000	<u>1105</u>	<u>1110</u>	<u>1115</u>	<u>1120</u>	<u>1130</u>	<u>1140</u>	<u>1145</u>
Volume	gals	<u>~2.0</u>	<u>~4.0</u>	<u>~6.0</u>	<u>~7.5</u>	<u>~8.5</u>	<u>~10.0</u>	<u>~10.0</u>
Specific Conductivity	mS/cm	<u>1.372</u>	<u>1.325</u>	<u>1.400</u>	<u>1.435</u>	<u>1.504</u>	<u>1.492</u>	<u>1.506</u>
pH	S.U.	<u>7.75</u>	<u>7.46</u>	<u>7.34</u>	<u>7.30</u>	<u>7.39</u>	<u>7.33</u>	<u>7.34</u>
Turbidity	NTU	<u>56.9</u>	<u>39.4</u>	<u>40.9</u>	<u>36.6</u>	<u>54.6</u>	<u>37.0</u>	<u>42.0</u>
Temperature	°C	<u>16.88</u>	<u>13.74</u>	<u>13.28</u>	<u>13.21</u>	<u>14.08</u>	<u>14.12</u>	<u>15.06</u>
ORP	mV	<u>75.7</u>	<u>85.0</u>	<u>86.2</u>	<u>87.1</u>	<u>85.0</u>	<u>87.5</u>	<u>85.8</u>
DO	mg/L	<u>5.74</u>	<u>4.39</u>	<u>3.93</u>	<u>3.82</u>	<u>5.62</u>	<u>3.83</u>	<u>4.21</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~11.0 (gallons)

Sampling Data

Sample Date: 08/4/2012

Sample Time: 1145

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: [REDACTED]

COMMENTS:

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: M. SUNNY 80°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 08/4/2012 Start Time: 1235

Well ID: MW-713D

Initial Total Casing Length -21.99 (feet) BOC

Depth to Water (from top of casing) ~13.09 (feet)

a) Height of Water Column ~8.90' (feet)

Well Volume ([a] x volume factor *) = 8.90 (feet) x 0.163 gallons/foot = ~1.5 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Purge Data

Date: 08/4/2012 Time: 1240 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~12.05'</u>	<u>~14.18'</u>	<u>~14.28'</u>	<u>~14.24'</u>	<u>~14.24'</u>
Time	0000	<u>1245</u>	<u>1305</u>	<u>1315</u>	<u>1325</u>	<u>1340</u>
Volume	gals	<u>~2.5</u>	<u>~4.5</u>	<u>~5.5</u>	<u>~6.0</u>	<u>~8.0</u>
Specific Conductivity	mS/cm	<u>1.010</u>	<u>1.210</u>	<u>0.872</u>	<u>0.870</u>	<u>0.863</u>
pH	S.U.	<u>7.45</u>	<u>7.22</u>	<u>7.19</u>	<u>7.20</u>	<u>7.21</u>
Turbidity	NTU	<u>32.1</u>	<u>10.5</u>	<u>12.6</u>	<u>0.1</u>	<u>2.7</u>
Temperature	°C	<u>16.99</u>	<u>15.48</u>	<u>15.04</u>	<u>15.14</u>	<u>15.04</u>
ORP	mV	<u>-124.7</u>	<u>-120.3</u>	<u>-176.9</u>	<u>-184.0</u>	<u>-195.1</u>
DO	mg/L	<u>4.01</u>	<u>4.26</u>	<u>4.24</u>	<u>4.30</u>	<u>4.10</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~8.0 (gallons)

Sampling Data

Sample Date: 08/4/2012

Sample Time: 1340

Appearance (visual) Clear

Color Clear

Odor H₂S odor

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel [REDACTED]

COMMENTS: THIN LAYER OF BROWN LNAPL PRESENT ON WL PROBE - BAIL OFF W/ BAILER PRIOR TO SETTING UP PERISTALTIC PUMP + YSI (NOTE H₂S + HYDROCARBON/SOLVENT ODOR) JHEEN NOTED ON GW IN BUCKETS - INITIALLY GRAY TURBID BUT CLEARS UP.

Equipment: YSI 6920 V2; SN 15951, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutel Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: SUNNY, 45°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 10/22/2012 Start Time: 0850

Well ID: MW-70420

Initial Total Casing Length ~ 38.82' BTOC (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~ 2.39' BTOC (feet)

a) Height of Water Column ~ 36.43 (feet)

Well Volume ([a] x volume factor *) = 36.43 (feet) x 0.163 gallons/foot = 5.9 gallons

Purge Data

Date: 10/22/2012 Time: 0915 (start) 1027 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

~2.72'	Time	0000	0918	0926	0934	0940	0947	1007	1020
1027	Volume	gals	<0.1	~0.8	~1.2	~2.0	~2.5	~4.0	~4.5
~5.0	Specific Conductivity	mS/cm	0.988	0.977	0.981	1.064	1.931	2.204	2.185
2.172	pH	S.U.	11.44	11.53	11.44	11.60	8.33	7.24	7.20
7.17	Turbidity	NTU	8.2	7.1	11.4	30.5	63.6	348.2	154.0
53.1	Temperature	°C	15.25	15.43	15.22	14.99	14.78	14.60	14.60
14.61	ORP	mV	-33.0	-32.4	-37.1	-30.6	30.3	21.6	2.8
~7.3	DO	mg/L	8.36	6.28	5.32	4.73	3.62	3.60	3.57
3.56									

Did well dry out? (If yes, how many times) NO Actual Volume Removed 5 (gallons)

Sampling Data

Sample Date: 10/22/2012

Sample Time: 1030

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel [REDACTED]

COMMENTS:

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: SUNNY, 50°

PID upon opening: 0.0 ppmv

Water Level Data

Date: 10/22/2012 Start Time: 1145

Well ID: MW-710 D

Initial Total Casing Length ~21.37' (feet)

Depth to Water (from top of casing) ~11.79' (feet)

a) Height of Water Column ~9.58' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 9.58 (feet) x 0.163 gallons/foot = 1.6 gallons

Purge Data

Date: 10/22/2012 Time: 1220 (start) 1250 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	1223	1232	1240	1248		
Volume	gals	<0.1	~1.0	~2.0	~2.5		
Specific Conductivity	mS/cm	1.720	1.673	1.683	1.675		
pH	S.U.	7.54	7.12	7.12	7.12		
Turbidity	NTU	-4.2	-6.0	-6.9	-4.2		
Temperature	°C	15.26	14.46	14.67	14.53		
ORP	mV	19.8	-6.2	-20.1	-29.5		
DO	mg/L	7.52	4.12	3.71	3.70		

Did well dry out? (If yes, how many times) NO Actual Volume Removed 2.5 (gallons)

Sampling Data

Sample Date: 10/22/2012

Sample Time: 1250

Appearance (visual) CLEAR

Color CLEAR Odor None

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: [REDACTED]

COMMENTS: Collected 3 VOA's for 8260 for USACE

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: SUNNY 62°

PID upon opening: 6.0 ppmv

Water Level Data

Date: 10/22/2012 Start Time: 1545

Well ID: MW-71001

Initial Total Casing Length ~42.00' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~23.43' (feet)

a) Height of Water Column ~18.57' (feet)

Well Volume ([a] x volume factor *) = 18.57 (feet) x 0.163 gallons/foot = ~3.0 gallons

Purge Data

Date: 10/22/2012 Time: 1600 (start) 1635 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

▼ ~23.26' ~23.28' ~23.32' ~23.32' ~23.34'

Time	0000	1600	1614	1622	1628	1635	
Volume	gals	<0.1	~1.0	~1.5	~2.0	~2.5	
Specific Conductivity	mS/cm	1.333	1.265	1.259	1.259	1.256	
pH	S.U.	7.25	7.06	7.04	7.07	7.06	
Turbidity	NTU	25.1	3.2	3.3	1.1	0.7	
Temperature	°C	14.36	13.62	13.54	13.55	13.58	
ORP	mV	1.9	~19.3	~26.0	~34.6	~38.7	
DO	mg/L	5.04	4.18	4.02	4.01	4.03	

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~2.5 (gallons)

Sampling Data

Sample Date: 10/22/2012

Sample Time: 1640

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: XXXXXXXXXX

COMMENTS:

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: SUNNY, 60°F

PID upon opening: 0.0 ppmv

Water Level Data

Date: 10/22/2012 Start Time: 1425

Well ID: MW-708 ND

Initial Total Casing Length ~ 39.69' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~ 7.80 (feet)

a) Height of Water Column ~ 31.89 (feet)

Well Volume ([a] x volume factor *) = 31.89 (feet) x 0.163 gallons/foot = 5.2 gallons

Purge Data

Date: 10/22/2012 Time: 1433 (start) 1515 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

Time	0000	<u>1435</u>	<u>1442</u>	<u>1455</u>	<u>1503</u>	<u>1508</u>	<u>1515</u>
Volume	gals	<u>< 0.1</u>	<u>~ 1.0</u>	<u>~ 2.0</u>	<u>~ 2.5</u>	<u>~ 3.0</u>	<u>~ 3.5</u>
Specific Conductivity	mS/cm	<u>0.662</u>	<u>1.235</u>	<u>1.329</u>	<u>1.371</u>	<u>1.373</u>	<u>1.383</u>
pH	S.U.	<u>10.64</u>	<u>7.45</u>	<u>7.21</u>	<u>7.20</u>	<u>7.20</u>	<u>7.19</u>
Turbidity	NTU	<u>12.7</u>	<u>12.3</u>	<u>4.9</u>	<u>0.5</u>	<u>-2.8</u>	<u>-3.6</u>
Temperature	°C	<u>16.73</u>	<u>15.73</u>	<u>15.47</u>	<u>15.44</u>	<u>15.40</u>	<u>15.40</u>
ORP	mV	<u>-35.6</u>	<u>-39.2</u>	<u>-41.2</u>	<u>-44.1</u>	<u>-45.8</u>	<u>-47.3</u>
DO	mg/L	<u>5.61</u>	<u>4.61</u>	<u>4.14</u>	<u>4.04</u>	<u>3.65</u>	<u>3.59</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~ 3.5 (gallons)

Sampling Data

Sample Date: 10/22/2012

Sample Time: 1515

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel [REDACTED]

COMMENTS: COLLECTED 3 VOAs FOR 8260 FOR USACE

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: RAIN, 54°

PID upon opening: NM ppmv - RAIN

Water Level Data

Date: 10/23/2012 Start Time: 0850

Well ID: MW-7130

Initial Total Casing Length ~21.99' (feet)

Depth to Water (from top of casing) ~12.62' (feet) FILM +

a) Height of Water Column ~9.37' (feet) NOTED

Well Volume ([a] x volume factor *) = 9.37 (feet) x 0.163 gallons/foot = 1.5 gallons

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Purge Data

Date: 10/23/2012 Time: 1305 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

PARAMETERS NOT MEASURED
DUE TO PRODUCT FILM
? SOLVENT? ODOOR/SOLVENT ODOOR NOTED

Time	0000						
Volume	gals						
Specific Conductivity	mS/cm _c						
pH	S.U.						
Turbidity	NTU						
Temperature	°C						
ORP	mV						
DO	mg/L						

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~4.5 (gallons)

Sampling Data

Sample Date: 10/23/2012

Sample Time: 1330

Appearance (visual) CLEAR

Color CLEAR

Odor SULPHUR/?COALTAR,
SOLVENT

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Discription

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: [REDACTED]

COMMENTS: COLLECTED 3 VOAS FOR 8260 FOR USACE ALSO.

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: Flowing Mist

PID upon opening: NM ppmv RA

Water Level Data

Date: 10/23/2012 Start Time: 0905

Well ID: MW-605D

Initial Total Casing Length ~17.32' (feet) 10/24

Depth to Water (from top of casing) (2.33') (feet) 1.81'

a) Height of Water Column ~15.51' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor) = 15.51 (feet) x 0.163 gallons/foot = 2.5 gallons

RENTAL
TROLL
STUCK IN
WELL

Purge Data

Date: 10/24/2012 Time: 0920 (start) 1015 (finish)

FISHED TROLL
OUT @ 0905

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

TURBID

		<u>~1.89'</u>	<u>~1.89'</u>	<u>~1.89'</u>	<u>~1.89'</u>	<u>~1.88'</u>	<u>~1.88'</u>
Time	0000	0921	0934	0943	0951	1005	1013
Volume	gals	<u><0.1</u>	<u>~1.5</u>	<u>~2.0</u>	<u>~3.0</u>	<u>~3.5</u>	<u>~4.0</u>
Specific Conductivity	mS/cm	0.694	0.689	0.691	0.692	0.692	0.691
pH	S.U.	7.17	7.19	7.21	7.22	7.22	7.23
Turbidity	NTU	1330	1021	761	540	178.8	133.5
Temperature	°C	15.89	15.82	15.78	15.79	15.86	15.85
ORP	mV	64.6	35.8	20.2	7.5	-5.0	-13.9
DO	mg/L	4.21	3.69	3.62	3.59	3.60	3.56

Did well dry out? (If yes, how many times) No Actual Volume Removed ~4.0 (gallons)

Sampling Data

Sample Date: 10/24/2012

Sample Time: 1015

Appearance (visual) SLT TURBID

Color SLT GRAYISH Odor NO OR

Sampling Method: Low Flow Sampling

Constituents Sampled

Total Uranium

Total Uranium (filtered)

Isotopic Uranium

Isotopic Uranium (filtered)

Container Description

250 ml plastic

250 ml plastic

1000 ml plastic

1000 ml plastic

Perservative

HNO₃

HNO₃

HNO₃

HNO₃

Personnel: [REDACTED]

VOAS FOR 8260 FOR USACE.

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: RAIN

PID upon opening: NM ppmv

RAIN

Water Level Data

Date: 10/24/2012 Start Time: 0920

Well ID: MW-26

Initial Total Casing Length ~16.95' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Depth to Water (from top of casing) ~2.0' (feet)

a) Height of Water Column ~14.95' (feet)

Well Volume ([a] x volume factor) = 14.95 (feet) x 0.163 gallons/foot = 2.4 gallons

Purge Data

Date: 10/24/2012 Time: 1155 (start) 1245 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>4.98'</u>	<u>~2.02'</u>	<u>~2.05'</u>	<u>~2.04'</u>	<u>~2.04'</u>
Time	0000	<u>1150</u>	<u>1210</u>	<u>1219</u>	<u>1230</u>	<u>1242</u>
Volume	gals	<u><0.1</u>	<u>~1.0</u>	<u>~1.5</u>	<u>~2.0</u>	<u>~3.0</u>
Specific Conductivity	mS/cm	<u>1.124</u>	<u>1.127</u>	<u>1.130</u>	<u>1.131</u>	<u>1.129</u>
pH	S.U.	<u>7.44</u>	<u>7.38</u>	<u>7.43</u>	<u>7.45</u>	<u>7.46</u>
Turbidity	NTU	<u>86.3</u>	<u>86.7</u>	<u>41.6</u>	<u>16.0</u>	<u>8.7</u>
Temperature	°C	<u>16.55</u>	<u>16.63</u>	<u>16.72</u>	<u>16.51</u>	<u>16.46</u>
ORP	mV	<u>21.5</u>	<u>-26.8</u>	<u>-38.1</u>	<u>-52.3</u>	<u>-62.1</u>
DO	mg/L	<u>5.21</u>	<u>3.62</u>	<u>3.50</u>	<u>3.56</u>	<u>3.55</u>

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~3.0 (gallons)

Sampling Data

Sample Date: 10/24/2012

Sample Time: 1245

Appearance (visual) CLEAR

Color CLEAR Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled

Container Description

Perservative

Total Uranium

250 ml plastic

HNO₃

Total Uranium (filtered)

250 ml plastic

HNO₃

Isotopic Uranium

1000 ml plastic

HNO₃

Isotopic Uranium (filtered)

1000 ml plastic

HNO₃

Personnel: [REDACTED]

COMMENTS: COLLECT 3 VOAS FOR 8260 FOR USACE

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: RAIN 52°

PID upon opening: NM ppmv

RAIN

Water Level Data

Date: 10/23/2012 Start Time: 0930

Well ID: MW-707DD

Initial Total Casing Length ~ 39.64' (feet)

Depth to Water (from top of casing) ~ 18.25 (feet)

a) Height of Water Column ~ 21.39' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft
1.5-inch well = 0.092 gal/ft
2-inch well = 0.163 gal/ft
3-inch well = 0.367 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 21.39 (feet) x 0.163 gallons/foot = ~ 3.5 gallons

Purge Data

Date: 10/23/2012 Time: 1715 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling, WELL DRAWING DOWN QUICKLY
~ 18.64' ~ 22.46' ~ 25.15' ~ 26.89'

Time	0000	1715	1730	1735	1745		
Volume	gals	< 0.1	~ 0.5	~ 0.9	~ 1.1		
Specific Conductivity	mS/cm	10.44	10.22	10.17	10.18		
pH	S.U.	6.99	7.01	7.12	7.15		
Turbidity	NTU	7.0	4.1	11.6	9.0		
Temperature	°C	13.32	13.42	13.44	13.21		
ORP	mV	6.6	-8.5	-4.5	6.0		
DO	mg/L	5.73	5.14	5.86	6.13		

Did well dry out? (If yes, how many times) DRAWN DOWN Actual Volume Removed ~ 1.1 (gallons)

Sampling Data

Sample Date: 10/23/2012

Sample Time: 1750

Appearance (visual) CLEAR

Color CLEAR Odor NO

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: [REDACTED]

COMMENTS: COLLECTED 3 VOLS FOR 8260 FOR USAGE

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Gutier Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: RAIN 55°F

PID upon opening: NM ppmv

RAIN

Water Level Data

Date: 10/23/2012 Start Time: 0935

Well ID: MW-604 D

Initial Total Casing Length ~16.92' (feet)

Depth to Water (from top of casing) ~6.28' (feet)

a) Height of Water Column ~10.64' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume $[(a) \times \text{volume factor}] = 10.64 \text{ (feet)} \times 0.163 \text{ gallons/foot} = 1.7 \text{ gallons}$

Purge Data

Date: 10/23/2012 Time: 1420 (start) 1505 (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

▼ 6.0 1423 ~5.97' ~5.92' ~5.92'

Time	0000	1423	1450	1500	1505		
Volume	gals	~0.1	~2.5	~3.0	~3.5		
Specific Conductivity	mS/cm	1.874	1.655	1.643	1.647		
pH	S.U.	7.25	7.14	7.15	7.15		
Turbidity	NTU	11.8	86.6	47.6	40.7		
Temperature	°C	15.21	15.36	15.38	15.42		
ORP	mV	+10.8	-59.0	-68.4	-69.6		
DO	mg/L	5.73	3.78	3.70	3.70		

Did well dry out? (If yes, how many times) NO Actual Volume Removed 3.5 (gallons)

Sampling Data

Sample Date: 10/23/2012

Sample Time: 1505

Appearance (visual) CLEAR

Color CLEAR

Odor NONE

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃

Personnel: [REDACTED]

COMMENTS: COLLECT 3 VOAS FOR 9260 FOR USAGE

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

Groundwater Sample Event Field Data Sheet

Project Name: Former Guterl Specialty Steel FUSRAP

Project Number: 140416.09040100

Weather: _____

PID upon opening: NM ppmv

RAIN

Water Level Data

Date: 10/23/2012 Start Time: 0940

Well ID: MW-709DD

Initial Total Casing Length ~40.29' (feet)

Depth to Water (from top of casing) ~7.44' (feet)

a) Height of Water Column ~32.85' (feet)

*Volume Factors:

1-inch well = 0.041 gal/ft

1.5-inch well = 0.092 gal/ft

2-inch well = 0.163 gal/ft

3-inch well = 0.367 gal/ft

4-inch well = 0.653 gal/ft

6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor *) = 32.85 (feet) x 0.163 gallons/foot = 5.4 gallons

Purge Data

Date: 10/23/2012 Time: 1600 (start) _____ (finish)

Method: Geopump peristaltic pump

(Waterra, bailer, submersible pump, peristaltic pump, etc.)

Purge Volume (3 to 5 well volumes): Low Flow Sampling

		<u>~7.31</u>	<u>~7.31</u>	<u>~7.27</u>	<u>~7.28</u>		
Time	0000	1605	1614	1630	1637		
Volume	gals	<0.1	~1.0	~2.5	~3.0		
Specific Conductivity	mS/cm	1.590	1.684	1.540	1.521		
pH	S.U.	7.36	7.25	7.27	7.27		
Turbidity	NTU	17.6	26.0	4.1	1.6		
Temperature	°C	14.86	13.77	13.58	13.56		
ORP	mV	-117.0	-179.1	-141.0	-143.6		
DO	mg/L	4.76	3.80	3.67	3.67		

Did well dry out? (If yes, how many times) NO Actual Volume Removed ~3.0 (gallons)

Sampling Data

Sample Date: 10/23/2012

Sample Time: 1640

Appearance (visual) _____

Color _____ Odor _____

Sampling Method: Low Flow Sampling

Constituents Sampled	Container Description	Perservative
Total Uranium	250 ml plastic	HNO ₃
Total Uranium (filtered)	250 ml plastic	HNO ₃
Isotopic Uranium	1000 ml plastic	HNO ₃
Isotopic Uranium (filtered)	1000 ml plastic	HNO ₃
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Personnel: _____

COMMENTS: _____

Equipment: YSI 6920 V2; SN 12014, Geopump with dedicated Teflon-lined tubing.

APPENDIX C

Analytical Data

(Provided on same CD as Appendix A)




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

Guteryl Steel

Lot #: F1H020470


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

August 25, 2011

Case Narrative
LOT NUMBER: F1H020470

This report contains the analytical results for the four samples received under chain of custody by TestAmerica in St. Louis on August 2, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

There were no nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H020470

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Thorium by Alpha Spectroscopy	EML A-01-R MOD	
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	

References:

EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
 HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY

SAMPLE SUMMARY**F1H020470**

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
MLCN1	001	CITY OF LOCKPORT SEWER LOCATION #1 US-0001	07/27/11	13:55
MLCN2	002	CITY OF LOCKPORT SEWER LOCATION #1 UW-0001	07/27/11	13:45
MLCN3	003	CITY OF LOCKPORT SEWER LOCATION #2 US-0002	07/27/11	14:35
MLCN4	004	CITY OF LOCKPORT SEWER LOCATION #2 UW-0002	07/27/11	14:25

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: CITY OF LOCKPORT SEWER LOCATION #1 US-0001

Radiochemistry

Lab Sample ID: F1H020470-001

Date Collected: 07/27/11 1355

Work Order: MLCN1

Date Received: 08/02/11 0940

Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
<hr/>							
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1223198	Yld % 82
Thorium 228	0.270		0.073	0.100	0.031	08/11/11	08/17/11
Thorium 230	0.448		0.096	0.100	0.020	08/11/11	08/17/11
Thorium 232	0.224		0.065	0.100	0.021	08/11/11	08/17/11
<hr/>							
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1223199	Yld % 79
Uranium 234	3.55		0.39	0.10	0.03	08/11/11	08/17/11
Uranium 235/236	0.201		0.067	0.100	0.014	08/11/11	08/17/11
Uranium 238	3.72		0.40	0.10	0.01	08/11/11	08/17/11
<hr/>							

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: CITY OF LOCKPORT SEWER LOCATION #1 US-0001 DUP

Radiochemistry

Lab Sample ID: F1H020470-001X
 Work Order: MLCN1
 Matrix: SOLID

Date Collected: 07/27/11 1355
 Date Received: 08/02/11 0940

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1223198	Yld % 80
Thorium 228	0.220		0.066	0.100	0.033	08/11/11	08/17/11
Thorium 230	0.271		0.073	0.100	0.034	08/11/11	08/17/11
Thorium 232	0.220		0.065	0.100	0.031	08/11/11	08/17/11
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1223199	Yld % 79
Uranium 234	3.15		0.35	0.10	0.02	08/11/11	08/17/11
Uranium 235/236	0.195		0.067	0.100	0.025	08/11/11	08/17/11
Uranium 238	3.33		0.37	0.10	0.02	08/11/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: CITY OF LOCKPORT SEWER LOCATION #1 UW-0001

Radiochemistry

Lab Sample ID: F1H020470-002
 Work Order: MLCN2
 Matrix: WATER

Date Collected: 07/27/11 1345
 Date Received: 08/02/11 0940

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD							
				pCi/L		Batch # 1227018	Yld % 83
Thorium 228	-0.002	U	0.020	0.100	0.058	08/15/11	08/16/11
Thorium 230	0.026		0.030	0.100	0.023	08/15/11	08/16/11
Thorium 232	0.009	U	0.017	0.100	0.023	08/15/11	08/16/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
				pCi/L		Batch # 1227019	Yld % 80
Uranium 234	10.9		1.1	0.1	0.04	08/15/11	08/16/11
Uranium 235/236	0.61		0.17	0.10	0.05	08/15/11	08/16/11
Uranium 238	10.4		1.1	0.1	0.04	08/15/11	08/16/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: CITY OF LOCKPORT SEWER LOCATION #1 UW-0001 DUP

Radiochemistry

Lab Sample ID: F1H020470-002X
 Work Order: MLCN2
 Matrix: WATER

Date Collected: 07/27/11 1345
 Date Received: 08/02/11 0940

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD							
				pCi/L		Batch # 1227018	Yld % 76
Thorium 228	0.007	U	0.028	0.100	0.062	08/15/11	08/16/11
Thorium 230	0.018	U	0.026	0.100	0.025	08/15/11	08/16/11
Thorium 232	0.009	U	0.018	0.100	0.025	08/15/11	08/16/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
				pCi/L		Batch # 1227019	Yld % 78
Uranium 234	10.9		1.1	0.1	0.02	08/15/11	08/16/11
Uranium 235/236	0.49		0.15	0.10	0.03	08/15/11	08/16/11
Uranium 238	11.2		1.1	0.1	0.02	08/15/11	08/16/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

F1H020470

Shaw Environmental & Infrastructure Inc

Client Sample ID: CITY OF LOCKPORT SEWER LOCATION #2 US-0002

Radiochemistry

Lab Sample ID: F1H020470-003

Date Collected: 07/27/11 1435

Work Order: MLCN3

Date Received: 08/02/11 0940

Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1223198	Yld % 51
Thorium 228	0.47		0.12	0.10	0.04	08/11/11	08/16/11
Thorium 230	0.325		0.0998	0.100	0.041	08/11/11	08/16/11
Thorium 232	0.44		0.12	0.10	0.02	08/11/11	08/16/11
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1223199	Yld % 84
Uranium 234	4.37		0.45	0.10	0.01	08/11/11	08/17/11
Uranium 235/236	0.219		0.069	0.100	0.013	08/11/11	08/17/11
Uranium 238	4.77		0.49	0.10	0.02	08/11/11	08/17/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: CITY OF LOCKPORT SEWER LOCATION #2 UW-0002

Radiochemistry

Lab Sample ID: FLH020470-004

Date Collected: 07/27/11 1425

Work Order: MLCN4

Date Received: 08/02/11 0940

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD							
				pCi/L		Batch # 1227018	Yld % 32
Thorium 228	0.053	U	0.075	0.100	0.11	08/15/11	08/16/11
Thorium 230	-0.005	U	0.011	0.100	0.096	08/15/11	08/16/11
Thorium 232	-0.005	U	0.011	0.100	0.096	08/15/11	08/16/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
				pCi/L		Batch # 1227019	Yld % 62
Uranium 234	0.43		0.14	0.10	0.03	08/15/11	08/16/11
Uranium 235/236	0.038		0.044	0.100	0.034	08/15/11	08/16/11
Uranium 238	0.44		0.14	0.10	0.03	08/15/11	08/16/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

F1H020470

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H020470
 Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD							
			pCi/g	Batch #	1223198	Yld %	94 F1H110000-198B
Thorium 228	-0.0009	U	0.0018	0.100	0.017	08/11/11	08/16/11
Thorium 230	0.022		0.018	0.100	0.01	08/11/11	08/16/11
Thorium 232	0.007	U	0.010	0.100	0.01	08/11/11	08/16/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/g	Batch #	1223199	Yld %	82 F1H110000-199B
Uranium 234	0.011	U	0.015	0.100	0.022	08/11/11	08/16/11
Uranium 235/236	0.005	U	0.011	0.100	0.014	08/11/11	08/16/11
Uranium 238	0.0042	U	0.0084	0.100	0.011	08/11/11	08/16/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H020470

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1227018	Yld %	91 F1H150000-018B
Thorium 228	0.0	U	0.0075	0.100	0.020	08/15/11	08/16/11
Thorium 230	0.022		0.026	0.100	0.020	08/15/11	08/16/11
Thorium 232	0.0	U	0.0074	0.100	0.020	08/15/11	08/16/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1227019	Yld %	86 F1H150000-019B
Uranium 234	0.013	U	0.022	0.100	0.034	08/15/11	08/16/11
Uranium 235/236	-0.0024	U	0.0047	0.100	0.043	08/15/11	08/16/11
Uranium 238	0.0	U	0.0076	0.100	0.020	08/15/11	08/16/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

F1H020470

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H020470
 Matrix: SOLID

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID		
					% Yld	% Rec	QC Control Limits
Iso THORIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1H110000-198C
Thorium 230	24.5	23.8	2.3	0.04	90	97	(77 - 122)
	Batch #:	1223198		Analysis Date:	08/16/11		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1H110000-199C
Uranium 234	1.63	1.63	0.21	0.02	85	100	(74 - 139)
Uranium 238	1.70	1.62	0.21	0.02	85	95	(75 - 140)
	Batch #:	1223199		Analysis Date:	08/16/11		

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H020470
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso THORIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H150000-018C
Thorium 230	2.37	2.30	0.33	0.04	87	97	(77 - 118)
	Batch #:	1227018		Analysis Date:	08/16/11		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H150000-019C
Uranium 234	3.26	3.03	0.40	0.03	94	93	(76 - 136)
Uranium 238	3.39	3.12	0.40	0.04	94	92	(76 - 134)
	Batch #:	1227019		Analysis Date:	08/16/11		

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H020470
 Matrix: SOLID

Date Sampled: 07/27/11
 Date Received: 08/02/11

Parameter	SAMPLE Result	Total Uncert. (2 σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Iso THORIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1H020470-001
Thorium 228	0.270	0.073	82	0.220	0.066	80	20 %RPD
Thorium 230	0.448	0.096	82	0.271	0.073	80	49 %RPD
Thorium 232	0.224	0.065	82	0.220	0.065	80	1 %RPD
Batch #:		1223198 (Sample)		1223198 (Duplicate)			
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1H020470-001
Uranium 234	3.55	0.39	79	3.15	0.35	79	12 %RPD
Uranium 235/236	0.201	0.067	79	0.195	0.067	79	3 %RPD
Uranium 238	3.72	0.40	79	3.33	0.37	79	11 %RPD
Batch #:		1223199 (Sample)		1223199 (Duplicate)			

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H020470

U Result is less than the sample detection limit.

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H020470
 Matrix: WATER

Date Sampled: 07/27/11
 Date Received: 08/02/11

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/L		A-01-R MOD			F1H020470-002
Thorium 228	-0.002 U		0.020	83	0.007 U		0.028	76	382 %RPD
Thorium 230	0.026		0.030	83	0.018 U		0.026	76	37 %RPD
Thorium 232	0.009 U		0.017	83	0.009 U		0.018	76	6 %RPD
Batch #:		1227018	(Sample)		1227018	(Duplicate)			
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		A-01-R MOD			F1H020470-002
Uranium 234	10.9		1.1	80	10.9		1.1	78	0.2 %RPD
Uranium 235/236	0.61		0.17	80	0.49		0.15	78	21 %RPD
Uranium 238	10.4		1.1	80	11.2		1.1	78	7 %RPD
Batch #:		1227019	(Sample)		1227019	(Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H020470

U Result is less than the sample detection limit.

F1H020470

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: **RAD**

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251 SDG:
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 0

Date Received: 2011-08-02
 Analytical Due Date: 2011-08-15
 Report Due Date: 2011-08-16
 Report Type: B Standard Report
 EDD Code: 00

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	A
1	CITY OF LOCKPORT SEWER LO			2011-07-27 / 1355	MLCN1	SOLID
<u>SAMPLE COMMENTS:</u>						
XX ZV	RAD SCREEN	SOLID, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	SOLID, A-01-R MOD, Iso URANIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 20	EML A-01-R MOD	SOLID, A-01-R MOD, Iso THORIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	CITY OF LOCKPORT SEWER LO			2011-07-27 / 1345	MLCN2	WATER
<u>SAMPLE COMMENTS:</u>						
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso URANIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 20	EML A-01-R MOD	WATER, A-01-R MOD, Iso THORIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	A
3	CITY OF LOCKPORT SEWER LO			2011-07-27 / 1435	MLCN3	SOLID
<u>SAMPLE COMMENTS:</u>						
XX ZV	RAD SCREEN	SOLID, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	SOLID, A-01-R MOD, Iso URANIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 20	EML A-01-R MOD	SOLID, A-01-R MOD, Iso THORIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	CITY OF LOCKPORT SEWER LO			2011-07-27 / 1425	MLCN4	WATER
<u>SAMPLE COMMENTS:</u>						
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso URANIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 20	EML A-01-R MOD	WATER, A-01-R MOD, Iso THORIUM (LONG CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06

15 Rider Trail North

ne 314.298.8566 fax 314.298.8757

cur 388

Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]**cial Instructions/QC Requirements & Comments:**

5.3.3.3 Possible Radioactive Hazard

SEWER LOCATION #2 US-0001 may CONTAIN HYDROCARBONS.

Company: Shaw E & I, Inc.	Date/Time: 8/1/11 1340	Company: BFL0	Date/Time: 08-01-11 13:40
Company: BFL0	Date/Time: 08-01-11 14:00	Company: BFL0	Date/Time: 8-1-11 1400
Company: BFL0	Date/Time: 8-1-11 1400	Company: TA STL	Date/Time: 8/2/11 0940

Lot #(s): F1H020470

TestAmerica St. Louis

CUR Form #: 388

CONDITION UPON RECEIPT FORM

Client: SHAW ENVIRO

Quote No: 89251

COC/RFA No: 001



Initiated By: NVD

Date: 8/2/11

Time: 0940

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____

Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 1694

1. AMBIENT

2. _____

2. _____

3. _____

3. _____

4. _____

4. _____

5. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

6. _____

7. _____

8. _____

9. _____

10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. Y <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y N <u>N/A</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

Client Contact Name: _____

Informed by: _____

Sample(s) processed "as is"

Sample(s) on hold until: _____

If released, notify: _____

Project Management Review

Date: 8/5/11

THIS FORM MUST BE COMPLETED BY THE INITIATOR. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON MUST APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

F1H020470



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. 140415

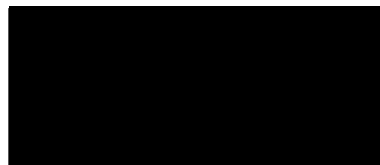
Guteryl Steel

Lot #: F1H090481

Karl VanKeuren

Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.



Project Manager

October 14, 2011

F1H090481

1 of 79

Case Narrative
LOT NUMBER: F1H090481
Revised

This report contains the analytical results for the eight samples received under chain of custody by TestAmerica in St. Louis on August 5, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

This report is revised to correct sample identification numbers for sample-002 and 006 to A04AMW230001 and A04AMW230001 Dissolved.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1229246**

The CCV %D for Dichlorodifluoromethane is outside the established QC limits. This analyte is not part of the analysis request and thus this excursion does not affect the data.

The MS/MSD recoveries for 1,1-Dichloroethene, 1,1-Dichloroethane, 1,2-Dichloroethene (total), 1,1,1-Trichloroethane, Benzene, Trichloroethene, and Bromodichloromethane are outside the established QC limits. The RPD is within method acceptance criteria except for 1,4-Dioxane indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

The sample required a dilution due to high concentrations of target analytes. There was insufficient sample to perform the dilution and reanalysis.

The Method Blank surrogate recovery for Toluene-d8 is outside acceptance limits. The samples associated with this method blank demonstrated acceptable surrogate recoveries indicating the surrogate excursion is isolated to the method blank and not indicative of the batch.

During screening F1H090481 did not appear to have hits above the calibration range. Screening is not as accurate as the full analytical test. The sample was selected to be used for the MS/MSD in the batch. Therefore, all three vials were consumed in the first run. "E" flagged concentration values should be considered estimates.

Affected Samples:

F1H090481 (1): A04DMW240001

Batch: 1230013

There was insufficient sample volume to perform MS/MSD analysis. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F1H090481 (2): A04DMW230001

F1H090481 (3): A04DMW713D0001

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090481 (2): A04DMW230001

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1222063**

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

Affected Samples:

F1H090481 (1): A04DMW240001

F1H090481 (2): A04DMW230001

F1H090481 (3): A04DMW713D0001

F1H090481 (4): A04BMW190001
F1H090481 (5): A04DMW240001 DISSOLVED
F1H090481 (6): A04DMW230001 DISSOLVED
F1H090481 (7): A04DMW713D0001 DISSOLVED
F1H090481 (8): A04BMW190001 DISSOLVED

Chloride (MCAWW 300.0A)

Batch: 1224118

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090481 (1): A04DMW240001
F1H090481 (2): A04DMW230001
F1H090481 (3): A04DMW713D0001
F1H090481 (4): A04BMW190001

Sulfate (MCAWW 300.0A)

Batch: 1224123

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090481 (1): A04DMW240001
F1H090481 (2): A04DMW230001
F1H090481 (3): A04DMW713D0001
F1H090481 (4): A04BMW190001

Nitrite as N (MCAWW 300.0A)

Batch: 1224121

The following samples were reported ND at dilution for Nitrite, due to interference with Chloride in the undiluted runs. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090481 (1): A04DMW240001
F1H090481 (3): A04DMW713D0001
F1H090481 (4): A04BMW190001

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H090481 (1): A04DMW240001
F1H090481 (2): A04DMW230001
F1H090481 (3): A04DMW713D0001

F1H090481 (4): A04BMW190001

Phosphate as P, Ortho (MCAWW 300.0A)

Batch: 1224122

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H090481 (1): A04DMW240001

F1H090481 (2): A04DMW230001

F1H090481 (3): A04DMW713D0001

F1H090481 (4): A04BMW190001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H090481

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL". HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H090481

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLHG0	001	A04DMW240001	08/04/11	09:25
MLHH0	002	A04AMW230001	08/04/11	10:40
MLHH1	003	A04DMW713D0001	08/04/11	12:00
MLHH2	004	A04BMW190001	08/04/11	13:30
MLHH8	005	A04DMW240001 DISSOLVED	08/04/11	09:25
MLHJ6	006	A04AMW230001 DISSOLVED	08/04/11	10:40
MLHJ7	007	A04DMW713D0001 DISSOLVED	08/04/11	12:00
MLHKE	008	A04BMW190001 DISSOLVED	08/04/11	13:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001

GC/MS Volatiles

Lot-Sample #...: F1H090481-001 Work Order #...: MLHG01AC Matrix.....: WATER
 Date Sampled...: 08/04/11 09:25 Date Received...: 08/05/11
 Prep Date.....: 08/16/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1229246 Analysis Time...: 01:31
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	0.41 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	15	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	52 E	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	21	1.0	ug/L
1,2-Dichloroethene	24	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	41 E	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	17	1.0	ug/L
Vinyl chloride	6.1	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001

GC/MS Volatiles

Lot-Sample #...: F1H090481-001 Work Order #...: MLHG01AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	115	(85 - 120)
Dibromofluoromethane	97	(85 - 115)
1,2-Dichloroethane-d4	98	(70 - 120)
4-Bromofluorobenzene	105	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001

TOTAL Metals

Lot-Sample #...: F1H090481-001

Matrix.....: WATER

Date Sampled...: 08/04/11 09:25 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	39.8 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHG01A4
		Dilution Factor: 1		Analysis Time...: 20:48		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AE
		Dilution Factor: 1		Analysis Time...: 15:22		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AF
		Dilution Factor: 1		Analysis Time...: 15:22		
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AD
		Dilution Factor: 1		Analysis Time...: 15:22		
Barium	67.9	50	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AG
		Dilution Factor: 1		Analysis Time...: 15:22		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AH
		Dilution Factor: 1		Analysis Time...: 15:22		
Calcium	104000 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHG01AJ
		Dilution Factor: 5		Analysis Time...: 11:42		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AK
		Dilution Factor: 1		Analysis Time...: 15:22		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AL
		Dilution Factor: 1		Analysis Time...: 15:22		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AM
		Dilution Factor: 1		Analysis Time...: 15:22		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AN
		Dilution Factor: 1		Analysis Time...: 15:22		
Iron	767	100	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AP
		Dilution Factor: 1		Analysis Time...: 15:22		
Magnesium	31700	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AQ
		Dilution Factor: 1		Analysis Time...: 09:50		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001

TOTAL Metals

Lot-Sample #...: F1H090481-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	110	15	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AR
		Dilution Factor: 1		Analysis Time...: 15:22		
Sodium	77600	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AT
		Dilution Factor: 1		Analysis Time...: 09:50		
Nickel	15.8 J	40	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AU
		Dilution Factor: 1		Analysis Time...: 15:22		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHG01AV
		Dilution Factor: 1		Analysis Time...: 17:34		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHG01AW
		Dilution Factor: 1		Analysis Time...: 15:22		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHG01AX
		Dilution Factor: 1		Analysis Time...: 17:34		
Strontium	495 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHG01A0
		Dilution Factor: 5		Analysis Time...: 11:42		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHG01A1
		Dilution Factor: 1		Analysis Time...: 15:22		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHG01A2
		Dilution Factor: 1		Analysis Time...: 15:22		
Zinc	13.9 J	20	ug/L	SW846 6010C	08/10-08/12/11	MLHG01A3
		Dilution Factor: 1		Analysis Time...: 15:22		

NOTE(S) :

E Matrix interference.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001

General Chemistry

Lot-Sample #...: F1H090481-001 Work Order #...: MLHG0 Matrix.....: WATER
 Date Sampled...: 08/04/11 09:25 Date Received...: 08/05/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	116	20.0	mg/L	MCAWW 300.0A	08/05/11	1224118
		Dilution Factor: 100		Analysis Time...: 03:43		
Fluoride	0.89	0.10	mg/L	MCAWW 300.0A	08/05/11	1224119
		Dilution Factor: 1		Analysis Time...: 03:14		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/05/11	1224120
		Dilution Factor: 1		Analysis Time...: 03:14		
Nitrite	ND	0.040	mg/L	MCAWW 300.0A	08/05/11	1224121
		Dilution Factor: 2		Analysis Time...: 05:23		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/05/11	1224122
		Dilution Factor: 1		Analysis Time...: 03:14		
Sulfate	99.1	5.0	mg/L	MCAWW 300.0A	08/05/11	1224123
		Dilution Factor: 10		Analysis Time...: 03:28		
Total Alkalinity	248	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	633	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

GC/MS Volatiles

Lot-Sample #...: F1H090481-002 Work Order #...: MLHH01AN Matrix.....: WATER
 Date Sampled...: 08/04/11 10:40 Date Received...: 08/05/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 17:00
 Dilution Factor: 5
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	10	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	10	ug/L
Dibromochloromethane	ND	5.0	ug/L
Chloroethane	82 D	10	ug/L
Chloroform	1.4 J,D	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
1,1-Dichloroethene	50 D	5.0	ug/L
1,2-Dichloroethene	160 D	10	ug/L
(total)			
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
2-Hexanone	ND	25	ug/L
Methylene chloride	3.2 J,B,D	5.0	ug/L
4-Methyl-2-pentanone	ND	25	ug/L
Styrene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	8.5 D	5.0	ug/L
Toluene	0.53 J,D	5.0	ug/L
1,1,2-Trichloroethane	1.9 J,D	5.0	ug/L
Trichloroethene	190 D	5.0	ug/L
Vinyl chloride	17 D	10	ug/L
Xylenes (total)	ND	25	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	111	(85 - 120)
Dibromofluoromethane	114	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	109	(75 - 120)

F1H090481

(Continued on next page)

13 of 79

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

GC/MS Volatiles

Lot-Sample #...: F1H090481-002 Work Order #...: MLHH01AN Matrix.....: WATER

NOTE(S) :

D Result was obtained from the analysis of a dilution.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

GC/MS Volatiles

Lot-Sample #...: F1H090481-002 Work Order #...: MLHH02AN Matrix.....: WATER
Date Sampled...: 08/04/11 10:40 Date Received...: 08/05/11
Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
Prep Batch #...: 1230013 Analysis Time...: 16:34
Dilution Factor: 25
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1-Dichloroethane	650 D	25	ug/L
1,1,1-Trichloroethane	1100 D	25	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
4-Bromofluorobenzene	105	(75 - 120)

NOTE (S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

TOTAL Metals

Lot-Sample #...: F1H090481-002

Matrix.....: WATER

Date Sampled...: 08/04/11 10:40 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	6.7 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHH01AF
		Dilution Factor: 1		Analysis Time...: 20:54		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AQ
		Dilution Factor: 1		Analysis Time...: 15:35		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AR
		Dilution Factor: 1		Analysis Time...: 15:35		
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AP
		Dilution Factor: 1		Analysis Time...: 15:35		
Barium	58.8	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AT
		Dilution Factor: 1		Analysis Time...: 15:35		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AU
		Dilution Factor: 1		Analysis Time...: 15:35		
Calcium	88200 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHH01AV
		Dilution Factor: 5		Analysis Time...: 11:55		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AW
		Dilution Factor: 1		Analysis Time...: 15:35		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AX
		Dilution Factor: 1		Analysis Time...: 15:35		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A0
		Dilution Factor: 1		Analysis Time...: 15:35		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A1
		Dilution Factor: 1		Analysis Time...: 15:35		
Iron	928	100	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A2
		Dilution Factor: 1		Analysis Time...: 15:35		
Magnesium	22400	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A3
		Dilution Factor: 1		Analysis Time...: 10:03		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

TOTAL Metals

Lot-Sample #...: F1H090481-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	804	15	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A4
		Dilution Factor: 1		Analysis Time...: 15:35		
Sodium	19300	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A5
		Dilution Factor: 1		Analysis Time...: 10:03		
Nickel	20.6 J	40	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A6
		Dilution Factor: 1		Analysis Time...: 15:35		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHH01A7
		Dilution Factor: 1		Analysis Time...: 17:47		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH01A8
		Dilution Factor: 1		Analysis Time...: 15:35		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHH01A9
		Dilution Factor: 1		Analysis Time...: 17:47		
Strontium	341 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHH01AA
		Dilution Factor: 5		Analysis Time...: 11:55		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AC
		Dilution Factor: 1		Analysis Time...: 15:35		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AD
		Dilution Factor: 1		Analysis Time...: 15:35		
Zinc	117	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH01AE
		Dilution Factor: 1		Analysis Time...: 15:35		

NOTE(S) :

E Matrix interference.

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

General Chemistry

Lot-Sample #...: F1H090481-002 Work Order #...: MLHH0 Matrix.....: WATER
 Date Sampled...: 08/04/11 10:40 Date Received...: 08/05/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	23.1	2.0	mg/L	MCAWW 300.0A	08/05/11	1224118
		Dilution Factor: 10		Analysis Time...: 12:35		
Fluoride	0.92	0.10	mg/L	MCAWW 300.0A	08/05/11	1224119
		Dilution Factor: 1		Analysis Time...: 12:21		
Nitrate	0.082	0.020	mg/L	MCAWW 300.0A	08/05/11	1224120
		Dilution Factor: 1		Analysis Time...: 12:21		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	08/05/11	1224121
		Dilution Factor: 1		Analysis Time...: 12:21		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/05/11	1224122
		Dilution Factor: 1		Analysis Time...: 12:21		
Sulfate	52.4	5.0	mg/L	MCAWW 300.0A	08/05/11	1224123
		Dilution Factor: 10		Analysis Time...: 12:35		
Total Alkalinity	252	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	411	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001

GC/MS Volatiles

Lot-Sample #....: F1H090481-003 Work Order #....: MLHH11AN Matrix.....: WATER
 Date Sampled....: 08/04/11 12:00 Date Received...: 08/05/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #....: 1230013 Analysis Time...: 16:07
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	4.2	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	1.0 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	0.23 J	2.0	ug/L
Chloroform	2.5	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	0.71 J	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	2.2	1.0	ug/L
1,2-Dichloroethene	3.4	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	0.10 J	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.92 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.18 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	1.0 J	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001

GC/MS Volatiles

Lot-Sample #...: F1H090481-003 Work Order #...: MLHH11AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	100	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
4-Bromofluorobenzene	110	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001

TOTAL Metals

Lot-Sample #...: F1H090481-003

Matrix.....: WATER

Date Sampled...: 08/04/11 12:00 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	5.1 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHH11AF
		Dilution Factor: 1		Analysis Time...: 21:01		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AQ
		Dilution Factor: 1		Analysis Time...: 15:42		
Aluminum	280	200	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AR
		Dilution Factor: 1		Analysis Time...: 15:42		
Arsenic	14.2	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AP
		Dilution Factor: 1		Analysis Time...: 15:42		
Barium	217	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AT
		Dilution Factor: 1		Analysis Time...: 15:42		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AU
		Dilution Factor: 1		Analysis Time...: 15:42		
Calcium	146000 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHH11AV
		Dilution Factor: 5		Analysis Time...: 12:01		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AW
		Dilution Factor: 1		Analysis Time...: 15:42		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AX
		Dilution Factor: 1		Analysis Time...: 15:42		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A0
		Dilution Factor: 1		Analysis Time...: 15:42		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A1
		Dilution Factor: 1		Analysis Time...: 15:42		
Iron	583	100	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A2
		Dilution Factor: 1		Analysis Time...: 15:42		
Magnesium	60900	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHH11A3
		Dilution Factor: 5		Analysis Time...: 12:01		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001

TOTAL Metals

Lot-Sample #...: F1H090481-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	134	15	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A4
		Dilution Factor: 1		Analysis Time...: 15:42		
Sodium	74700	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A5
		Dilution Factor: 1		Analysis Time...: 10:09		
Nickel	ND	40	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A6
		Dilution Factor: 1		Analysis Time...: 15:42		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHH11A7
		Dilution Factor: 1		Analysis Time...: 17:53		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH11A8
		Dilution Factor: 1		Analysis Time...: 15:42		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHH11A9
		Dilution Factor: 1		Analysis Time...: 17:53		
Strontium	1300 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHH11AA
		Dilution Factor: 5		Analysis Time...: 12:01		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AC
		Dilution Factor: 1		Analysis Time...: 15:42		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AD
		Dilution Factor: 1		Analysis Time...: 15:42		
Zinc	8.8 J	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH11AE
		Dilution Factor: 1		Analysis Time...: 15:42		

NOTE(S) :

E Matrix interference.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001

General Chemistry

Lot-Sample #...: F1H090481-003 Work Order #...: MLHH1 Matrix.....: WATER
 Date Sampled...: 08/04/11 12:00 Date Received...: 08/05/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	173	20.0	mg/L	MCAWW 300.0A	08/05/11	1224118
		Dilution Factor: 100		Analysis Time...: 04:26		
Fluoride	0.23	0.10	mg/L	MCAWW 300.0A	08/05/11	1224119
		Dilution Factor: 1		Analysis Time...: 03:57		
Nitrate	0.075	0.020	mg/L	MCAWW 300.0A	08/05/11	1224120
		Dilution Factor: 1		Analysis Time...: 03:57		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/05/11	1224121
		Dilution Factor: 10		Analysis Time...: 04:11		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/05/11	1224122
		Dilution Factor: 1		Analysis Time...: 03:57		
Sulfate	76.2	5.0	mg/L	MCAWW 300.0A	08/05/11	1224123
		Dilution Factor: 10		Analysis Time...: 04:11		
Total Alkalinity	419	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	904	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW190001

TOTAL Metals

Lot-Sample #...: F1H090481-004

Matrix.....: WATER

Date Sampled...: 08/04/11 13:30 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	16.4 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHH21AF
		Dilution Factor: 1		Analysis Time...: 21:08		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AQ
		Dilution Factor: 1		Analysis Time...: 15:48		
Aluminum	3150	200	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AR
		Dilution Factor: 1		Analysis Time...: 15:48		
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AP
		Dilution Factor: 1		Analysis Time...: 15:48		
Barium	59.6	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AT
		Dilution Factor: 1		Analysis Time...: 15:48		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AU
		Dilution Factor: 1		Analysis Time...: 15:48		
Calcium	152000 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHH21AV
		Dilution Factor: 5		Analysis Time...: 12:07		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AW
		Dilution Factor: 1		Analysis Time...: 15:48		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AX
		Dilution Factor: 1		Analysis Time...: 15:48		
Chromium	8.0 J	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A0
		Dilution Factor: 1		Analysis Time...: 15:48		
Copper	12.2 J	25	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A1
		Dilution Factor: 1		Analysis Time...: 15:48		
Iron	3800	100	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A2
		Dilution Factor: 1		Analysis Time...: 15:48		
Magnesium	64700	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHH21A3
		Dilution Factor: 5		Analysis Time...: 12:07		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW190001

TOTAL Metals

Lot-Sample #...: F1H090481-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	351	15	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A4
		Dilution Factor: 1		Analysis Time...: 15:48		
Sodium	63400	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A5
		Dilution Factor: 1		Analysis Time...: 10:15		
Nickel	19.6 J	40	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A6
		Dilution Factor: 1		Analysis Time...: 15:48		
Lead	8.7 J	10	ug/L	SW846 6010C	08/10-08/16/11	MLHH21A7
		Dilution Factor: 1		Analysis Time...: 18:00		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH21A8
		Dilution Factor: 1		Analysis Time...: 15:48		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHH21A9
		Dilution Factor: 1		Analysis Time...: 18:00		
Strontium	409 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHH21AA
		Dilution Factor: 5		Analysis Time...: 12:07		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AC
		Dilution Factor: 1		Analysis Time...: 15:48		
Vanadium	4.7 J	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AD
		Dilution Factor: 1		Analysis Time...: 15:48		
Zinc	70.9	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH21AE
		Dilution Factor: 1		Analysis Time...: 15:48		

NOTE(S):

E Matrix interference.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW190001

General Chemistry

Lot-Sample #...: F1H090481-004 Work Order #...: MLHH2 Matrix.....: WATER
 Date Sampled...: 08/04/11 13:30 Date Received...: 08/05/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	72.5	20.0	mg/L	MCAWW 300.0A	08/05/11	1224118
		Dilution Factor: 100		Analysis Time...: 02:59		
Fluoride	1.4	0.10	mg/L	MCAWW 300.0A	08/05/11	1224119
		Dilution Factor: 1		Analysis Time...: 02:30		
Nitrate	0.89	0.020	mg/L	MCAWW 300.0A	08/05/11	1224120
		Dilution Factor: 1		Analysis Time...: 02:30		
Nitrite	0.034 B	0.10	mg/L	MCAWW 300.0A	08/05/11	1224121
		Dilution Factor: 5		Analysis Time...: 04:40		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/05/11	1224122
		Dilution Factor: 1		Analysis Time...: 02:30		
Sulfate	95.0	5.0	mg/L	MCAWW 300.0A	08/05/11	1224123
		Dilution Factor: 10		Analysis Time...: 02:45		
Total Alkalinity	400	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	500	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-005

Matrix.....: WATER

Date Sampled...: 08/04/11 09:25 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	42.7 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHH81A2
		Dilution Factor: 1		Analysis Time...: 21:14		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AC
		Dilution Factor: 1		Analysis Time...: 15:54		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AD
		Dilution Factor: 1		Analysis Time...: 15:54		
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AA
		Dilution Factor: 1		Analysis Time...: 15:54		
Barium	67.3	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AE
		Dilution Factor: 1		Analysis Time...: 15:54		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AF
		Dilution Factor: 1		Analysis Time...: 15:54		
Calcium	110000 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHH81AG
		Dilution Factor: 5		Analysis Time...: 12:13		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AH
		Dilution Factor: 1		Analysis Time...: 15:54		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AJ
		Dilution Factor: 1		Analysis Time...: 15:54		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AK
		Dilution Factor: 1		Analysis Time...: 15:54		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AL
		Dilution Factor: 1		Analysis Time...: 15:54		
Iron	612	100	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AM
		Dilution Factor: 1		Analysis Time...: 15:54		
Magnesium	32500	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AN
		Dilution Factor: 1		Analysis Time...: 10:21		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	104	15	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AP
		Dilution Factor: 1		Analysis Time...: 15:54		
Sodium	71300	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AQ
		Dilution Factor: 1		Analysis Time...: 10:21		
Nickel	14.6 J	40	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AR
		Dilution Factor: 1		Analysis Time...: 15:54		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHH81AT
		Dilution Factor: 1		Analysis Time...: 18:06		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AU
		Dilution Factor: 1		Analysis Time...: 15:54		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHH81AV
		Dilution Factor: 1		Analysis Time...: 18:06		
Strontium	522 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHH81AW
		Dilution Factor: 5		Analysis Time...: 12:13		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH81AX
		Dilution Factor: 1		Analysis Time...: 15:54		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHH81A0
		Dilution Factor: 1		Analysis Time...: 15:54		
Zinc	11.3 J	20	ug/L	SW846 6010C	08/10-08/12/11	MLHH81A1
		Dilution Factor: 1		Analysis Time...: 15:54		

NOTE(S) :

E Matrix interference.

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-006

Matrix.....: WATER

Date Sampled...: 08/04/11 10:40 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	6.3 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHJ61AD
		Dilution Factor: 1		Analysis Time...: 21:21		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AG
		Dilution Factor: 1		Analysis Time...: 16:01		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AH
		Dilution Factor: 1		Analysis Time...: 16:01		
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AF
		Dilution Factor: 1		Analysis Time...: 16:01		
Barium	54.5	50	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AJ
		Dilution Factor: 1		Analysis Time...: 16:01		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AK
		Dilution Factor: 1		Analysis Time...: 16:01		
Calcium	92800 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHJ61AL
		Dilution Factor: 5		Analysis Time...: 12:20		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AM
		Dilution Factor: 1		Analysis Time...: 16:01		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AN
		Dilution Factor: 1		Analysis Time...: 16:01		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AP
		Dilution Factor: 1		Analysis Time...: 16:01		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AQ
		Dilution Factor: 1		Analysis Time...: 16:01		
Iron	679	100	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AR
		Dilution Factor: 1		Analysis Time...: 16:01		
Magnesium	21800	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AT
		Dilution Factor: 1		Analysis Time...: 10:28		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	728	15	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AU
		Dilution Factor: 1		Analysis Time...: 16:01		
Sodium	18100	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AV
		Dilution Factor: 1		Analysis Time...: 10:28		
Nickel	22.1 J	40	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AW
		Dilution Factor: 1		Analysis Time...: 16:01		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHJ61AX
		Dilution Factor: 1		Analysis Time...: 18:12		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61A0
		Dilution Factor: 1		Analysis Time...: 16:01		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHJ61A1
		Dilution Factor: 1		Analysis Time...: 18:12		
Strontium	364 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHJ61A2
		Dilution Factor: 5		Analysis Time...: 12:20		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61A3
		Dilution Factor: 1		Analysis Time...: 16:01		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AA
		Dilution Factor: 1		Analysis Time...: 16:01		
Zinc	104	20	ug/L	SW846 6010C	08/10-08/12/11	MLHJ61AC
		Dilution Factor: 1		Analysis Time...: 16:01		

NOTE(S) :

E Matrix interference.

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-007

Matrix.....: WATER

Date Sampled...: 08/04/11 12:00 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	4.7 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHJ71AH
		Dilution Factor: 1		Analysis Time...: 21:28		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AL
		Dilution Factor: 1		Analysis Time...: 16:07		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AM
		Dilution Factor: 1		Analysis Time...: 16:07		
Arsenic	9.3 J	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AK
		Dilution Factor: 1		Analysis Time...: 16:07		
Barium	221	50	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AN
		Dilution Factor: 1		Analysis Time...: 16:07		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AP
		Dilution Factor: 1		Analysis Time...: 16:07		
Calcium	141000 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHJ71AQ
		Dilution Factor: 5		Analysis Time...: 12:26		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AR
		Dilution Factor: 1		Analysis Time...: 16:07		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AT
		Dilution Factor: 1		Analysis Time...: 16:07		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AU
		Dilution Factor: 1		Analysis Time...: 16:07		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AV
		Dilution Factor: 1		Analysis Time...: 16:07		
Iron	259	100	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AW
		Dilution Factor: 1		Analysis Time...: 16:07		
Magnesium	59200	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHJ71AX
		Dilution Factor: 5		Analysis Time...: 12:26		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	113	15	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71A0
		Dilution Factor: 1		Analysis Time...: 16:07		
Sodium	73000	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71A1
		Dilution Factor: 1		Analysis Time...: 10:34		
Nickel	ND	40	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71A2
		Dilution Factor: 1		Analysis Time...: 16:07		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHJ71A3
		Dilution Factor: 1		Analysis Time...: 18:19		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AA
		Dilution Factor: 1		Analysis Time...: 16:07		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHJ71AC
		Dilution Factor: 1		Analysis Time...: 18:19		
Strontium	1270 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHJ71AD
		Dilution Factor: 5		Analysis Time...: 12:26		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AE
		Dilution Factor: 1		Analysis Time...: 16:07		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AF
		Dilution Factor: 1		Analysis Time...: 16:07		
Zinc	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHJ71AG
		Dilution Factor: 1		Analysis Time...: 16:07		

NOTE(S) :

E Matrix interference.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW190001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-008

Matrix.....: WATER

Date Sampled...: 08/04/11 13:30 Date Received...: 08/05/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	12.9 E	1	ug/L	SW846 6020A	08/10-08/11/11	MLHKE1AM
		Dilution Factor: 1		Analysis Time...: 21:34		
Prep Batch #...: 1222063						
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AQ
		Dilution Factor: 1		Analysis Time...: 16:27		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AR
		Dilution Factor: 1		Analysis Time...: 16:27		
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AP
		Dilution Factor: 1		Analysis Time...: 16:27		
Barium	43.8 J	50	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AT
		Dilution Factor: 1		Analysis Time...: 16:27		
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AU
		Dilution Factor: 1		Analysis Time...: 16:27		
Calcium	65300 E	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHKE1AV
		Dilution Factor: 5		Analysis Time...: 12:45		
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AW
		Dilution Factor: 1		Analysis Time...: 16:27		
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AX
		Dilution Factor: 1		Analysis Time...: 16:27		
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1A0
		Dilution Factor: 1		Analysis Time...: 16:27		
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1A1
		Dilution Factor: 1		Analysis Time...: 16:27		
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1A2
		Dilution Factor: 1		Analysis Time...: 16:27		
Magnesium	29300	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1A3
		Dilution Factor: 1		Analysis Time...: 10:53		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW190001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090481-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	ND	15	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AA
		Dilution Factor: 1		Analysis Time...: 16:27		
Sodium	62000	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AC
		Dilution Factor: 1		Analysis Time...: 10:53		
Nickel	ND	40	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AD
		Dilution Factor: 1		Analysis Time...: 16:27		
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLHKE1AE
		Dilution Factor: 1		Analysis Time...: 18:38		
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AF
		Dilution Factor: 1		Analysis Time...: 16:27		
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLHKE1AG
		Dilution Factor: 1		Analysis Time...: 18:38		
Strontium	326 E	25	ug/L	SW846 6010C	08/10-08/16/11	MLHKE1AH
		Dilution Factor: 5		Analysis Time...: 12:45		
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AJ
		Dilution Factor: 1		Analysis Time...: 16:27		
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AK
		Dilution Factor: 1		Analysis Time...: 16:27		
Zinc	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLHKE1AL
		Dilution Factor: 1		Analysis Time...: 16:27		

NOTE(S) :

E Matrix interference.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090481
 MB Lot-Sample #: F1H170000-246

Work Order #...: MLRJ01AA

Matrix.....: WATER

Analysis Date...: 08/17/11

Prep Date.....: 08/16/11

Analysis Time...: 00:59

Dilution Factor: 1

Prep Batch #...: 1229246

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	122 *	(85 - 120)
Dibromofluoromethane	92	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090481

Work Order #...: MLRJ01AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	101	(70 - 120)		
4-Bromofluorobenzene	109	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090481
 MB Lot-Sample #: F1H180000-013

Work Order #...: MLRLL1AA

Matrix.....: WATER

Analysis Date...: 08/17/11
 Dilution Factor: 1

Prep Date.....: 08/17/11

Analysis Time...: 10:16

Prep Batch #...: 1230013

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	0.28 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	103	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090481

Work Order #...: MLRLL1AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
1,2-Dichloroethane-d4	102	(70 - 120)		
4-Bromofluorobenzene	101	(75 - 120)		

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H100000-061 Prep Batch #...: 1222061						
Uranium	ND	1	ug/L	SW846 6020A	08/10-08/11/11	MLH641AA
		Dilution Factor: 1				
		Analysis Time...: 20:34				
MB Lot-Sample #: F1H100000-063 Prep Batch #...: 1222063						
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLH681AD
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Antimony	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLH681AU
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Arsenic	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLH681AA
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Barium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLH681AE
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Beryllium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLH681AF
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Cadmium	ND	5	ug/L	SW846 6010C	08/10-08/12/11	MLH681AH
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Calcium	ND	1000	ug/L	SW846 6010C	08/10-08/16/11	MLH681AG
		Dilution Factor: 1				
		Analysis Time...: 11:29				
Chromium	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLH681AK
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Cobalt	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLH681AJ
		Dilution Factor: 1				
		Analysis Time...: 15:09				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25	ug/L	SW846 6010C	08/10-08/12/11	MLH681AL
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLH681AM
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Lead	ND	10	ug/L	SW846 6010C	08/10-08/16/11	MLH681AT
		Dilution Factor: 1				
		Analysis Time...: 17:21				
Magnesium	ND	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH681AN
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Manganese	ND	15	ug/L	SW846 6010C	08/10-08/12/11	MLH681AP
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Nickel	ND	40	ug/L	SW846 6010C	08/10-08/12/11	MLH681AR
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Selenium	ND	15	ug/L	SW846 6010C	08/10-08/16/11	MLH681AV
		Dilution Factor: 1				
		Analysis Time...: 17:21				
Silver	ND	10	ug/L	SW846 6010C	08/10-08/12/11	MLH681AC
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Sodium	ND	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH681AQ
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Strontium	ND	5	ug/L	SW846 6010C	08/10-08/16/11	MLH681AW
		Dilution Factor: 1				
		Analysis Time...: 11:29				
Thallium	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLH681AX
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Vanadium	ND	50	ug/L	SW846 6010C	08/10-08/12/11	MLH681AO
		Dilution Factor: 1				
		Analysis Time...: 15:09				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20	ug/L	SW846 6010C	08/10-08/12/11	MLH681A1

Dilution Factor: 1
Analysis Time...: 15:09

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLNQN1AA 0.20	mg/L	MB Lot-Sample #: F1H120000-118 MCAWW 300.0A	08/05/11	1224118
		Dilution Factor: 1 Analysis Time...: 12:06				
Fluoride	ND	Work Order #: MLNQQ1AA 0.10	mg/L	MB Lot-Sample #: F1H120000-119 MCAWW 300.0A	08/05/11	1224119
		Dilution Factor: 1 Analysis Time...: 12:06				
Nitrate	ND	Work Order #: MLNQR1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-120 MCAWW 300.0A	08/05/11	1224120
		Dilution Factor: 1 Analysis Time...: 12:06				
Nitrite	ND	Work Order #: MLNQV1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-121 MCAWW 300.0A	08/05/11	1224121
		Dilution Factor: 1 Analysis Time...: 12:06				
Phosphate as P, Ortho	ND	Work Order #: MLNQW1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-122 MCAWW 300.0A	08/05/11	1224122
		Dilution Factor: 1 Analysis Time...: 12:06				
Sulfate	ND	Work Order #: MLNQX1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-123 MCAWW 300.0A	08/05/11	1224123
		Dilution Factor: 1 Analysis Time...: 12:06				
Total Alkalinity	ND	Work Order #: MLRFM1AA 5.0	mg/L	MB Lot-Sample #: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: MLRAM1AA 10.0	mg/L	MB Lot-Sample #: F1H120000-098 MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLRJ01AC Matrix.....: WATER
 LCS Lot-Sample#: F1H170000-246
 Prep Date.....: 08/16/11 Analysis Date...: 08/16/11
 Prep Batch #...: 1229246 Analysis Time...: 23:59
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
cis-1,3-Dichloropropene	118	(70 - 130)	SW846 8260B
Dibromochloromethane	106	(60 - 135)	SW846 8260B
Vinyl chloride	97	(50 - 145)	SW846 8260B
Bromomethane	99	(30 - 145)	SW846 8260B
Chloroethane	89	(60 - 135)	SW846 8260B
Acetone	82	(40 - 140)	SW846 8260B
1,1-Dichloroethene	109	(70 - 130)	SW846 8260B
Methylene chloride	90	(55 - 140)	SW846 8260B
Carbon disulfide	103	(35 - 160)	SW846 8260B
1,1-Dichloroethane	90	(70 - 135)	SW846 8260B
2-Butanone	89	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	103	(85 - 115)	SW846 8260B
Chloroform	112	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	93	(65 - 130)	SW846 8260B
Carbon tetrachloride	93	(65 - 140)	SW846 8260B
1,2-Dichloroethane	113	(70 - 130)	SW846 8260B
Benzene	93	(80 - 120)	SW846 8260B
Trichloroethene	86	(70 - 125)	SW846 8260B
1,2-Dichloropropane	111	(75 - 125)	SW846 8260B
Bromodichloromethane	95	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	105	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	117	(55 - 140)	SW846 8260B
Toluene	116	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	110	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	105	(75 - 125)	SW846 8260B
2-Hexanone	96	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	105	(60 - 135)	SW846 8260B
Chlorobenzene	110	(80 - 120)	SW846 8260B
Bromoform	102	(70 - 130)	SW846 8260B
Ethylbenzene	106	(75 - 125)	SW846 8260B
Styrene	96	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	105	(65 - 130)	SW846 8260B
Tetrachloroethene	108	(45 - 150)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLRJ01AC Matrix.....: WATER
LCS Lot-Sample#: F1H170000-246

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,2-Dichlorobenzene	107	(70 - 120)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	100	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLRLL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-013 MLRLL1AD-LCSD
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 09:23
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.58	(0-20)	SW846 8260B
Dibromochloromethane	102	(60 - 135)			SW846 8260B
	102	(60 - 135)	0.88	(0-20)	SW846 8260B
Vinyl chloride	94	(50 - 145)			SW846 8260B
	88	(50 - 145)	5.7	(0-20)	SW846 8260B
Bromomethane	106	(30 - 145)			SW846 8260B
	103	(30 - 145)	2.5	(0-20)	SW846 8260B
Chloroethane	94	(60 - 135)			SW846 8260B
	92	(60 - 135)	2.1	(0-20)	SW846 8260B
Acetone	92	(40 - 140)			SW846 8260B
	98	(40 - 140)	6.2	(0-20)	SW846 8260B
1,1-Dichloroethene	104	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.19	(0-20)	SW846 8260B
Methylene chloride	91	(55 - 140)			SW846 8260B
	95	(55 - 140)	4.8	(0-20)	SW846 8260B
Carbon disulfide	98	(35 - 160)			SW846 8260B
	95	(35 - 160)	3.2	(0-20)	SW846 8260B
1,1-Dichloroethane	96	(70 - 135)			SW846 8260B
	95	(70 - 135)	0.38	(0-20)	SW846 8260B
2-Butanone	89	(30 - 150)			SW846 8260B
	94	(30 - 150)	5.9	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	98	(85 - 115)			SW846 8260B
	98	(85 - 115)	0.15	(0-20)	SW846 8260B
Chloroform	93	(65 - 135)			SW846 8260B
	96	(65 - 135)	3.2	(0-20)	SW846 8260B
1,1,1-Trichloroethane	101	(65 - 130)			SW846 8260B
	104	(65 - 130)	3.1	(0-20)	SW846 8260B
Carbon tetrachloride	103	(65 - 140)			SW846 8260B
	103	(65 - 140)	0.090	(0-20)	SW846 8260B
1,2-Dichloroethane	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.9	(0-20)	SW846 8260B
Benzene	99	(80 - 120)			SW846 8260B
	99	(80 - 120)	0.14	(0-20)	SW846 8260B
Trichloroethene	93	(70 - 125)			SW846 8260B
	94	(70 - 125)	1.1	(0-20)	SW846 8260B
1,2-Dichloropropane	95	(75 - 125)			SW846 8260B
	95	(75 - 125)	0.37	(0-20)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLRLL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-013 MLRLL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	98	(75 - 120)			SW846 8260B
	98	(75 - 120)	0.070	(0-20)	SW846 8260B
1,1,2-Trichloroethane	95	(75 - 125)			SW846 8260B
	100	(75 - 125)	5.0	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	105	(55 - 140)			SW846 8260B
	104	(55 - 140)	1.2	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	106	(75 - 120)	0.28	(0-20)	SW846 8260B
1,3-Dichlorobenzene	101	(75 - 125)			SW846 8260B
	102	(75 - 125)	0.78	(0-20)	SW846 8260B
1,4-Dichlorobenzene	96	(75 - 125)			SW846 8260B
	97	(75 - 125)	0.88	(0-20)	SW846 8260B
2-Hexanone	89	(55 - 130)			SW846 8260B
	88	(55 - 130)	1.3	(0-20)	SW846 8260B
4-Methyl-2-pentanone	96	(60 - 135)			SW846 8260B
	100	(60 - 135)	3.9	(0-20)	SW846 8260B
Chlorobenzene	98	(80 - 120)			SW846 8260B
	98	(80 - 120)	0.37	(0-20)	SW846 8260B
Bromoform	104	(70 - 130)			SW846 8260B
	108	(70 - 130)	3.6	(0-20)	SW846 8260B
Ethylbenzene	105	(75 - 125)			SW846 8260B
	105	(75 - 125)	0.47	(0-20)	SW846 8260B
Styrene	111	(65 - 135)			SW846 8260B
	111	(65 - 135)	0.090	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	92	(65 - 130)			SW846 8260B
	96	(65 - 130)	4.1	(0-20)	SW846 8260B
Tetrachloroethene	105	(45 - 150)			SW846 8260B
	102	(45 - 150)	3.2	(0-20)	SW846 8260B
1,2-Dichlorobenzene	98	(70 - 120)			SW846 8260B
	102	(70 - 120)	3.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
	111	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
	107	(85 - 115)
1,2-Dichloroethane-d4	97	(70 - 120)
	102	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	101	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H100000-061 Prep Batch #...: 1222061					
Uranium	104	(80 - 120)	SW846 6020A	08/10-08/11/11	MLH641AC
		Dilution Factor: 1		Analysis Time...: 20:41	
LCS Lot-Sample#: F1H100000-063 Prep Batch #...: 1222063					
Arsenic	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A2
		Dilution Factor: 1		Analysis Time...: 15:16	
Silver	96	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A3
		Dilution Factor: 1		Analysis Time...: 15:16	
Aluminum	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A4
		Dilution Factor: 1		Analysis Time...: 15:16	
Barium	110	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A5
		Dilution Factor: 1		Analysis Time...: 15:16	
Beryllium	116	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A6
		Dilution Factor: 1		Analysis Time...: 15:16	
Calcium	105	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681A7
		Dilution Factor: 1		Analysis Time...: 11:36	
Cadmium	110	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A8
		Dilution Factor: 1		Analysis Time...: 15:16	
Cobalt	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A9
		Dilution Factor: 1		Analysis Time...: 15:16	
Chromium	107	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CA
		Dilution Factor: 1		Analysis Time...: 15:16	
Copper	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CC
		Dilution Factor: 1		Analysis Time...: 15:16	
Iron	110	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CD
		Dilution Factor: 1		Analysis Time...: 15:16	
Magnesium	103	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CE
		Dilution Factor: 1		Analysis Time...: 09:44	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	109	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CF
		Dilution Factor: 1		Analysis Time...: 15:16	
Sodium	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CG
		Dilution Factor: 1		Analysis Time...: 09:44	
Nickel	107	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CH
		Dilution Factor: 1		Analysis Time...: 15:16	
Lead	102	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681CJ
		Dilution Factor: 1		Analysis Time...: 17:27	
Antimony	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CK
		Dilution Factor: 1		Analysis Time...: 15:16	
Selenium	104	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681CL
		Dilution Factor: 1		Analysis Time...: 17:27	
Strontium	102	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681CM
		Dilution Factor: 1		Analysis Time...: 11:36	
Thallium	104	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CN
		Dilution Factor: 1		Analysis Time...: 15:16	
Vanadium	107	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CP
		Dilution Factor: 1		Analysis Time...: 15:16	
Zinc	115	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CQ
		Dilution Factor: 1		Analysis Time...: 15:16	

NOTE(S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090481

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	97	(90 - 110)	Work Order #: MLNQN1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-118 08/05/11 Analysis Time...: 11:52	1224118
Fluoride	96	(90 - 110)	Work Order #: MLNQQ1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-119 08/05/11 Analysis Time...: 11:52	1224119
Nitrate	96	(90 - 110)	Work Order #: MLNQR1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-120 08/05/11 Analysis Time...: 11:52	1224120
Nitrite	93	(90 - 110)	Work Order #: MLNQV1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-121 08/05/11 Analysis Time...: 11:52	1224121
Phosphate as P, Ortho	93	(90 - 110)	Work Order #: MLNQW1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-122 08/05/11 Analysis Time...: 11:52	1224122
Sulfate	94	(90 - 110)	Work Order #: MLNQX1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-123 08/05/11 Analysis Time...: 11:52	1224123
Total Alkalinity	92	(90 - 110)	Work Order #: MLRFM1AC MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H170000-090 08/17/11 Analysis Time...: 00:00	1229090
Total Alkalinity	93	(90 - 110)	Work Order #: MLRFM1AD MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H170000-090 08/17/11 Analysis Time...: 00:00	1229090
Total Dissolved Solids	100	(90 - 113)	Work Order #: MLRAM1AC MCAWW 160.1 Dilution Factor: 1	LCS Lot-Sample#: F1H120000-098 08/11-08/12/11 Analysis Time...: 00:00	1224098

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLHG01CG-MS Matrix.....: WATER
 MS Lot-Sample #: F1H090481-001 MLHG01CH-MSD
 Date Sampled...: 08/04/11 09:25 Date Received...: 08/05/11
 Prep Date.....: 08/16/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1229246 Analysis Time...: 02:01
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	95	(70 - 130)			SW846 8260B
	85	(70 - 130)	10	(0-20)	SW846 8260B
Dibromochloromethane	86	(60 - 135)			SW846 8260B
	78	(60 - 135)	9.5	(0-20)	SW846 8260B
Vinyl chloride	107	(50 - 145)			SW846 8260B
	97	(50 - 145)	6.5	(0-20)	SW846 8260B
Bromomethane	85	(30 - 145)			SW846 8260B
	78	(30 - 145)	8.3	(0-20)	SW846 8260B
Chloroethane	120	(60 - 135)			SW846 8260B
	120	(60 - 135)	0.07	(0-20)	SW846 8260B
Acetone	81	(40 - 140)			SW846 8260B
	86	(40 - 140)	7.0	(0-20)	SW846 8260B
1,1-Dichloroethene	171 a	(70 - 130)			SW846 8260B
	202 a	(70 - 130)	7.9	(0-20)	SW846 8260B
Methylene chloride	75	(55 - 140)			SW846 8260B
	70	(55 - 140)	7.1	(0-20)	SW846 8260B
Carbon disulfide	86	(35 - 160)			SW846 8260B
	83	(35 - 160)	3.8	(0-20)	SW846 8260B
1,1-Dichloroethane	201 a	(70 - 135)			SW846 8260B
	253 a	(70 - 135)	7.0	(0-20)	SW846 8260B
2-Butanone	84	(30 - 150)			SW846 8260B
	78	(30 - 150)	7.5	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	121 a	(85 - 115)			SW846 8260B
	129 a	(85 - 115)	3.0	(0-20)	SW846 8260B
Chloroform	96	(65 - 135)			SW846 8260B
	87	(65 - 135)	10	(0-20)	SW846 8260B
1,1,1-Trichloroethane	259 a	(65 - 130)			SW846 8260B
	337 a	(65 - 130)	11	(0-20)	SW846 8260B
Carbon tetrachloride	76	(65 - 140)			SW846 8260B
	71	(65 - 140)	7.1	(0-20)	SW846 8260B
1,2-Dichloroethane	96	(70 - 130)			SW846 8260B
	91	(70 - 130)	5.3	(0-20)	SW846 8260B
Benzene	75 a	(80 - 120)			SW846 8260B
	68 a	(80 - 120)	9.6	(0-20)	SW846 8260B
Trichloroethene	162 a	(70 - 125)			SW846 8260B
	186 a	(70 - 125)	7.0	(0-20)	SW846 8260B
1,2-Dichloropropane	93	(75 - 125)			SW846 8260B
	86	(75 - 125)	7.8	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLHG01CG-MS Matrix.....: WATER
 MS Lot-Sample #: F1H090481-001 MLHG01CH-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	81	(75 - 120)			SW846 8260B
	74 a	(75 - 120)	9.4	(0-20)	SW846 8260B
1,1,2-Trichloroethane	89	(75 - 125)			SW846 8260B
	80	(75 - 125)	11	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	93	(55 - 140)			SW846 8260B
	85	(55 - 140)	8.5	(0-20)	SW846 8260B
Toluene	94	(75 - 120)			SW846 8260B
	87	(75 - 120)	8.3	(0-20)	SW846 8260B
1,3-Dichlorobenzene	91	(75 - 125)			SW846 8260B
	85	(75 - 125)	7.0	(0-20)	SW846 8260B
1,4-Dichlorobenzene	88	(75 - 125)			SW846 8260B
	80	(75 - 125)	9.9	(0-20)	SW846 8260B
2-Hexanone	86	(55 - 130)			SW846 8260B
	72	(55 - 130)	17	(0-20)	SW846 8260B
4-Methyl-2-pentanone	93	(60 - 135)			SW846 8260B
	82	(60 - 135)	13	(0-20)	SW846 8260B
Chlorobenzene	92	(80 - 120)			SW846 8260B
	83	(80 - 120)	11	(0-20)	SW846 8260B
Bromoform	82	(70 - 130)			SW846 8260B
	75	(70 - 130)	8.9	(0-20)	SW846 8260B
Ethylbenzene	87	(75 - 125)			SW846 8260B
	79	(75 - 125)	9.6	(0-20)	SW846 8260B
Styrene	80	(65 - 135)			SW846 8260B
	73	(65 - 135)	9.5	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	86	(65 - 130)			SW846 8260B
	80	(65 - 130)	7.6	(0-20)	SW846 8260B
Tetrachloroethene	87	(45 - 150)			SW846 8260B
	80	(45 - 150)	9.0	(0-20)	SW846 8260B
1,2-Dichlorobenzene	90	(70 - 120)			SW846 8260B
	81	(70 - 120)	11	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
	109	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
	106	(85 - 115)
1,2-Dichloroethane-d4	105	(70 - 120)
	105	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)
	103	(75 - 120)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090481 Work Order #...: MLHG01CG-MS Matrix.....: WATER
MS Lot-Sample #: F1H090481-001 MLHG01CH-MSD

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
------------------	-----------------------------------	----------------------------------

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H090496-002 Prep Batch #...: 1222061							
Uranium	105	(80 - 120)			SW846 6020A	08/10-08/11/11	MLHLC1DG
	108	(80 - 120)	2.6 (0-20)		SW846 6020A	08/10-08/11/11	MLHLC1DH
Dilution Factor: 1							
Analysis Time...: 22:14							
MS Lot-Sample #: F1H090496-002 Prep Batch #...: 1222063							
Aluminum	104	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DW
	105	(80 - 120)	1.0 (0-20)		SW846 6010C	08/10-08/12/11	MLHLC1DX
Dilution Factor: 1							
Analysis Time...: 16:46							
Antimony	105	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1C3
	105	(80 - 120)	0.51 (0-20)		SW846 6010C	08/10-08/12/11	MLHLC1C4
Dilution Factor: 1							
Analysis Time...: 16:46							
Arsenic	104	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DR
	105	(80 - 120)	0.50 (0-20)		SW846 6010C	08/10-08/12/11	MLHLC1DT
Dilution Factor: 1							
Analysis Time...: 16:46							
Barium	107	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1D0
	108	(80 - 120)	0.87 (0-20)		SW846 6010C	08/10-08/12/11	MLHLC1D1
Dilution Factor: 1							
Analysis Time...: 16:46							
Beryllium	111	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1D2
	111	(80 - 120)	0.61 (0-20)		SW846 6010C	08/10-08/12/11	MLHLC1D3
Dilution Factor: 1							
Analysis Time...: 16:46							
Cadmium	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1D6
	102	(80 - 120)	0.81 (0-20)		SW846 6010C	08/10-08/12/11	MLHLC1D7
Dilution Factor: 1							
Analysis Time...: 16:46							
Calcium	117	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1D4
	100	(80 - 120)	2.1 (0-20)		SW846 6010C	08/10-08/16/11	MLHLC1D5
Dilution Factor: 5							
Analysis Time...: 13:04							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	100	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CJ
	101	(80 - 120)	0.85	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CK
Dilution Factor: 1 Analysis Time...: 16:46							
Cobalt	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CG
	99	(80 - 120)	0.69	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CH
Dilution Factor: 1 Analysis Time...: 16:46							
Copper	101	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CL
	102	(80 - 120)	0.89	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CM
Dilution Factor: 1 Analysis Time...: 16:46							
Iron	103	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CN
	104	(80 - 120)	0.78	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CP
Dilution Factor: 1 Analysis Time...: 16:46							
Lead	99	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1C1
	100	(80 - 120)	0.47	(0-20)	SW846 6010C	08/10-08/16/11	MLHLC1C2
Dilution Factor: 1 Analysis Time...: 18:58							
Magnesium	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CQ
	99	(80 - 120)	0.25	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CR
Dilution Factor: 1 Analysis Time...: 11:12							
Manganese	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CT
	103	(80 - 120)	0.71	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CU
Dilution Factor: 1 Analysis Time...: 16:46							
Nickel	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CX
	99	(80 - 120)	0.95	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1C0
Dilution Factor: 1 Analysis Time...: 16:46							
Selenium	103	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1C5
	105	(80 - 120)	1.2	(0-20)	SW846 6010C	08/10-08/16/11	MLHLC1C6
Dilution Factor: 1 Analysis Time...: 18:58							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090481

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	93	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DU
	94	(80 - 120)	1.2	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DV
		Dilution Factor: 1					
		Analysis Time...: 16:46					
Sodium	100	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CV
	102	(80 - 120)	0.41	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CW
		Dilution Factor: 1					
		Analysis Time...: 11:12					
Strontium	105	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1C7
	103	(80 - 120)	1.3	(0-20)	SW846 6010C	08/10-08/16/11	MLHLC1C8
		Dilution Factor: 5					
		Analysis Time...: 13:04					
Thallium	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1C9
	99	(80 - 120)	0.97	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DA
		Dilution Factor: 1					
		Analysis Time...: 16:46					
Vanadium	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DC
	103	(80 - 120)	0.76	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DD
		Dilution Factor: 1					
		Analysis Time...: 16:46					
Zinc	108	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DE
	110	(80 - 120)	1.4	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DF
		Dilution Factor: 1					
		Analysis Time...: 16:46					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090481

Matrix.....: WATER

Date Sampled...: 08/04/11 10:40 Date Received...: 08/05/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	105	Work Order #...: MLHH01CG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090481-002 08/05/11	1224118
		Dilution Factor: 10		Analysis Time...: 12:35	
Fluoride	99	Work Order #...: MLHH01CJ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090481-002 08/05/11	1224119
		Dilution Factor: 1		Analysis Time...: 12:21	
Nitrate	100	Work Order #...: MLHH01CL (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090481-002 08/05/11	1224120
		Dilution Factor: 1		Analysis Time...: 12:21	
Nitrite	72 N	Work Order #...: MLHH01CN (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090481-002 08/05/11	1224121
		Dilution Factor: 1		Analysis Time...: 12:21	
Phosphate as P, Ortho	63 N	Work Order #...: MLHH01CQ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090481-002 08/05/11	1224122
		Dilution Factor: 1		Analysis Time...: 12:21	
Sulfate	96	Work Order #...: MLHH01CT (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090481-002 08/05/11	1224123
		Dilution Factor: 10		Analysis Time...: 12:35	
Total Alkalinity	98	Work Order #...: MLHLC1EA (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H090496-002 08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090481 Work Order #...: MLHLC-SMP Matrix.....: WATER
MLHLC-DUP
Date Sampled....: 08/05/11 09:30 Date Received...: 08/06/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: F1H090496-002		
	387	383	mg/L	1.0	(0-15)	MCAWW 160.1	08/11-08/12/11	1224098
			Dilution Factor: 1			Analysis Time...: 00:00		
Total Alkalinity						SD Lot-Sample #: F1H090496-002		
	252	252	mg/L	0.0	(0-20)	MCAWW 310.1	08/17/11	1229090
			Dilution Factor: 1			Analysis Time...: 00:00		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090481

Work Order #...: MLHH0-SMP
MLHH0-DUP

Matrix.....: WATER

Date Sampled...: 08/04/11 10:40

Date Received...: 08/05/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	23.1	23.4	mg/L	1.3	(0-20)	SD Lot-Sample #: F1H090481-002 MCAWW 300.0A	08/05/11	1224118
			Dilution Factor: 10			Analysis Time...: 12:35		
Fluoride	0.92	0.99	mg/L	6.7	(0-20)	SD Lot-Sample #: F1H090481-002 MCAWW 300.0A	08/05/11	1224119
			Dilution Factor: 1			Analysis Time...: 12:21		
Nitrate	0.082	0.077	mg/L	6.3	(0-20)	SD Lot-Sample #: F1H090481-002 MCAWW 300.0A	08/05/11	1224120
			Dilution Factor: 1			Analysis Time...: 12:21		
Nitrite	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H090481-002 MCAWW 300.0A	08/05/11	1224121
			Dilution Factor: 1			Analysis Time...: 12:21		
Phosphate as P, Ortho	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H090481-002 MCAWW 300.0A	08/05/11	1224122
			Dilution Factor: 1			Analysis Time...: 12:21		
Sulfate	52.4	52.7	mg/L	0.70	(0-20)	SD Lot-Sample #: F1H090481-002 MCAWW 300.0A	08/05/11	1224123
			Dilution Factor: 10			Analysis Time...: 12:35		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW240001

Radiochemistry

Lab Sample ID: F1H090481-001
Work Order: MLHGO
Matrix: WATER

Date Collected: 08/04/11 0925
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 67
Uranium 234	13.1		1.3	0.1	0.05	08/16/11	08/17/11
Uranium 235/236	0.43		0.15	0.10	0.03	08/16/11	08/17/11
Uranium 238	12.6		1.3	0.1	0.03	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW230001

Radiochemistry

Lab Sample ID: F1H090481-002
Work Order: MLHHO
Matrix: WATER

Date Collected: 08/04/11 1040
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 81
Uranium 234	1.79		0.29	0.10	0.06	08/16/11	08/17/11
Uranium 235/236	0.114		0.073	0.100	0.066	08/16/11	08/17/11
Uranium 238	1.73		0.28	0.10	0.07	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0001

Radiochemistry

Lab Sample ID: F1H090481-003
Work Order: MLHH1
Matrix: WATER

Date Collected: 08/04/11 1200
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 80
Uranium 234	2.62		0.37	0.10	0.05	08/16/11	08/17/11
Uranium 235/236	0.061		0.053	0.100	0.048	08/16/11	08/17/11
Uranium 238	1.26		0.23	0.10	0.05	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW190001

Radiochemistry

Lab Sample ID: F1H090481-004
Work Order: MLHH2
Matrix: WATER

Date Collected: 08/04/11 1330
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 74
Uranium 234	4.52		0.56	0.10	0.07	08/16/11	08/17/11
Uranium 235/236	0.27		0.12	0.10	0.03	08/16/11	08/17/11
Uranium 238	4.77		0.59	0.10	0.04	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

62 of 79

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04DMW240001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090481-005
Work Order: MLHH8
Matrix: WATER

Date Collected: 08/04/11 0925
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 72
Uranium 234	12.5		1.3	0.1	0.03	08/16/11	08/17/11
Uranium 235/236	0.51		0.16	0.10	0.03	08/16/11	08/17/11
Uranium 238	11.6		1.2	0.1	0.04	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

63 of 79

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04AMW230001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090481-006
 Work Order: MLHJ6
 Matrix: WATER

Date Collected: 08/04/11 1040
 Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 76
Uranium 234	1.74		0.29	0.10	0.04	08/16/11	08/17/11
Uranium 235/236	0.136		0.079	0.100	0.031	08/16/11	08/17/11
Uranium 238	1.64		0.28	0.10	0.02	08/16/11	08/17/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04DMW713D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090481-007
Work Order: MLHJ7
Matrix: WATER

Date Collected: 08/04/11 1200
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 77
Uranium 234	2.67		0.38	0.10	0.02	08/16/11	08/17/11
Uranium 235/236	0.076		0.058	0.100	0.029	08/16/11	08/17/11
Uranium 238	1.40		0.25	0.10	0.02	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

65 of 79

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW190001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090481-008
Work Order: MLHKE
Matrix: WATER

Date Collected: 08/04/11 1330
Date Received: 08/05/11 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 73
Uranium 234	4.34		0.55	0.10	0.05	08/16/11	08/18/11
Uranium 235/236	0.192		0.097	0.100	0.033	08/16/11	08/18/11
Uranium 238	4.27		0.54	0.10	0.03	08/16/11	08/18/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090481

66 of 79

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H090481
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1228169	Yld % 93	F1H160000-169B
Uranium 234	0.013	U	0.022	0.100	0.035	08/16/11	08/17/11
Uranium 235/236	-0.0024	U	0.0047	0.100	0.043	08/16/11	08/17/11
Uranium 238	-0.0038	U	0.0054	0.100	0.040	08/16/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H090481
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID		
					% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H160000-169C
Uranium 234	3.27	3.26	0.42	0.04	85	100	(76 - 136)
Uranium 238	3.39	3.37	0.43	0.04	85	99	(76 - 134)
Batch #:		1228169		Analysis Date:	08/17/11		

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H090481
 Matrix: WATER

Date Sampled: 08/05/11
 Date Received: 08/06/11

Parameter	SAMPLE Result	Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result	Total Uncert. (2σ+/-)	% Yld	QC Sample ID	
							Precision	
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD				F1H090496-002
Uranium 234	24.3	2.3	54	24.3	2.3	59	0.2	%RPD
Uranium 235/236	1.03	0.27	54	1.27	0.29	59	21	%RPD
Uranium 238	24.8	2.4	54	23.2	2.2	59	7	%RPD
Batch #:		1228169 (Sample)		1228169 (Duplicate)				

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H090481

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Project Manager: LMF

Quote #: 89251

SDG:

Storage Loc: 2-9,R248/249,ME

Project: 140415

Guteryl Steel

Date Received: 2011-08-05

PO#: 697886

Report to: [REDACTED]

Analytical Due Date: 2011-08-17

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Due Date: 2011-08-19

Report Type: B Standard Report

#SMPS in LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04DMW240001	140415		2011-08-04 / 925	MLHG0	WATER
<u>SAMPLE COMMENTS:</u>						
MG I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
AG I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
VX I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
TL I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
SR I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
SE I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
SB I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
PB I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
NI I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
MN I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
ZN I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
FE I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CU I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CR I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CO I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CD I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CA I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
BE I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
BA I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
AS I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
AL I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
NA I\$	SW846 6010C		WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX QK	SW846 8260B		WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A WRK LOC 06 TIC: N
XX ZV	RAD SCREEN		WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A WRK LOC 06
XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C WRK LOC 06
XX AK	MCAW 160.1 W		WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX C8	MCAW 300.0A W		WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX C9	MCAW 300.0A W		WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX CX	MCAW 300.0A W		WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX CY	MCAW 300.0A W		WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX DO	MCAW 300.0A W		WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX GO	MCAW 300.0A W		WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX VC	MCAW 310.1 W		WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B WRK LOC 06

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: 2-9,R248/249,ME

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-05

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 8

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

D	XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
S	XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A04AMW230001	140415		2011-08-04 / 1040	MLHH0	WATER

SAMPLE COMMENTS:

NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV			RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: 2-9,R248/249,ME

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-05

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 8

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

	XX	DO	MCAW	300.0A	WATER, 300.0A,Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
	XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
	XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
S	XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
S	XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
S	XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
S	XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
S	XX	DO	MCAW	300.0A	WATER, 300.0A,Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
S	XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
X	XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
X	XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
X	XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
X	XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
X	XX	DO	MCAW	300.0A	WATER, 300.0A,Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
X	XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04DMW713D0001	140415		2011-08-04 / 1200	MLHH1	WATER

SAMPLE COMMENTS:

CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Project Manager: LMF

Quote #: 89251

SDG:

Storage Loc: 2-9,R248/249,ME

Project: 140415

Guteryl Steel

Date Received: 2011-08-05

PO#: 697886

Report to: [REDACTED]

Analytical Due Date: 2011-08-17

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Due Date: 2011-08-19

Report Type: B Standard Report

#SMPS in LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV			RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A04BMW190001	140415		2011-08-04 / 1330	MLHH2	WATER

SAMPLE COMMENTS:

CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090481

CLIENT ANALYSIS SUMMARY

Storage Loc: 2-9,R248/249,ME

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-05

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 8

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A04DMW240001 DISSOLVED	140415		2011-08-04 / 925	MLHH8	WATER

SAMPLE COMMENTS:

TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R248/249,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-05

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 8

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04AMW230001 DISSOLVED	140415		2011-08-04 / 1040	MLHJ6	WATER

SAMPLE COMMENTS:

CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	A04DMW713D0001 DISSOLVED	140415		2011-08-04 / 1200	MLHJ7	WATER

SAMPLE COMMENTS:

MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R248/249,METS

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-05

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 8

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	A04BMW190001 DISSOLVED	140415		2011-08-04 / 1330	MLHKE	WATER

SAMPLE COMMENTS:

MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090481

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Project Manager: LMF

Quote #: 89251

SDG:

Project: 140415

Guteryl Steel

PO#: 697886

Report to: [REDACTED]

Client: 522706

Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 8

Storage Loc:

R248/249,METS

Date Received:

2011-08-05

Analytical Due Date:

2011-08-17

Report Due Date:

2011-08-19

Report Type: B

Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

13715 Rider Trail North

Earth City, MO 63045
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]

Company: Shaw E & I. Inc.	Date/Time: 8/4/11 1630	Company: BFL0	Date/Time: 08-04-11 16:30
Company: BFL0	Date/Time: 08-04-11 17:41	Company: TAL	Date/Time: 8/4/11 1740
Company: TAL	Date/Time: 8/4/11 1751	Company: TASL	Date/Time: 8.5.11 0900

CONDITION UPON RECEIPT FORM

Client: TA Buffalo - Show

Quote No: 89251

COC/RFA No: 002

Initiated By: SW

Date: 8.5.11

Time: 0900

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. <u>4485 0258 2587</u>	6. _____	1. <u>3</u>	6. _____
2. <u>2598</u>	7. _____	2. <u>2</u>	7. _____
3. _____	8. _____	3. _____	8. _____
4. _____	9. _____	4. _____	9. _____
5. _____	10. _____	5. _____	10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. <u>Y</u> <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (if not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y <u>N</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Received bottles for Filtered metals, Iso4, & Total U - not on COC - log per LF
AB 89.

Corrective Action:

- ☐ Client Contact Name: _____
- ☐ Sample(s) processed "as is"
- ☐ Sample(s) on hold until: 8/11/2011

Informed by: _____

Project Management Review: [Signature]

If released, notify: _____
Date: 8/11/2011

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.


TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

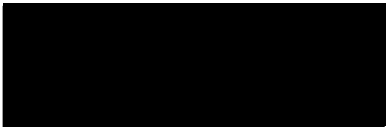
PROJECT NO. 140415

Guteryl Steel

Lot #: F1H090496


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

August 24, 2011

Case Narrative
LOT NUMBER: F1H090496

This report contains the analytical results for the six samples received under chain of custody by TestAmerica in St. Louis on August 6, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1222063**

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

Affected Samples:

F1H090496 (1): A04AMW603D0001
F1H090496 (2): A04AMW220001
F1H090496 (3): A04BMW180001
F1H090496 (4): A04AMW603D0001 DISSOLVED

Batch: 1222064

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

The MSD recovery for Calcium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Strontium was observed in the CCB above 3X the MDL. Associated samples which are either non-detect for the contaminant or exhibit concentrations greater than ten (10) times the concentrations observed in the CCB and does not require re-analysis.

Affected Samples:

F1H090496 (5): A04AMW22001 DISSOLVED
F1H090496 (6): A04BMW180001 DISSOLVED

Chloride (MCAWW 300.0A)**Batch: 1224124**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090496 (1): A04AMW603D0001
F1H090496 (2): A04AMW220001
F1H090496 (3): A04BMW180001

Sulfate (MCAWW 300.0A)**Batch: 1224129**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090496 (1): A04AMW603D0001
F1H090496 (2): A04AMW220001
F1H090496 (3): A04BMW180001

Fluoride (MCAWW 300.0A)**Batch: 1224125**

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090496 (3): A04BMW180001

Nitrite as N (MCAWW 300.0A)**Batch: 1224127**

The following samples were reported ND at dilution for Nitrite, due to interference with Chloride in the undiluted runs. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H090496 (1): A04AMW603D0001

F1H090496 (2): A04AMW220001

F1H090496 (3): A04BMW180001

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1224128**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H090496 (1): A04AMW603D0001

F1H090496 (2): A04AMW220001

F1H090496 (3): A04BMW180001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H090496

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H090496

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLHLA	001	A04AMW603D0001	08/05/11	08:40
MLHLC	002	A04AMW220001	08/05/11	09:30
MLHLD	003	A04BMW180001	08/05/11	12:45
MLHLP	004	A04AMW603D0001 DISSOLVED	08/05/11	08:40
MLHLR	005	A04AMW22001 DISSOLVED	08/05/11	09:30
MLHL1	006	A04BMW180001 DISSOLVED	08/05/11	12:45

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001

GC/MS Volatiles

Lot-Sample #....: F1H090496-001 Work Order #....: MLHLA1AC Matrix.....: WATER
 Date Sampled....: 08/05/11 08:40 Date Received...: 08/06/11
 Prep Date.....: 08/11/11 Analysis Date...: 08/13/11
 Prep Batch #....: 1224172 Analysis Time...: 00:12
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	0.95 J	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	0.18 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.34 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	0.82 J,B	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001

GC/MS Volatiles

Lot-Sample #....: F1H090496-001 Work Order #....: MLHLA1AC Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	110	(85 - 115)
1,2-Dichloroethane-d4	109	(70 - 120)
4-Bromofluorobenzene	110	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001

TOTAL Metals

Lot-Sample #...: F1H090496-001

Matrix.....: WATER

Date Sampled...: 08/05/11 08:40 Date Received...: 08/06/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	11.1	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHLA1A5
		Dilution Factor: 1		Analysis Time...: 21:54		
Prep Batch #...: 1222063						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AF
		Dilution Factor: 1		Analysis Time...: 16:33		
Aluminum	200	200	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AG
		Dilution Factor: 1		Analysis Time...: 16:33		
Arsenic	12.9	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AE
		Dilution Factor: 1		Analysis Time...: 16:33		
Barium	73.6	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AH
		Dilution Factor: 1		Analysis Time...: 16:33		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AJ
		Dilution Factor: 1		Analysis Time...: 16:33		
Calcium	125000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHLA1AK
		Dilution Factor: 5		Analysis Time...: 12:51		
Cadmium	3.8 J	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AL
		Dilution Factor: 1		Analysis Time...: 16:33		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AM
		Dilution Factor: 1		Analysis Time...: 16:33		
Chromium	11.3	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AN
		Dilution Factor: 1		Analysis Time...: 16:33		
Copper	5.2 J	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AP
		Dilution Factor: 1		Analysis Time...: 16:33		
Iron	50700	100	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AQ
		Dilution Factor: 1		Analysis Time...: 16:33		
Magnesium	47900	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AR
		Dilution Factor: 1		Analysis Time...: 10:59		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001

TOTAL Metals

Lot-Sample #...: F1H090496-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	207	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AT
		Dilution Factor: 1		Analysis Time...: 16:33		
Sodium	30600	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AU
		Dilution Factor: 1		Analysis Time...: 10:59		
Nickel	108	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AV
		Dilution Factor: 1		Analysis Time...: 16:33		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLA1AW
		Dilution Factor: 1		Analysis Time...: 18:45		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1AX
		Dilution Factor: 1		Analysis Time...: 16:33		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLA1A0
		Dilution Factor: 1		Analysis Time...: 18:45		
Strontium	478	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLA1A1
		Dilution Factor: 5		Analysis Time...: 12:51		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1A2
		Dilution Factor: 1		Analysis Time...: 16:33		
Vanadium	9.8 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1A3
		Dilution Factor: 1		Analysis Time...: 16:33		
Zinc	996	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLA1A4
		Dilution Factor: 1		Analysis Time...: 16:33		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001

General Chemistry

Lot-Sample #...: F1H090496-001 Work Order #...: MLHLA Matrix.....: WATER
 Date Sampled...: 08/05/11 08:40 Date Received...: 08/06/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	53.8	20.0	mg/L	MCAWW 300.0A	08/06/11	1224124
			Dilution Factor: 100	Analysis Time...: 08:05		
Fluoride	1.9	0.10	mg/L	MCAWW 300.0A	08/06/11	1224125
			Dilution Factor: 1	Analysis Time...: 07:36		
Nitrate	0.097	0.020	mg/L	MCAWW 300.0A	08/06/11	1224126
			Dilution Factor: 1	Analysis Time...: 07:36		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/06/11	1224127
			Dilution Factor: 5	Analysis Time...: 09:46		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/06/11	1224128
			Dilution Factor: 1	Analysis Time...: 07:36		
Sulfate	125	5.0	mg/L	MCAWW 300.0A	08/06/11	1224129
			Dilution Factor: 10	Analysis Time...: 07:50		
Total Alkalinity	350	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	692	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
			Dilution Factor: 1	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

GC/MS Volatiles

Lot-Sample #....: F1H090496-002 Work Order #....: MLHLC1AN Matrix.....: WATER
 Date Sampled....: 08/05/11 09:30 Date Received...: 08/06/11
 Prep Date.....: 08/11/11 Analysis Date...: 08/12/11
 Prep Batch #....: 1224172 Analysis Time...: 15:50
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	1.0 J	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	17	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	5.0	1.0	ug/L
1,2-Dichloroethene	1.4 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.51 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	3.0 B	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	29	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.2	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

GC/MS Volatiles

Lot-Sample #...: F1H090496-002 Work Order #...: MLHLC1AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	113	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
4-Bromofluorobenzene	111	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

TOTAL Metals

Lot-Sample #...: F1H090496-002

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	73.6	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHLC1AG
		Dilution Factor: 1		Analysis Time...: 22:01		
Prep Batch #...: 1222063						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AR
		Dilution Factor: 1		Analysis Time...: 16:40		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AT
		Dilution Factor: 1		Analysis Time...: 16:40		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AQ
		Dilution Factor: 1		Analysis Time...: 16:40		
Barium	26.2 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AU
		Dilution Factor: 1		Analysis Time...: 16:40		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AV
		Dilution Factor: 1		Analysis Time...: 16:40		
Calcium	69700	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHLC1AW
		Dilution Factor: 5		Analysis Time...: 12:58		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AX
		Dilution Factor: 1		Analysis Time...: 16:40		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A0
		Dilution Factor: 1		Analysis Time...: 16:40		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A1
		Dilution Factor: 1		Analysis Time...: 16:40		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A2
		Dilution Factor: 1		Analysis Time...: 16:40		
Iron	556	100	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A3
		Dilution Factor: 1		Analysis Time...: 16:40		
Magnesium	24800	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A4
		Dilution Factor: 1		Analysis Time...: 11:06		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

TOTAL Metals

Lot-Sample #...: F1H090496-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	90.9	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A5
		Dilution Factor: 1		Analysis Time...: 16:40		
Sodium	39900	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A6
		Dilution Factor: 1		Analysis Time...: 11:06		
Nickel	190	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A7
		Dilution Factor: 1		Analysis Time...: 16:40		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLC1A8
		Dilution Factor: 1		Analysis Time...: 18:51		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1A9
		Dilution Factor: 1		Analysis Time...: 16:40		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLC1AA
		Dilution Factor: 1		Analysis Time...: 18:51		
Strontium	350	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLC1AC
		Dilution Factor: 5		Analysis Time...: 12:58		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AD
		Dilution Factor: 1		Analysis Time...: 16:40		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AE
		Dilution Factor: 1		Analysis Time...: 16:40		
Zinc	10.7 J	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLC1AF
		Dilution Factor: 1		Analysis Time...: 16:40		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

General Chemistry

Lot-Sample #....: F1H090496-002 Work Order #....: MLHLC Matrix.....: WATER
 Date Sampled....: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	34.4	2.0	mg/L	MCAWW 300.0A	08/06/11	1224124
				Dilution Factor: 10	Analysis Time...: 02:33	
Fluoride	1.5	0.10	mg/L	MCAWW 300.0A	08/06/11	1224125
				Dilution Factor: 1	Analysis Time...: 02:19	
Nitrate	0.099	0.020	mg/L	MCAWW 300.0A	08/06/11	1224126
				Dilution Factor: 1	Analysis Time...: 02:19	
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	08/06/11	1224127
				Dilution Factor: 1	Analysis Time...: 02:19	
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/06/11	1224128
				Dilution Factor: 1	Analysis Time...: 02:19	
Sulfate	40.7	5.0	mg/L	MCAWW 300.0A	08/06/11	1224129
				Dilution Factor: 10	Analysis Time...: 02:33	
Total Alkalinity	252	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
				Dilution Factor: 1	Analysis Time...: 00:00	
Total Dissolved Solids	387	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
				Dilution Factor: 1	Analysis Time...: 00:00	

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW180001

TOTAL Metals

Lot-Sample #...: F1H090496-003

Matrix.....: WATER

Date Sampled...: 08/05/11 12:45 Date Received...: 08/06/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	123	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHLD1AG
		Dilution Factor: 1		Analysis Time...: 22:28		
Prep Batch #...: 1222063						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AR
		Dilution Factor: 1		Analysis Time...: 17:05		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AT
		Dilution Factor: 1		Analysis Time...: 17:05		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AQ
		Dilution Factor: 1		Analysis Time...: 17:05		
Barium	68.3	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AU
		Dilution Factor: 1		Analysis Time...: 17:05		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AV
		Dilution Factor: 1		Analysis Time...: 17:05		
Calcium	64200	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHLD1AW
		Dilution Factor: 5		Analysis Time...: 13:23		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AX
		Dilution Factor: 1		Analysis Time...: 17:05		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A0
		Dilution Factor: 1		Analysis Time...: 17:05		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A1
		Dilution Factor: 1		Analysis Time...: 17:05		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A2
		Dilution Factor: 1		Analysis Time...: 17:05		
Iron	37.4 J	100	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A3
		Dilution Factor: 1		Analysis Time...: 17:05		
Magnesium	37200	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A4
		Dilution Factor: 1		Analysis Time...: 11:31		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW180001

TOTAL Metals

Lot-Sample #...: F1H090496-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	396	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A5
		Dilution Factor: 1		Analysis Time...: 17:05		
Sodium	122000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHLD1A6
		Dilution Factor: 5		Analysis Time...: 13:23		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A7
		Dilution Factor: 1		Analysis Time...: 17:05		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLD1A8
		Dilution Factor: 1		Analysis Time...: 19:17		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1A9
		Dilution Factor: 1		Analysis Time...: 17:05		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLD1AA
		Dilution Factor: 1		Analysis Time...: 19:17		
Strontium	187	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLD1AC
		Dilution Factor: 5		Analysis Time...: 13:23		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AD
		Dilution Factor: 1		Analysis Time...: 17:05		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AE
		Dilution Factor: 1		Analysis Time...: 17:05		
Zinc	177	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLD1AF
		Dilution Factor: 1		Analysis Time...: 17:05		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW180001

General Chemistry

Lot-Sample #...: F1H090496-003 Work Order #...: MLHLD Matrix.....: WATER
 Date Sampled...: 08/05/11 12:45 Date Received...: 08/06/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	89.9	20.0	mg/L	MCAWW 300.0A	08/06/11	1224124
			Dilution Factor: 100	Analysis Time...: 06:53		
Fluoride	2.6	1.0	mg/L	MCAWW 300.0A	08/06/11	1224125
			Dilution Factor: 10	Analysis Time...: 06:38		
Nitrate	0.0076 B	0.020	mg/L	MCAWW 300.0A	08/06/11	1224126
			Dilution Factor: 1	Analysis Time...: 06:24		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/06/11	1224127
			Dilution Factor: 5	Analysis Time...: 09:31		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/06/11	1224128
			Dilution Factor: 1	Analysis Time...: 06:24		
Sulfate	47.8	5.0	mg/L	MCAWW 300.0A	08/06/11	1224129
			Dilution Factor: 10	Analysis Time...: 06:38		
Total Alkalinity	381	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	619	10.0	mg/L	MCAWW 160.1	08/11-08/12/11	1224098
			Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090496-004

Matrix.....: WATER

Date Sampled...: 08/05/11 08:40 Date Received...: 08/06/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222061						
Uranium	8.2	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHLP1A2
		Dilution Factor: 1		Analysis Time...: 22:34		
Prep Batch #...: 1222063						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AC
		Dilution Factor: 1		Analysis Time...: 17:12		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AD
		Dilution Factor: 1		Analysis Time...: 17:12		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AA
		Dilution Factor: 1		Analysis Time...: 17:12		
Barium	30.7 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AE
		Dilution Factor: 1		Analysis Time...: 17:12		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AF
		Dilution Factor: 1		Analysis Time...: 17:12		
Calcium	129000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHLP1AG
		Dilution Factor: 5		Analysis Time...: 13:29		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AH
		Dilution Factor: 1		Analysis Time...: 17:12		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AJ
		Dilution Factor: 1		Analysis Time...: 17:12		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AK
		Dilution Factor: 1		Analysis Time...: 17:12		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AL
		Dilution Factor: 1		Analysis Time...: 17:12		
Iron	932	100	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AM
		Dilution Factor: 1		Analysis Time...: 17:12		
Magnesium	46500	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AN
		Dilution Factor: 1		Analysis Time...: 11:37		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090496-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	125	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AP
		Dilution Factor: 1		Analysis Time...: 17:12		
Sodium	30900	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AQ
		Dilution Factor: 1		Analysis Time...: 11:37		
Nickel	70.8	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AR
		Dilution Factor: 1		Analysis Time...: 17:12		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLP1AT
		Dilution Factor: 1		Analysis Time...: 19:23		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AU
		Dilution Factor: 1		Analysis Time...: 17:12		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLP1AV
		Dilution Factor: 1		Analysis Time...: 19:23		
Strontium	478	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLP1AW
		Dilution Factor: 5		Analysis Time...: 13:29		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1AX
		Dilution Factor: 1		Analysis Time...: 17:12		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1A0
		Dilution Factor: 1		Analysis Time...: 17:12		
Zinc	134	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLP1A1
		Dilution Factor: 1		Analysis Time...: 17:12		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW22001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090496-005

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	65.1	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHLR1AD
		Dilution Factor: 1		Analysis Time...: 22:54		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AG
		Dilution Factor: 1		Analysis Time...: 17:44		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AH
		Dilution Factor: 1		Analysis Time...: 17:44		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AF
		Dilution Factor: 1		Analysis Time...: 17:44		
Barium	36.4 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AJ
		Dilution Factor: 1		Analysis Time...: 17:44		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AK
		Dilution Factor: 1		Analysis Time...: 17:44		
Calcium	74200	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHLR1AL
		Dilution Factor: 5		Analysis Time...: 14:00		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AM
		Dilution Factor: 1		Analysis Time...: 17:44		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AN
		Dilution Factor: 1		Analysis Time...: 17:44		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AP
		Dilution Factor: 1		Analysis Time...: 17:44		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AQ
		Dilution Factor: 1		Analysis Time...: 17:44		
Iron	962	100	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AR
		Dilution Factor: 1		Analysis Time...: 17:44		
Magnesium	24800	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AT
		Dilution Factor: 1		Analysis Time...: 12:09		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW22001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090496-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	117	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AU
		Dilution Factor: 1		Analysis Time...: 17:44		
Sodium	36000 B	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AV
		Dilution Factor: 1		Analysis Time...: 12:09		
Nickel	132	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AW
		Dilution Factor: 1		Analysis Time...: 17:44		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLR1AX
		Dilution Factor: 1		Analysis Time...: 19:55		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1A0
		Dilution Factor: 1		Analysis Time...: 17:44		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLR1A1
		Dilution Factor: 1		Analysis Time...: 19:55		
Strontium	384	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHLR1A2
		Dilution Factor: 5		Analysis Time...: 14:00		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1A3
		Dilution Factor: 1		Analysis Time...: 17:44		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AA
		Dilution Factor: 1		Analysis Time...: 17:44		
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHLR1AC
		Dilution Factor: 1		Analysis Time...: 17:44		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW180001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090496-006

Matrix.....: WATER

Date Sampled...: 08/05/11 12:45 Date Received...: 08/06/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	125	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHL11AD
		Dilution Factor: 1		Analysis Time...: 23:34		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AG
		Dilution Factor: 1		Analysis Time...: 18:10		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AH
		Dilution Factor: 1		Analysis Time...: 18:10		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AF
		Dilution Factor: 1		Analysis Time...: 18:10		
Barium	67.6	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AJ
		Dilution Factor: 1		Analysis Time...: 18:10		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AK
		Dilution Factor: 1		Analysis Time...: 18:10		
Calcium	63800	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHL11AL
		Dilution Factor: 5		Analysis Time...: 14:26		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AM
		Dilution Factor: 1		Analysis Time...: 18:10		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AN
		Dilution Factor: 1		Analysis Time...: 18:10		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AP
		Dilution Factor: 1		Analysis Time...: 18:10		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AQ
		Dilution Factor: 1		Analysis Time...: 18:10		
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AR
		Dilution Factor: 1		Analysis Time...: 18:10		
Magnesium	37400	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AT
		Dilution Factor: 1		Analysis Time...: 12:34		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW180001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090496-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	393	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AU
		Dilution Factor: 1		Analysis Time...: 18:10		
Sodium	124000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHL11AV
		Dilution Factor: 5		Analysis Time...: 14:26		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AW
		Dilution Factor: 1		Analysis Time...: 18:10		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHL11AX
		Dilution Factor: 1		Analysis Time...: 20:21		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11A0
		Dilution Factor: 1		Analysis Time...: 18:10		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHL11A1
		Dilution Factor: 1		Analysis Time...: 20:21		
Strontium	193	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHL11A2
		Dilution Factor: 5		Analysis Time...: 14:26		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11A3
		Dilution Factor: 1		Analysis Time...: 18:10		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AA
		Dilution Factor: 1		Analysis Time...: 18:10		
Zinc	180	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHL11AC
		Dilution Factor: 1		Analysis Time...: 18:10		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090496
 MB Lot-Sample #: F1H120000-172

Work Order #...: MLL8H1AA

Matrix.....: WATER

Analysis Date...: 08/12/11
 Dilution Factor: 1

Prep Date.....: 08/11/11

Analysis Time...: 15:24

Prep Batch #...: 1224172

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	0.54 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.33 J	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	105	(85 - 115)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090496

Work Order #...: MLL8H1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	103	(70 - 120)		
4-Bromofluorobenzene	108	(75 - 120)		

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H100000-061 Prep Batch #...: 1222061						
Uranium	ND	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLH641AA
		Dilution Factor: 1				
		Analysis Time...: 20:34				
MB Lot-Sample #: F1H100000-062 Prep Batch #...: 1222062						
Uranium	ND	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLH661AA
		Dilution Factor: 1				
		Analysis Time...: 22:41				
MB Lot-Sample #: F1H100000-063 Prep Batch #...: 1222063						
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLH681AD
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AU
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AA
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Barium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AE
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AF
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AH
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Calcium	ND	1000	ug/L	SW846 6010C	08/10-08/16/11	MLH681AG
		Dilution Factor: 1				
		Analysis Time...: 11:29				
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AK
		Dilution Factor: 1				
		Analysis Time...: 15:09				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AJ
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AL
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLH681AM
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLH681AT
		Dilution Factor: 1				
		Analysis Time...: 17:21				
Magnesium	ND	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH681AN
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Manganese	ND	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AP
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AR
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLH681AV
		Dilution Factor: 1				
		Analysis Time...: 17:21				
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AC
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Sodium	ND	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH681AQ
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Strontium	ND	5.0	ug/L	SW846 6010C	08/10-08/16/11	MLH681AW
		Dilution Factor: 1				
		Analysis Time...: 11:29				
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681AX
		Dilution Factor: 1				
		Analysis Time...: 15:09				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681A0
		Dilution Factor: 1				
		Analysis Time...: 15:09				
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLH681A1
		Dilution Factor: 1				
		Analysis Time...: 15:09				
MB Lot-Sample #: F1H100000-064 Prep Batch #...: 1222064						
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AF
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AW
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AD
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Barium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AG
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AH
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AK
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Calcium	ND	1000	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1AJ
		Dilution Factor: 1				
		Analysis Time...: 13:48				
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AM
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AL
		Dilution Factor: 1				
		Analysis Time...: 17:31				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AN
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AP
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1AV
		Dilution Factor: 1				
		Analysis Time...: 19:43				
Magnesium	ND	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AQ
		Dilution Factor: 1				
		Analysis Time...: 11:56				
Manganese	ND	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AR
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AU
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1AX
		Dilution Factor: 1				
		Analysis Time...: 19:43				
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AE
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Sodium	458 J	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AT
		Dilution Factor: 1				
		Analysis Time...: 11:56				
Strontium	ND	5.0	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1A0
		Dilution Factor: 1				
		Analysis Time...: 13:48				
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1A1
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AA
		Dilution Factor: 1				
		Analysis Time...: 17:31				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AC

Dilution Factor: 1
Analysis Time..: 17:31

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLPHM1AA 0.20	mg/L	MB Lot-Sample #: F1H120000-124 MCAWW 300.0A	08/06/11	1224124
		Dilution Factor: 1 Analysis Time...: 12:09				
Fluoride	ND	Work Order #: MLPHQ1AA 0.10	mg/L	MB Lot-Sample #: F1H120000-125 MCAWW 300.0A	08/06/11	1224125
		Dilution Factor: 1 Analysis Time...: 12:09				
Nitrate	ND	Work Order #: MLPHR1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-126 MCAWW 300.0A	08/06/11	1224126
		Dilution Factor: 1 Analysis Time...: 12:09				
Nitrite	ND	Work Order #: MLPHW1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-127 MCAWW 300.0A	08/06/11	1224127
		Dilution Factor: 1 Analysis Time...: 12:09				
Phosphate as P, Ortho	ND	Work Order #: MLPHX1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-128 MCAWW 300.0A	08/06/11	1224128
		Dilution Factor: 1 Analysis Time...: 12:09				
Sulfate	ND	Work Order #: MLPH01AA 0.50	mg/L	MB Lot-Sample #: F1H120000-129 MCAWW 300.0A	08/06/11	1224129
		Dilution Factor: 1 Analysis Time...: 12:09				
Total Alkalinity	ND	Work Order #: MLRFM1AA 5.0	mg/L	MB Lot-Sample #: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: MLRAM1AA 10.0	mg/L	MB Lot-Sample #: F1H120000-098 MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: F1H090496 Work Order #....: MLL8H1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H120000-172
 Prep Date.....: 08/11/11 Analysis Date...: 08/12/11
 Prep Batch #....: 1224172 Analysis Time...: 14:31
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
cis-1,3-Dichloropropene	104	(70 - 130)	SW846 8260B
Dibromochloromethane	103	(60 - 135)	SW846 8260B
Vinyl chloride	87	(50 - 145)	SW846 8260B
Bromomethane	90	(30 - 145)	SW846 8260B
Chloroethane	87	(60 - 135)	SW846 8260B
Acetone	104	(40 - 140)	SW846 8260B
1,1-Dichloroethene	85	(70 - 130)	SW846 8260B
Methylene chloride	93	(55 - 140)	SW846 8260B
Carbon disulfide	80	(35 - 160)	SW846 8260B
1,1-Dichloroethane	95	(70 - 135)	SW846 8260B
2-Butanone	99	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	99	(85 - 115)	SW846 8260B
Chloroform	94	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	96	(65 - 130)	SW846 8260B
Carbon tetrachloride	98	(65 - 140)	SW846 8260B
1,2-Dichloroethane	95	(70 - 130)	SW846 8260B
Benzene	98	(80 - 120)	SW846 8260B
Trichloroethene	93	(70 - 125)	SW846 8260B
1,2-Dichloropropane	96	(75 - 125)	SW846 8260B
Bromodichloromethane	98	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	98	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	102	(55 - 140)	SW846 8260B
Toluene	102	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	104	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	98	(75 - 125)	SW846 8260B
2-Hexanone	101	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	108	(60 - 135)	SW846 8260B
Chlorobenzene	98	(80 - 120)	SW846 8260B
Bromoform	108	(70 - 130)	SW846 8260B
Ethylbenzene	101	(75 - 125)	SW846 8260B
Styrene	108	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	99	(65 - 130)	SW846 8260B
Tetrachloroethene	105	(45 - 150)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090496 Work Order #...: MLL8H1AC Matrix.....: WATER
LCS Lot-Sample#: F1H120000-172

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
1,2-Dichloroethane-d4	101	(70 - 120)
4-Bromofluorobenzene	105	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H100000-061 Prep Batch #... : 1222061					
Uranium	104	(80 - 120)	SW846 6020A	08/10-08/11/11	MLH641AC
		Dilution Factor: 1	Analysis Time..: 20:41		
LCS Lot-Sample#: F1H100000-062 Prep Batch #... : 1222062					
Uranium	105	(80 - 120)	SW846 6020A	08/10-08/11/11	MLH661AC
		Dilution Factor: 1	Analysis Time..: 22:47		
LCS Lot-Sample#: F1H100000-063 Prep Batch #... : 1222063					
Arsenic	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A2
		Dilution Factor: 1	Analysis Time..: 15:16		
Silver	96	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A3
		Dilution Factor: 1	Analysis Time..: 15:16		
Aluminum	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A4
		Dilution Factor: 1	Analysis Time..: 15:16		
Barium	110	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A5
		Dilution Factor: 1	Analysis Time..: 15:16		
Beryllium	117	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A6
		Dilution Factor: 1	Analysis Time..: 15:16		
Calcium	105	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681A7
		Dilution Factor: 1	Analysis Time..: 11:36		
Cadmium	110	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A8
		Dilution Factor: 1	Analysis Time..: 15:16		
Cobalt	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681A9
		Dilution Factor: 1	Analysis Time..: 15:16		
Chromium	107	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CA
		Dilution Factor: 1	Analysis Time..: 15:16		
Copper	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CC
		Dilution Factor: 1	Analysis Time..: 15:16		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Iron	110	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CD
		Dilution Factor: 1	Analysis Time...: 15:16		
Magnesium	103	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CE
		Dilution Factor: 1	Analysis Time...: 09:44		
Manganese	109	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CF
		Dilution Factor: 1	Analysis Time...: 15:16		
Sodium	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CG
		Dilution Factor: 1	Analysis Time...: 09:44		
Nickel	107	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CH
		Dilution Factor: 1	Analysis Time...: 15:16		
Lead	101	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681CJ
		Dilution Factor: 1	Analysis Time...: 17:27		
Antimony	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CK
		Dilution Factor: 1	Analysis Time...: 15:16		
Selenium	104	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681CL
		Dilution Factor: 1	Analysis Time...: 17:27		
Strontium	102	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH681CM
		Dilution Factor: 1	Analysis Time...: 11:36		
Thallium	104	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CN
		Dilution Factor: 1	Analysis Time...: 15:16		
Vanadium	107	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CP
		Dilution Factor: 1	Analysis Time...: 15:16		
Zinc	115	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH681CQ
		Dilution Factor: 1	Analysis Time...: 15:16		
LCS Lot-Sample#: F1H100000-064 Prep Batch #...: 1222064					
Vanadium	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A2
		Dilution Factor: 1	Analysis Time...: 17:38		
Zinc	114	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A3
		Dilution Factor: 1	Analysis Time...: 17:38		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Arsenic	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A4
		Dilution Factor: 1	Analysis Time...: 17:38		
Silver	95	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A5
		Dilution Factor: 1	Analysis Time...: 17:38		
Aluminum	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A6
		Dilution Factor: 1	Analysis Time...: 17:38		
Barium	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A7
		Dilution Factor: 1	Analysis Time...: 17:38		
Beryllium	113	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A8
		Dilution Factor: 1	Analysis Time...: 17:38		
Calcium	108	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1A9
		Dilution Factor: 1	Analysis Time...: 13:54		
Cadmium	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CA
		Dilution Factor: 1	Analysis Time...: 17:38		
Cobalt	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CC
		Dilution Factor: 1	Analysis Time...: 17:38		
Chromium	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CD
		Dilution Factor: 1	Analysis Time...: 17:38		
Copper	103	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CE
		Dilution Factor: 1	Analysis Time...: 17:38		
Iron	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CF
		Dilution Factor: 1	Analysis Time...: 17:38		
Magnesium	101	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CG
		Dilution Factor: 1	Analysis Time...: 12:02		
Manganese	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CH
		Dilution Factor: 1	Analysis Time...: 17:38		
Sodium	109	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CJ
		Dilution Factor: 1	Analysis Time...: 12:02		
Nickel	104	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CK
		Dilution Factor: 1	Analysis Time...: 17:38		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F1H090496

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Lead	101	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1CL
		Dilution Factor: 1	Analysis Time..: 19:49		
Antimony	102	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CM
		Dilution Factor: 1	Analysis Time..: 17:38		
Selenium	102	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1CN
		Dilution Factor: 1	Analysis Time..: 19:49		
Strontium	105	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1CP
		Dilution Factor: 1	Analysis Time..: 13:54		
Thallium	103	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CQ
		Dilution Factor: 1	Analysis Time..: 17:38		

NOTE (S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090496

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	92	Work Order #: MLPHM1AC (90 - 110)	LCS Lot-Sample#: F1H120000-124 MCAWW 300.0A	08/06/11	1224124
		Dilution Factor: 1	Analysis Time...: 11:54		
Fluoride	95	Work Order #: MLPHQ1AC (90 - 110)	LCS Lot-Sample#: F1H120000-125 MCAWW 300.0A	08/06/11	1224125
		Dilution Factor: 1	Analysis Time...: 11:54		
Nitrate	99	Work Order #: MLPHR1AC (90 - 110)	LCS Lot-Sample#: F1H120000-126 MCAWW 300.0A	08/06/11	1224126
		Dilution Factor: 1	Analysis Time...: 11:54		
Nitrite	99	Work Order #: MLPHW1AC (90 - 110)	LCS Lot-Sample#: F1H120000-127 MCAWW 300.0A	08/06/11	1224127
		Dilution Factor: 1	Analysis Time...: 11:54		
Phosphate as P, Ortho	96	Work Order #: MLPHX1AC (90 - 110)	LCS Lot-Sample#: F1H120000-128 MCAWW 300.0A	08/06/11	1224128
		Dilution Factor: 1	Analysis Time...: 11:54		
Sulfate	96	Work Order #: MLPH01AC (90 - 110)	LCS Lot-Sample#: F1H120000-129 MCAWW 300.0A	08/06/11	1224129
		Dilution Factor: 1	Analysis Time...: 11:54		
Total Alkalinity	92	Work Order #: MLRFM1AC (90 - 110)	LCS Lot-Sample#: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	93	Work Order #: MLRFM1AD (90 - 110)	LCS Lot-Sample#: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	100	Work Order #: MLRAM1AC (90 - 113)	LCS Lot-Sample#: F1H120000-098 MCAWW 160.1	08/11-08/12/11	1224098
		Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090496 Work Order #...: MLHLC1DN-MS Matrix.....: WATER
 MS Lot-Sample #: F1H090496-002 MLHLC1DP-MSD
 Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11
 Prep Date.....: 08/11/11 Analysis Date...: 08/12/11
 Prep Batch #...: 1224172 Analysis Time...: 16:17
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	103	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.97	(0-20)	SW846 8260B
Dibromochloromethane	104	(60 - 135)			SW846 8260B
	101	(60 - 135)	2.6	(0-20)	SW846 8260B
Vinyl chloride	88	(50 - 145)			SW846 8260B
	91	(50 - 145)	2.8	(0-20)	SW846 8260B
Bromomethane	76	(30 - 145)			SW846 8260B
	81	(30 - 145)	5.8	(0-20)	SW846 8260B
Chloroethane	88	(60 - 135)			SW846 8260B
	88	(60 - 135)	0.18	(0-20)	SW846 8260B
Acetone	110	(40 - 140)			SW846 8260B
	99	(40 - 140)	10	(0-20)	SW846 8260B
1,1-Dichloroethene	87	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.6	(0-20)	SW846 8260B
Methylene chloride	90	(55 - 140)			SW846 8260B
	85	(55 - 140)	6.0	(0-20)	SW846 8260B
Carbon disulfide	81	(35 - 160)			SW846 8260B
	80	(35 - 160)	0.67	(0-20)	SW846 8260B
1,1-Dichloroethane	104	(70 - 135)			SW846 8260B
	94	(70 - 135)	3.6	(0-20)	SW846 8260B
2-Butanone	112	(30 - 150)			SW846 8260B
	98	(30 - 150)	14	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	100	(85 - 115)			SW846 8260B
	97	(85 - 115)	2.7	(0-20)	SW846 8260B
Chloroform	96	(65 - 135)			SW846 8260B
	93	(65 - 135)	3.8	(0-20)	SW846 8260B
1,1,1-Trichloroethane	114	(65 - 130)			SW846 8260B
	106	(65 - 130)	2.2	(0-20)	SW846 8260B
Carbon tetrachloride	97	(65 - 140)			SW846 8260B
	96	(65 - 140)	1.1	(0-20)	SW846 8260B
1,2-Dichloroethane	102	(70 - 130)			SW846 8260B
	95	(70 - 130)	7.1	(0-20)	SW846 8260B
Benzene	99	(80 - 120)			SW846 8260B
	98	(80 - 120)	1.2	(0-20)	SW846 8260B
Trichloroethene	94	(70 - 125)			SW846 8260B
	92	(70 - 125)	1.9	(0-20)	SW846 8260B
1,2-Dichloropropane	97	(75 - 125)			SW846 8260B
	99	(75 - 125)	1.2	(0-20)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090496 Work Order #...: MLHLC1DN-MS Matrix.....: WATER
 MS Lot-Sample #: F1H090496-002 MLHLC1DP-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	101	(75 - 120)			SW846 8260B
	97	(75 - 120)	3.7	(0-20)	SW846 8260B
1,1,2-Trichloroethane	102	(75 - 125)			SW846 8260B
	98	(75 - 125)	3.7	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)			SW846 8260B
	104	(55 - 140)	2.5	(0-20)	SW846 8260B
Toluene	103	(75 - 120)			SW846 8260B
	103	(75 - 120)	0.48	(0-20)	SW846 8260B
1,3-Dichlorobenzene	102	(75 - 125)			SW846 8260B
	101	(75 - 125)	0.78	(0-20)	SW846 8260B
1,4-Dichlorobenzene	97	(75 - 125)			SW846 8260B
	95	(75 - 125)	2.4	(0-20)	SW846 8260B
2-Hexanone	111	(55 - 130)			SW846 8260B
	101	(55 - 130)	10	(0-20)	SW846 8260B
4-Methyl-2-pentanone	114	(60 - 135)			SW846 8260B
	104	(60 - 135)	8.8	(0-20)	SW846 8260B
Chlorobenzene	98	(80 - 120)			SW846 8260B
	96	(80 - 120)	2.0	(0-20)	SW846 8260B
Bromoform	111	(70 - 130)			SW846 8260B
	104	(70 - 130)	7.4	(0-20)	SW846 8260B
Ethylbenzene	101	(75 - 125)			SW846 8260B
	103	(75 - 125)	1.8	(0-20)	SW846 8260B
Styrene	112	(65 - 135)			SW846 8260B
	111	(65 - 135)	0.89	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	101	(65 - 130)			SW846 8260B
	91	(65 - 130)	10	(0-20)	SW846 8260B
Tetrachloroethene	99	(45 - 150)			SW846 8260B
	98	(45 - 150)	0.93	(0-20)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)			SW846 8260B
	97	(70 - 120)	3.0	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	106	(85 - 120)
	108	(85 - 120)
Dibromofluoromethane	110	(85 - 115)
	104	(85 - 115)
1,2-Dichloroethane-d4	105	(70 - 120)
	99	(70 - 120)
4-Bromofluorobenzene	104	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H090496

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H090496-002 Prep Batch #...: 1222061						
Uranium	105	(80 - 120)		SW846 6020A	08/10-08/11/11	MLHLC1DG
	108	(80 - 120)	2.6 (0-20)	SW846 6020A	08/10-08/11/11	MLHLC1DH
		Dilution Factor: 1				
		Analysis Time...: 22:14				
MS Lot-Sample #: F1H090496-002 Prep Batch #...: 1222063						
Aluminum	104	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLC1DW
	105	(80 - 120)	1.0 (0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DX
		Dilution Factor: 1				
		Analysis Time...: 16:46				
Antimony	105	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLC1C3
	105	(80 - 120)	0.51 (0-20)	SW846 6010C	08/10-08/12/11	MLHLC1C4
		Dilution Factor: 1				
		Analysis Time...: 16:46				
Arsenic	105	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLC1DR
	105	(80 - 120)	0.50 (0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DT
		Dilution Factor: 1				
		Analysis Time...: 16:46				
Barium	107	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLC1D0
	108	(80 - 120)	0.87 (0-20)	SW846 6010C	08/10-08/12/11	MLHLC1D1
		Dilution Factor: 1				
		Analysis Time...: 16:46				
Beryllium	111	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLC1D2
	111	(80 - 120)	0.61 (0-20)	SW846 6010C	08/10-08/12/11	MLHLC1D3
		Dilution Factor: 1				
		Analysis Time...: 16:46				
Cadmium	102	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLC1D6
	103	(80 - 120)	0.81 (0-20)	SW846 6010C	08/10-08/12/11	MLHLC1D7
		Dilution Factor: 1				
		Analysis Time...: 16:46				
Calcium	117	(80 - 120)		SW846 6010C	08/10-08/16/11	MLHLC1D4
	100	(80 - 120)	2.1 (0-20)	SW846 6010C	08/10-08/16/11	MLHLC1D5
		Dilution Factor: 5				
		Analysis Time...: 13:04				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	100	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CJ
	101	(80 - 120)	0.85	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CK
Dilution Factor: 1							
Analysis Time...: 16:46							
Cobalt	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CG
	99	(80 - 120)	0.69	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CH
Dilution Factor: 1							
Analysis Time...: 16:46							
Copper	101	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CL
	102	(80 - 120)	0.89	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CM
Dilution Factor: 1							
Analysis Time...: 16:46							
Iron	103	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CN
	104	(80 - 120)	0.78	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CP
Dilution Factor: 1							
Analysis Time...: 16:46							
Lead	99	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1C1
	100	(80 - 120)	0.47	(0-20)	SW846 6010C	08/10-08/16/11	MLHLC1C2
Dilution Factor: 1							
Analysis Time...: 18:58							
Magnesium	99	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CQ
	99	(80 - 120)	0.25	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CR
Dilution Factor: 1							
Analysis Time...: 11:12							
Manganese	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CT
	103	(80 - 120)	0.71	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CU
Dilution Factor: 1							
Analysis Time...: 16:46							
Nickel	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CX
	99	(80 - 120)	0.95	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1C0
Dilution Factor: 1							
Analysis Time...: 16:46							
Selenium	103	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1C5
	105	(80 - 120)	1.2	(0-20)	SW846 6010C	08/10-08/16/11	MLHLC1C6
Dilution Factor: 1							
Analysis Time...: 18:58							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	93	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DU
	94	(80 - 120)	1.2	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DV
		Dilution Factor: 1					
		Analysis Time...: 16:46					
Sodium	100	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1CV
	102	(80 - 120)	0.41	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1CW
		Dilution Factor: 1					
		Analysis Time...: 11:12					
Strontium	105	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLC1C7
	103	(80 - 120)	1.3	(0-20)	SW846 6010C	08/10-08/16/11	MLHLC1C8
		Dilution Factor: 5					
		Analysis Time...: 13:04					
Thallium	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1C9
	99	(80 - 120)	0.97	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DA
		Dilution Factor: 1					
		Analysis Time...: 16:46					
Vanadium	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DC
	103	(80 - 120)	0.76	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DD
		Dilution Factor: 1					
		Analysis Time...: 16:46					
Zinc	108	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLC1DE
	110	(80 - 120)	1.4	(0-20)	SW846 6010C	08/10-08/12/11	MLHLC1DF
		Dilution Factor: 1					
		Analysis Time...: 16:46					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H090496-005 Prep Batch #...: 1222062						
Uranium	106	(80 - 120)		SW846 6020A	08/10-08/11/11	MLHLR1CH
	106	(80 - 120)	0.30 (0-20)	SW846 6020A	08/10-08/11/11	MLHLR1CJ
			Dilution Factor: 1			
			Analysis Time...: 23:21			
MS Lot-Sample #: F1H090496-005 Prep Batch #...: 1222064						
Aluminum	103	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CQ
	103	(80 - 120)	0.16 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CR
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Antimony	103	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1A4
	108	(80 - 120)	4.8 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1A5
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Arsenic	105	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CL
	105	(80 - 120)	0.04 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CM
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Barium	104	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CT
	105	(80 - 120)	0.57 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CU
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Beryllium	108	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CV
	109	(80 - 120)	0.74 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CW
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Cadmium	104	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1C1
	103	(80 - 120)	0.65 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C2
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Calcium	96	(80 - 120)		SW846 6010C	08/10-08/16/11	MLHLR1CX
	122 N	(80 - 120)	3.1 (0-20)	SW846 6010C	08/10-08/16/11	MLHLR1C0
			Dilution Factor: 5			
			Analysis Time...: 14:07			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	100	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1C5
	100	(80 - 120)	0.11	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C6
Dilution Factor: 1							
Analysis Time...: 17:50							
Cobalt	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1C3
	99	(80 - 120)	0.16	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C4
Dilution Factor: 1							
Analysis Time...: 17:50							
Copper	100	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1C7
	100	(80 - 120)	0.65	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C8
Dilution Factor: 1							
Analysis Time...: 17:50							
Iron	103	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1C9
	103	(80 - 120)	0.24	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DA
Dilution Factor: 1							
Analysis Time...: 17:50							
Lead	99	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLR1DL
	100	(80 - 120)	0.14	(0-20)	SW846 6010C	08/10-08/16/11	MLHLR1DM
Dilution Factor: 1							
Analysis Time...: 20:02							
Magnesium	99	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1DC
	98	(80 - 120)	0.17	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DD
Dilution Factor: 1							
Analysis Time...: 12:15							
Manganese	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1DE
	103	(80 - 120)	0.17	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DF
Dilution Factor: 1							
Analysis Time...: 17:50							
Nickel	98	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1DJ
	99	(80 - 120)	0.56	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DK
Dilution Factor: 1							
Analysis Time...: 17:50							
Selenium	104	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLR1A6
	104	(80 - 120)	0.18	(0-20)	SW846 6010C	08/10-08/16/11	MLHLR1A7
Dilution Factor: 1							
Analysis Time...: 20:02							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	91	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1CN
	92	(80 - 120)	1.3	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CP
Dilution Factor: 1							
Analysis Time...: 17:50							
Sodium	101	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1DG
	99	(80 - 120)	0.59	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DH
Dilution Factor: 1							
Analysis Time...: 12:15							
Strontium	109	(80 - 120)			SW846 6010C	08/10-08/16/11	MLHLR1A8
	115	(80 - 120)	3.5	(0-20)	SW846 6010C	08/10-08/16/11	MLHLR1A9
Dilution Factor: 5							
Analysis Time...: 14:07							
Thallium	99	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1CA
	99	(80 - 120)	0.02	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CC
Dilution Factor: 1							
Analysis Time...: 17:50							
Vanadium	102	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1CD
	102	(80 - 120)	0.0	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CE
Dilution Factor: 1							
Analysis Time...: 17:50							
Zinc	112	(80 - 120)			SW846 6010C	08/10-08/12/11	MLHLR1CF
	111	(80 - 120)	0.85	(0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CG
Dilution Factor: 1							
Analysis Time...: 17:50							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090496

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	107	Work Order #...: MLHLC1DJ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090496-002 08/06/11	1224124
		Dilution Factor: 10		Analysis Time...: 02:33	
Fluoride	102	Work Order #...: MLHLC1DK (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090496-002 08/06/11	1224125
		Dilution Factor: 1		Analysis Time...: 02:19	
Nitrate	99	Work Order #...: MLHLC1DL (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090496-002 08/06/11	1224126
		Dilution Factor: 1		Analysis Time...: 02:19	
Nitrite	80 N	Work Order #...: MLHLC1DM (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090496-002 08/06/11	1224127
		Dilution Factor: 1		Analysis Time...: 02:19	
Phosphate as P, Ortho	61 N	Work Order #...: MLHLC1D8 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090496-002 08/06/11	1224128
		Dilution Factor: 1		Analysis Time...: 02:19	
Sulfate	100	Work Order #...: MLHLC1D9 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090496-002 08/06/11	1224129
		Dilution Factor: 10		Analysis Time...: 02:33	
Total Alkalinity	98	Work Order #...: MLHLC1EA (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H090496-002 08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW603D0001

Radiochemistry

Lab Sample ID: F1H090496-001
Work Order: MLHLA
Matrix: WATER

Date Collected: 08/05/11 0840
Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 69
Uranium 234	2.86		0.41	0.10	0.06	08/16/11	08/18/11
Uranium 235/236	0.107		0.072	0.100	0.032	08/16/11	08/18/11
Uranium 238	2.76		0.40	0.10	0.03	08/16/11	08/18/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090496

51 of 72

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

Radiochemistry

Lab Sample ID: F1H090496-002
 Work Order: MLHLC
 Matrix: WATER

Date Collected: 08/05/11 0930
 Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 54
Uranium 234	24.3		2.3	0.1	0.03	08/16/11	08/18/11
Uranium 235/236	1.03		0.27	0.10	0.04	08/16/11	08/18/11
Uranium 238	24.8		2.4	0.1	0.03	08/16/11	08/18/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW220001

Radiochemistry

Lab Sample ID: F1H090496-002X
Work Order: MLHLC
Matrix: WATER

Date Collected: 08/05/11 0930
Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 59
Uranium 234	24.3		2.3	0.1	0.06	08/16/11	08/18/11
Uranium 235/236	1.27		0.29	0.10	0.04	08/16/11	08/18/11
Uranium 238	23.2		2.2	0.1	0.03	08/16/11	08/18/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090496

53 of 72

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW180001

Radiochemistry

Lab Sample ID: F1H090496-003

Date Collected: 08/05/11 1245

Work Order: MLHLD

Date Received: 08/06/11 0820

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1228169	Yld % 46
Uranium 234	38.8		3.6	0.1	0.09	08/16/11	08/18/11
Uranium 235/236	1.72		0.39	0.10	0.10	08/16/11	08/18/11
Uranium 238	39.6		3.7	0.1	0.08	08/16/11	08/18/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090496

54 of 72

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04AMW603D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090496-004
Work Order: MLHLP
Matrix: WATER

Date Collected: 08/05/11 0840
Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1228169		Yld % 72
Uranium 234	3.01		0.43	0.10	0.04	08/16/11	08/18/11
Uranium 235/236	0.196		0.099	0.100	0.033	08/16/11	08/18/11
Uranium 238	2.97		0.42	0.10	0.08	08/16/11	08/18/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090496

55 of 72

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW22001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090496-005

Work Order: MLHLR

Matrix: WATER

Date Collected: 08/05/11 0930

Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 64
Uranium 234	21.6		2.1	0.1	0.09	08/17/11	08/17/11
Uranium 235/236	1.05		0.26	0.10	0.04	08/17/11	08/17/11
Uranium 238	21.2		2.0	0.1	0.03	08/17/11	08/17/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090496

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW22001 DISSOLVED DUP

Radiochemistry

Lab Sample ID: F1H090496-005X
Work Order: MLHLR
Matrix: WATER

Date Collected: 08/05/11 0930
Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 62
Uranium 234	23.1		2.2	0.1	0.06	08/17/11	08/17/11
Uranium 235/236	1.22		0.28	0.10	0.06	08/17/11	08/17/11
Uranium 238	22.7		2.2	0.1	0.07	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090496

57 of 72

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW180001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090496-006
 Work Order: MLHL1
 Matrix: WATER

Date Collected: 08/05/11 1245
 Date Received: 08/06/11 0820

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 49
Uranium 234	37.7		3.5	0.1	0.1	08/17/11	08/17/11
Uranium 235/236	1.79		0.38	0.10	0.08	08/17/11	08/17/11
Uranium 238	36.6		3.4	0.1	0.1	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H090496
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1228169	Yld %	93 F1H160000-169B
Uranium 234	0.013	U	0.022	0.100	0.035	08/16/11	08/17/11
Uranium 235/236	-0.0024	U	0.0047	0.100	0.043	08/16/11	08/17/11
Uranium 238	-0.0038	U	0.0054	0.100	0.040	08/16/11	08/17/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1229042	Yld %	83 F1H170000-042B
Uranium 234	-0.0060	U	0.0070	0.100	0.047	08/17/11	08/17/11
Uranium 235/236	-0.0025	U	0.0050	0.100	0.046	08/17/11	08/17/11
Uranium 238	0.020	U	0.028	0.100	0.043	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H090496
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H160000-169C
Uranium 234	3.27	3.26	0.42	0.04	85	100	(76 - 136)
Uranium 238	3.39	3.37	0.43	0.04	85	99	(76 - 134)
Batch #:	1228169			Analysis Date:	08/17/11		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H170000-042C
Uranium 234	3.27	3.26	0.42	0.04	82	100	(76 - 136)
Uranium 238	3.39	3.50	0.44	0.02	82	103	(76 - 134)
Batch #:	1229042			Analysis Date:	08/17/11		

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H090496
 Matrix: WATER

Date Sampled: 08/05/11
 Date Received: 08/06/11

Parameter	SAMPLE Result	Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H090496-002
Uranium 234	24.3	2.3	54	24.3	2.3	59	0.2 %RPD
Uranium 235/236	1.03	0.27	54	1.27	0.29	59	21 %RPD
Uranium 238	24.8	2.4	54	23.2	2.2	59	7 %RPD
Batch #:		1228169 (Sample)		1228169 (Duplicate)			
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H090496-005
Uranium 234	21.6	2.1	64	23.1	2.2	62	7 %RPD
Uranium 235/236	1.05	0.26	64	1.22	0.28	62	15 %RPD
Uranium 238	21.2	2.0	64	22.7	2.2	62	7 %RPD
Batch #:		1229042 (Sample)		1229042 (Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H090496

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250,2-9,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS In LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04AMW603D0001			2011-08-05 / 840	MLHLA	WATER
SAMPLE COMMENTS:						
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
UX I&	SW846 6020A	WATER, 6020 Total	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK 06 LOC
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK 06 LOC
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: B	WRK 06 LOC
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC

F1H090496

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

62 of 72

Page 1 of 9

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250, 2-9, METS, V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 6

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
----	----	------	-------	---------------------------------	----	--	----	-------------------	---------	---------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	
2	A04AMW220001			2011-08-05 / 930	MLHLC	WATER

SAMPLE COMMENTS:

BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK LOC	06
XX	CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

F1H090496

TestAmerica - St. Louis

Logged In by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

63 of 72

Page 2 of 9

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250,2-9,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
D	AL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	MN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	ZN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	VX	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	TL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	SR	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	SE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	SB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	PB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	NI	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	NA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	AG	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	MG	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	BA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	AS	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	BE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CD	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CO	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CR	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CU	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	FE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	UX	I& SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	XX	QK SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
S	SB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	MN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	NA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	NI	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	PB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	SE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	TL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	MG	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	ZN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	SR	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	VX	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	

F1H090496

64 of 72

TestAmerica - St. Louis

Logged In by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

Page 3 of 9

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250,2-9,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
S	XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK LOC	06	
S	XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	DO	MCAW	300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
X	XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
X	XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK LOC	06	
X	XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	DO	MCAW	300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04BMW180001			2011-08-05 / 1245	MLHLD	WATER

SAMPLE COMMENTS:

CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090496

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

65 of 72

Page 4 of 9

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250,2-9,METS,V

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guteryl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-06
 Analytical Due Date: 2011-08-17
 Report Due Date: 2011-08-19

Report Type: B Standard Report
 EDD Code: 00

#SMPS in LOT: 6

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AL	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AS	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
BA	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
BE	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CA	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CO	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SE	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
ZN	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CD	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
VX	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SR	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SB	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
PB	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NI	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NA	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
MN	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
MG	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
FE	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CU	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
TL	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV		RAD	WATER, RAD SCREEN, RAD	RA	IN-HOUSE RAD	01	STANDARD TEST SET	PROT: A	WRK	06
XX	2M	EML	A-01-R MOD	SCREEN, Special L WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK	06
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
XX	DO	MCAW	300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A04AMW603D0001 DISSOLVED			2011-08-05 / 840	MLHLP	WATER

SAMPLE COMMENTS:

VX	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NA	I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06

F1H090496

66 of 72

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc. R250, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	1
5	A04AMW22001 DISSOLVED			2011-08-05 / 930	MLHLR	WATER
SAMPLE COMMENTS:						
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F1H090496

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

67 of 72

Page 6 of 9

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
D MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090496

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

68 of 72

Page 7 of 9

F1H090496

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R250, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
X	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04BMW180001 DISSOLVED			2011-08-05 / 1245	MLHL1	WATER

SAMPLE COMMENTS:

MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090496

TestAmerica - St. Louis

Logged in by: BRUNSONA 2011-08-09 15:26:59

printed on: Wednesday, August 10, 2011 01:38

69 of 72

Page 8 of 9

F1H090496

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R250, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-06

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F1H090496

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-09

15:26:59

printed on: Wednesday, August 10, 2011 01:38

70 of 72

Page 9 of 9

715 Rider Trail North

North City, MO 63045

one 314.298.8566 fax 314.298.8757

CU R 059

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]**Special Instructions/QC Requirements & Comments:**

[REDACTED]	Company: Shaw E & I. Inc.	Date/Time: 08/05/11 1630	Company:	Date/Time: 08/05/11 1630
	Company: DARWIN	Date/Time: 08/05/11	Company: TA STL	Date/Time: 08/06/11 0820
	Company:	Date/Time:	Company:	Date/Time:

CONDITION UPON RECEIPT FORM

Client: SHAW

Quote No: 89251

COC/RFA No: 003

Initiated By: NVO

Date: 08/06/11 Time: 0820



Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____ Multiple Packages: Y 9/9

Shipping # (s):*

Sample Temperature (s):**

1. <u>4485 0258 2944</u>	6. _____	1. <u>3</u>	6. _____
2. <u>4485 0258 2955</u>	7. _____	2. <u>Ambient</u>	7. _____
3. _____	8. _____	3. _____	8. _____
4. _____	9. _____	4. _____	9. _____
5. _____	10. _____	5. _____	10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. Y <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y <u>N</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Received bottles for Filter metals, Iso-L, & Tetra-L - not on COC - for per LF - AB 8-9-11

Corrective Action:

- ☐ Client Contact Name: _____
- ☐ Sample(s) processed "as is": _____
- ☐ Sample(s) on hold until: _____

Informed by: _____

Project Management Review:

If released, notify: _____

Date: 8/10/11

THIS FORM MUST BE COMPLETED AND BEING CHECKED IN, IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUESTED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

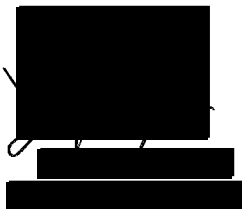
Guteryl Steel

Lot #: F1H090504



Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.



August 24, 2011

F1H090504

1 of 82

Case Narrative
LOT NUMBER: F1H090504

This report contains the analytical results for the 10 samples received under chain of custody by TestAmerica in St. Louis on August 9, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1230013**

There was insufficient sample volume to perform MS/MSD analysis. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F1H090504 (1): A02MW110001

F1H090504 (2): A02MW090001

F1H090504 (4): SEEP 01

F1H090504 (5): SEEP 02

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1222064**

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

The MSD recovery for calcium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Strontium was observed in the CCB above 3X the MDL. Associated samples which are either non-detect for the contaminant or exhibit concentrations greater than ten (10) times the concentrations observed in the CCB and do not require re-analysis.

Affected Samples:

F1H090504 (1): A02MW110001

F1H090504 (2): A02MW090001

F1H090504 (3): A02MW080001

F1H090504 (4): SEEP 01

F1H090504 (5): SEEP 02

F1H090504 (6): A02MW110001 DISSOLVED

F1H090504 (7): A02MW090001 DISSOLVED

F1H090504 (8): A02MW080001 DISSOLVED

F1H090504 (9): SEEP 01

F1H090504 (10): SEEP 02

Chloride (MCAWW 300.0A)**Batch: 1224130**

The sample was analyzed at dilution, due to high concentrations of the target analytes.

Affected Samples:

F1H090504 (1): A02MW110001

F1H090504 (2): A02MW090001

F1H090504 (3): A02MW080001

F1H090504 (4): SEEP 01

F1H090504 (5): SEEP 02

Sulfate (MCAWW 300.0A)**Batch: 1224135**

The samples was analyzed at dilution, due to high concentrations of the target analytes.

Affected Samples:

F1H090504 (1): A02MW110001
F1H090504 (2): A02MW090001
F1H090504 (3): A02MW080001
F1H090504 (4): SEEP 01
F1H090504 (5): SEEP 02

Nitrite as N (MCAWW 300.0A)**Batch: 1224133**

The following samples were reported ND at dilution for Nitrite, due to interference with Chloride in the undiluted runs. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H090504 (1): A02MW110001
F1H090504 (3): A02MW080001
F1H090504 (4): SEEP 01
F1H090504 (5): SEEP 02

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H090504 (1): A02MW110001
F1H090504 (2): A02MW090001
F1H090504 (3): A02MW080001
F1H090504 (4): SEEP 01
F1H090504 (5): SEEP 02

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1224134**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H090504 (1): A02MW110001
F1H090504 (2): A02MW090001
F1H090504 (3): A02MW080001
F1H090504 (4): SEEP 01
F1H090504 (5): SEEP 02

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H090504

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H090504

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLHM6	001	A02MW110001	08/08/11	09:10
MLHM7	002	A02MW090001	08/08/11	10:40
MLHM9	003	A02MW080001	08/08/11	11:40
MLHNA	004	SEEP 01	08/08/11	10:35
MLHNC	005	SEEP 02	08/08/11	11:30
MLHNE	006	A02MW110001 DISSOLVED	08/08/11	09:10
MLHNF	007	A02MW090001 DISSOLVED	08/08/11	10:40
MLHNG	008	A02MW080001 DISSOLVED	08/08/11	11:40
MLHNH	009	SEEP 01	08/08/11	10:35
MLHNU	010	SEEP 02	08/08/11	11:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001

GC/MS Volatiles

Lot-Sample #...: F1H090504-001 Work Order #...: MLHM61AC Matrix.....: WATER
 Date Sampled...: 08/08/11 09:10 Date Received...: 08/09/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 13:21
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	3.2	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	12	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	5.9	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	8.7	1.0	ug/L
1,2-Dichloroethene	19	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.97 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	0.25 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.23 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.59 J	1.0	ug/L
Vinyl chloride	1.3 J	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001

GC/MS Volatiles

Lot-Sample #....: F1H090504-001 Work Order #....: MLHM61AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	107	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001

TOTAL Metals

Lot-Sample #...: F1H090504-001

Matrix.....: WATER

Date Sampled...: 08/08/11 09:10 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	17.7	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHM61A5
		Dilution Factor: 1		Analysis Time...: 23:41		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AF
		Dilution Factor: 1		Analysis Time...: 18:23		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AG
		Dilution Factor: 1		Analysis Time...: 18:23		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AE
		Dilution Factor: 1		Analysis Time...: 18:23		
Barium	65.2	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AH
		Dilution Factor: 1		Analysis Time...: 18:23		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AJ
		Dilution Factor: 1		Analysis Time...: 18:23		
Calcium	114000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHM61AK
		Dilution Factor: 5		Analysis Time...: 14:38		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AL
		Dilution Factor: 1		Analysis Time...: 18:23		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AM
		Dilution Factor: 1		Analysis Time...: 18:23		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AN
		Dilution Factor: 1		Analysis Time...: 18:23		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AP
		Dilution Factor: 1		Analysis Time...: 18:23		
Iron	2120	100	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AQ
		Dilution Factor: 1		Analysis Time...: 18:23		
Magnesium	34000	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AR
		Dilution Factor: 1		Analysis Time...: 12:46		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001

TOTAL Metals

Lot-Sample #...: F1H090504-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	119	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AT
		Dilution Factor: 1		Analysis Time...: 18:23		
Sodium	49900 B	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AU
		Dilution Factor: 1		Analysis Time...: 12:46		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AV
		Dilution Factor: 1		Analysis Time...: 18:23		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM61AW
		Dilution Factor: 1		Analysis Time...: 20:34		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61AX
		Dilution Factor: 1		Analysis Time...: 18:23		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM61A0
		Dilution Factor: 1		Analysis Time...: 20:34		
Strontium	492	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM61A1
		Dilution Factor: 5		Analysis Time...: 14:38		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61A2
		Dilution Factor: 1		Analysis Time...: 18:23		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61A3
		Dilution Factor: 1		Analysis Time...: 18:23		
Zinc	7.3 J	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM61A4
		Dilution Factor: 1		Analysis Time...: 18:23		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001

General Chemistry

Lot-Sample #...: F1H090504-001 Work Order #...: MLHM6 Matrix.....: WATER
 Date Sampled...: 08/08/11 09:10 Date Received...: 08/09/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	101	20.0	mg/L	MCAWW 300.0A	08/09/11	1224130
		Dilution Factor: 100		Analysis Time...: 08:52		
Fluoride	0.69	0.10	mg/L	MCAWW 300.0A	08/09/11	1224131
		Dilution Factor: 1		Analysis Time...: 07:54		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/09/11	1224132
		Dilution Factor: 1		Analysis Time...: 07:54		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/09/11	1224133
		Dilution Factor: 10		Analysis Time...: 08:08		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/09/11	1224134
		Dilution Factor: 1		Analysis Time...: 07:54		
Sulfate	61.4	5.0	mg/L	MCAWW 300.0A	08/09/11	1224135
		Dilution Factor: 10		Analysis Time...: 08:08		
Total Alkalinity	332	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	626	10.0	mg/L	MCAWW 160.1	08/15-08/16/11	1227174
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001

GC/MS Volatiles

Lot-Sample #...: F1H090504-002 Work Order #...: MLHM71AN Matrix.....: WATER
 Date Sampled...: 08/08/11 10:40 Date Received...: 08/09/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 14:47
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	2.0	2.0	ug/L
Benzene	0.10 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.39 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	14	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	12	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	2.9	1.0	ug/L
1,2-Dichloroethene	6.8	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.92 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.24 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.79 J	1.0	ug/L
Vinyl chloride	2.7	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001

GC/MS Volatiles

Lot-Sample #...: F1H090504-002 Work Order #...: MLHM71AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	114	(85 - 115)
1,2-Dichloroethane-d4	112	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001

TOTAL Metals

Lot-Sample #...: F1H090504-002

Matrix.....: WATER

Date Sampled...: 08/08/11 10:40 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	21.8	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHM71AG
		Dilution Factor: 1		Analysis Time...: 23:47		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AR
		Dilution Factor: 1		Analysis Time...: 18:29		
Aluminum	94.3 J	200	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AT
		Dilution Factor: 1		Analysis Time...: 18:29		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AQ
		Dilution Factor: 1		Analysis Time...: 18:29		
Barium	31.8 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AU
		Dilution Factor: 1		Analysis Time...: 18:29		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AV
		Dilution Factor: 1		Analysis Time...: 18:29		
Calcium	85900	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHM71AW
		Dilution Factor: 5		Analysis Time...: 14:45		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AX
		Dilution Factor: 1		Analysis Time...: 18:29		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A0
		Dilution Factor: 1		Analysis Time...: 18:29		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A1
		Dilution Factor: 1		Analysis Time...: 18:29		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A2
		Dilution Factor: 1		Analysis Time...: 18:29		
Iron	1730	100	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A3
		Dilution Factor: 1		Analysis Time...: 18:29		
Magnesium	23700	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A4
		Dilution Factor: 1		Analysis Time...: 12:53		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001

TOTAL Metals

Lot-Sample #...: F1H090504-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	304	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A5
		Dilution Factor: 1		Analysis Time...: 18:29		
Sodium	19300 B	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A6
		Dilution Factor: 1		Analysis Time...: 12:53		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A7
		Dilution Factor: 1		Analysis Time...: 18:29		
Lead	2.2 J	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM71A8
		Dilution Factor: 1		Analysis Time...: 20:41		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71A9
		Dilution Factor: 1		Analysis Time...: 18:29		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM71AA
		Dilution Factor: 1		Analysis Time...: 20:41		
Strontium	272	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM71AC
		Dilution Factor: 5		Analysis Time...: 14:45		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AD
		Dilution Factor: 1		Analysis Time...: 18:29		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AE
		Dilution Factor: 1		Analysis Time...: 18:29		
Zinc	18.9 J	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM71AF
		Dilution Factor: 1		Analysis Time...: 18:29		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001

General Chemistry

Lot-Sample #...: F1H090504-002 Work Order #...: MLHM7 Matrix.....: WATER
 Date Sampled...: 08/08/11 10:40 Date Received...: 08/09/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	22.9	2.0	mg/L	MCAWW 300.0A	08/09/11	1224130
			Dilution Factor: 10	Analysis Time...: 07:25		
Fluoride	1.9	0.10	mg/L	MCAWW 300.0A	08/09/11	1224131
			Dilution Factor: 1	Analysis Time...: 07:11		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/09/11	1224132
			Dilution Factor: 1	Analysis Time...: 07:11		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	08/09/11	1224133
			Dilution Factor: 1	Analysis Time...: 07:11		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/09/11	1224134
			Dilution Factor: 1	Analysis Time...: 07:11		
Sulfate	54.7	5.0	mg/L	MCAWW 300.0A	08/09/11	1224135
			Dilution Factor: 10	Analysis Time...: 07:25		
Total Alkalinity	247	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	398	10.0	mg/L	MCAWW 160.1	08/15-08/16/11	1227174
			Dilution Factor: 1	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001

TOTAL Metals

Lot-Sample #...: F1H090504-003

Matrix.....: WATER

Date Sampled...: 08/08/11 11:40 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	1.1	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLHM91AG
		Dilution Factor: 1		Analysis Time...: 23:54		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AR
		Dilution Factor: 1		Analysis Time...: 18:48		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AT
		Dilution Factor: 1		Analysis Time...: 18:48		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AQ
		Dilution Factor: 1		Analysis Time...: 18:48		
Barium	48.8 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AU
		Dilution Factor: 1		Analysis Time...: 18:48		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AV
		Dilution Factor: 1		Analysis Time...: 18:48		
Calcium	198000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHM91AW
		Dilution Factor: 5		Analysis Time...: 15:03		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AX
		Dilution Factor: 1		Analysis Time...: 18:48		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A0
		Dilution Factor: 1		Analysis Time...: 18:48		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A1
		Dilution Factor: 1		Analysis Time...: 18:48		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A2
		Dilution Factor: 1		Analysis Time...: 18:48		
Iron	207	100	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A3
		Dilution Factor: 1		Analysis Time...: 18:48		
Magnesium	48600	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A4
		Dilution Factor: 1		Analysis Time...: 13:11		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001

TOTAL Metals

Lot-Sample #...: F1H090504-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	245	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A5
		Dilution Factor: 1		Analysis Time...: 18:48		
Sodium	185000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHM91A6
		Dilution Factor: 5		Analysis Time...: 15:03		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A7
		Dilution Factor: 1		Analysis Time...: 18:48		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM91A8
		Dilution Factor: 1		Analysis Time...: 21:00		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91A9
		Dilution Factor: 1		Analysis Time...: 18:48		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM91AA
		Dilution Factor: 1		Analysis Time...: 21:00		
Strontium	892	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHM91AC
		Dilution Factor: 5		Analysis Time...: 15:03		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AD
		Dilution Factor: 1		Analysis Time...: 18:48		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AE
		Dilution Factor: 1		Analysis Time...: 18:48		
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHM91AF
		Dilution Factor: 1		Analysis Time...: 18:48		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001

General Chemistry

Lot-Sample #...: F1H090504-003 Work Order #...: MLHM9 Matrix.....: WATER
 Date Sampled...: 08/08/11 11:40 Date Received...: 08/09/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	296	20.0	mg/L	MCAWW 300.0A	08/09/11	1224130
		Dilution Factor: 100		Analysis Time...: 06:56		
Fluoride	0.75	0.10	mg/L	MCAWW 300.0A	08/09/11	1224131
		Dilution Factor: 1		Analysis Time...: 06:27		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/09/11	1224132
		Dilution Factor: 1		Analysis Time...: 06:27		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/09/11	1224133
		Dilution Factor: 10		Analysis Time...: 06:42		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/09/11	1224134
		Dilution Factor: 1		Analysis Time...: 06:27		
Sulfate	197	50.0	mg/L	MCAWW 300.0A	08/09/11	1224135
		Dilution Factor: 100		Analysis Time...: 06:56		
Total Alkalinity	328	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1260	10.0	mg/L	MCAWW 160.1	08/15-08/16/11	1227174
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

GC/MS Volatiles

Lot-Sample #...: F1H090504-004 Work Order #...: MLHNA1AN Matrix.....: WATER
 Date Sampled...: 08/08/11 10:35 Date Received...: 08/09/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 15:14
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.23 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.5	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	0.41 J	1.0	ug/L
1,2-Dichloroethene	1.8 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.67 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	2.2	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.90 J	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

GC/MS Volatiles

Lot-Sample #...: F1H090504-004 Work Order #...: MLHNA1AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	105	(85 - 120)
Dibromofluoromethane	113	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

TOTAL Metals

Lot-Sample #...: F1H090504-004

Matrix.....: WATER

Date Sampled...: 08/08/11 10:35 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	44.9	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNA1AG
		Dilution Factor: 1		Analysis Time...: 00:01		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AR
		Dilution Factor: 1		Analysis Time...: 18:55		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AT
		Dilution Factor: 1		Analysis Time...: 18:55		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AQ
		Dilution Factor: 1		Analysis Time...: 18:55		
Barium	53.7	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AU
		Dilution Factor: 1		Analysis Time...: 18:55		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AV
		Dilution Factor: 1		Analysis Time...: 18:55		
Calcium	106000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNA1AW
		Dilution Factor: 5		Analysis Time...: 15:10		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AX
		Dilution Factor: 1		Analysis Time...: 18:55		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A0
		Dilution Factor: 1		Analysis Time...: 18:55		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A1
		Dilution Factor: 1		Analysis Time...: 18:55		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A2
		Dilution Factor: 1		Analysis Time...: 18:55		
Iron	109	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A3
		Dilution Factor: 1		Analysis Time...: 18:55		
Magnesium	29400	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A4
		Dilution Factor: 1		Analysis Time...: 13:18		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

TOTAL Metals

Lot-Sample #...: F1H090504-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	4.2 J	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A5
		Dilution Factor: 1		Analysis Time...: 18:55		
Sodium	195000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNA1A6
		Dilution Factor: 5		Analysis Time...: 15:10		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A7
		Dilution Factor: 1		Analysis Time...: 18:55		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNA1A8
		Dilution Factor: 1		Analysis Time...: 21:06		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1A9
		Dilution Factor: 1		Analysis Time...: 18:55		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNA1AA
		Dilution Factor: 1		Analysis Time...: 21:06		
Strontium	372	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNA1AC
		Dilution Factor: 5		Analysis Time...: 15:10		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AD
		Dilution Factor: 1		Analysis Time...: 18:55		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AE
		Dilution Factor: 1		Analysis Time...: 18:55		
Zinc	73.4	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNA1AF
		Dilution Factor: 1		Analysis Time...: 18:55		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

General Chemistry

Lot-Sample #...: F1H090504-004 Work Order #...: MLHNA Matrix.....: WATER
 Date Sampled...: 08/08/11 10:35 Date Received...: 08/09/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	298	20.0	mg/L	MCAWW 300.0A	08/09/11	1224130
		Dilution Factor: 100		Analysis Time...: 03:34		
Fluoride	0.83	0.10	mg/L	MCAWW 300.0A	08/09/11	1224131
		Dilution Factor: 1		Analysis Time...: 03:05		
Nitrate	0.044	0.020	mg/L	MCAWW 300.0A	08/09/11	1224132
		Dilution Factor: 1		Analysis Time...: 03:05		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/09/11	1224133
		Dilution Factor: 10		Analysis Time...: 03:20		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/09/11	1224134
		Dilution Factor: 1		Analysis Time...: 03:05		
Sulfate	51.3	5.0	mg/L	MCAWW 300.0A	08/09/11	1224135
		Dilution Factor: 10		Analysis Time...: 03:20		
Total Alkalinity	292	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	939	10.0	mg/L	MCAWW 160.1	08/15-08/16/11	1227174
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

GC/MS Volatiles

Lot-Sample #...: F1H090504-005 Work Order #...: MLHNC1AN Matrix.....: WATER
 Date Sampled...: 08/08/11 11:30 Date Received...: 08/09/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 15:41
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	2.7	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.83 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

GC/MS Volatiles

Lot-Sample #...: F1H090504-005 Work Order #...: MLHNC1AN Matrix.....: WATER

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	106	(70 - 120)
4-Bromofluorobenzene	119	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

TOTAL Metals

Lot-Sample #...: F1H090504-005

Matrix.....: WATER

Date Sampled...: 08/08/11 11:30 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	6.3	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNC1AG
		Dilution Factor: 1		Analysis Time...: 00:07		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AR
		Dilution Factor: 1		Analysis Time...: 19:01		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AT
		Dilution Factor: 1		Analysis Time...: 19:01		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AQ
		Dilution Factor: 1		Analysis Time...: 19:01		
Barium	68.1	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AU
		Dilution Factor: 1		Analysis Time...: 19:01		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AV
		Dilution Factor: 1		Analysis Time...: 19:01		
Calcium	113000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNC1AW
		Dilution Factor: 5		Analysis Time...: 15:16		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AX
		Dilution Factor: 1		Analysis Time...: 19:01		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A0
		Dilution Factor: 1		Analysis Time...: 19:01		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A1
		Dilution Factor: 1		Analysis Time...: 19:01		
Copper	226	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A2
		Dilution Factor: 1		Analysis Time...: 19:01		
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A3
		Dilution Factor: 1		Analysis Time...: 19:01		
Magnesium	30800	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A4
		Dilution Factor: 1		Analysis Time...: 13:24		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

TOTAL Metals

Lot-Sample #...: F1H090504-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	16.5	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A5
		Dilution Factor: 1		Analysis Time...: 19:01		
Sodium	180000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNC1A6
		Dilution Factor: 5		Analysis Time...: 15:16		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A7
		Dilution Factor: 1		Analysis Time...: 19:01		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNC1A8
		Dilution Factor: 1		Analysis Time...: 21:13		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1A9
		Dilution Factor: 1		Analysis Time...: 19:01		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNC1AA
		Dilution Factor: 1		Analysis Time...: 21:13		
Strontium	485	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNC1AC
		Dilution Factor: 5		Analysis Time...: 15:16		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AD
		Dilution Factor: 1		Analysis Time...: 19:01		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AE
		Dilution Factor: 1		Analysis Time...: 19:01		
Zinc	45.4	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNC1AF
		Dilution Factor: 1		Analysis Time...: 19:01		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

General Chemistry

Lot-Sample #...: F1H090504-005 Work Order #...: MLHNC Matrix.....: WATER
 Date Sampled...: 08/08/11 11:30 Date Received...: 08/09/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	24.8	20.0	mg/L	MCAWW 300.0A	08/09/11	1224130
		Dilution Factor: 100		Analysis Time...: 06:13		
Fluoride	0.46	0.10	mg/L	MCAWW 300.0A	08/09/11	1224131
		Dilution Factor: 1		Analysis Time...: 05:15		
Nitrate	0.33	0.020	mg/L	MCAWW 300.0A	08/09/11	1224132
		Dilution Factor: 1		Analysis Time...: 05:15		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/09/11	1224133
		Dilution Factor: 10		Analysis Time...: 05:59		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/09/11	1224134
		Dilution Factor: 1		Analysis Time...: 05:15		
Sulfate	75.9	5.0	mg/L	MCAWW 300.0A	08/09/11	1224135
		Dilution Factor: 10		Analysis Time...: 05:59		
Total Alkalinity	314	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	867	10.0	mg/L	MCAWW 160.1	08/15-08/16/11	1227174
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090504-006

Matrix.....: WATER

Date Sampled...: 08/08/11 09:10 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	14.5	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNE1A2
		Dilution Factor: 1		Analysis Time...: 00:14		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AC
		Dilution Factor: 1		Analysis Time...: 19:08		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AD
		Dilution Factor: 1		Analysis Time...: 19:08		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AA
		Dilution Factor: 1		Analysis Time...: 19:08		
Barium	68.4	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AE
		Dilution Factor: 1		Analysis Time...: 19:08		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AF
		Dilution Factor: 1		Analysis Time...: 19:08		
Calcium	112000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNE1AG
		Dilution Factor: 5		Analysis Time...: 15:22		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AH
		Dilution Factor: 1		Analysis Time...: 19:08		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AJ
		Dilution Factor: 1		Analysis Time...: 19:08		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AK
		Dilution Factor: 1		Analysis Time...: 19:08		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AL
		Dilution Factor: 1		Analysis Time...: 19:08		
Iron	2250	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AM
		Dilution Factor: 1		Analysis Time...: 19:08		
Magnesium	34100	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AN
		Dilution Factor: 1		Analysis Time...: 13:30		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090504-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	126	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AP
		Dilution Factor: 1		Analysis Time...: 19:08		
Sodium	47500 B	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AQ
		Dilution Factor: 1		Analysis Time...: 13:30		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AR
		Dilution Factor: 1		Analysis Time...: 19:08		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNE1AT
		Dilution Factor: 1		Analysis Time...: 21:19		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AU
		Dilution Factor: 1		Analysis Time...: 19:08		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNE1AV
		Dilution Factor: 1		Analysis Time...: 21:19		
Strontium	496	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNE1AW
		Dilution Factor: 5		Analysis Time...: 15:22		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1AX
		Dilution Factor: 1		Analysis Time...: 19:08		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1A0
		Dilution Factor: 1		Analysis Time...: 19:08		
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNE1A1
		Dilution Factor: 1		Analysis Time...: 19:08		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090504-007

Matrix.....: WATER

Date Sampled...: 08/08/11 10:40 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	21.1	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNF1AD
		Dilution Factor: 1		Analysis Time...: 00:34		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AG
		Dilution Factor: 1		Analysis Time...: 19:14		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AH
		Dilution Factor: 1		Analysis Time...: 19:14		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AF
		Dilution Factor: 1		Analysis Time...: 19:14		
Barium	31.4 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AJ
		Dilution Factor: 1		Analysis Time...: 19:14		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AK
		Dilution Factor: 1		Analysis Time...: 19:14		
Calcium	85400	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNF1AL
		Dilution Factor: 5		Analysis Time...: 15:29		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AM
		Dilution Factor: 1		Analysis Time...: 19:14		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AN
		Dilution Factor: 1		Analysis Time...: 19:14		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AP
		Dilution Factor: 1		Analysis Time...: 19:14		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AQ
		Dilution Factor: 1		Analysis Time...: 19:14		
Iron	1600	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AR
		Dilution Factor: 1		Analysis Time...: 19:14		
Magnesium	23800	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AT
		Dilution Factor: 1		Analysis Time...: 13:37		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090504-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	303	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AU
		Dilution Factor: 1		Analysis Time...: 19:14		
Sodium	19300 B	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AV
		Dilution Factor: 1		Analysis Time...: 13:37		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AW
		Dilution Factor: 1		Analysis Time...: 19:14		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNF1AX
		Dilution Factor: 1		Analysis Time...: 21:26		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1A0
		Dilution Factor: 1		Analysis Time...: 19:14		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNF1A1
		Dilution Factor: 1		Analysis Time...: 21:26		
Strontium	268	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNF1A2
		Dilution Factor: 5		Analysis Time...: 15:29		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1A3
		Dilution Factor: 1		Analysis Time...: 19:14		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AA
		Dilution Factor: 1		Analysis Time...: 19:14		
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNF1AC
		Dilution Factor: 1		Analysis Time...: 19:14		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090504-008

Matrix.....: WATER

Date Sampled...: 08/08/11 11:40 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	1.1	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNG1AD
		Dilution Factor: 1		Analysis Time...: 00:41		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AG
		Dilution Factor: 1		Analysis Time...: 19:21		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AH
		Dilution Factor: 1		Analysis Time...: 19:21		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AF
		Dilution Factor: 1		Analysis Time...: 19:21		
Barium	47.0 J	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AJ
		Dilution Factor: 1		Analysis Time...: 19:21		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AK
		Dilution Factor: 1		Analysis Time...: 19:21		
Calcium	191000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNG1AL
		Dilution Factor: 5		Analysis Time...: 15:35		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AM
		Dilution Factor: 1		Analysis Time...: 19:21		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AN
		Dilution Factor: 1		Analysis Time...: 19:21		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AP
		Dilution Factor: 1		Analysis Time...: 19:21		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AQ
		Dilution Factor: 1		Analysis Time...: 19:21		
Iron	140	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AR
		Dilution Factor: 1		Analysis Time...: 19:21		
Magnesium	47700	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AT
		Dilution Factor: 1		Analysis Time...: 13:43		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H090504-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	236	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AU
		Dilution Factor: 1		Analysis Time...: 19:21		
Sodium	178000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNG1AV
		Dilution Factor: 5		Analysis Time...: 15:35		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AW
		Dilution Factor: 1		Analysis Time...: 19:21		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNG1AX
		Dilution Factor: 1		Analysis Time...: 21:32		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1A0
		Dilution Factor: 1		Analysis Time...: 19:21		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNG1A1
		Dilution Factor: 1		Analysis Time...: 21:32		
Strontium	845	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNG1A2
		Dilution Factor: 5		Analysis Time...: 15:35		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1A3
		Dilution Factor: 1		Analysis Time...: 19:21		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AA
		Dilution Factor: 1		Analysis Time...: 19:21		
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNG1AC
		Dilution Factor: 1		Analysis Time...: 19:21		

NOTE (S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

TOTAL Metals

Lot-Sample #...: F1H090504-009

Matrix.....: WATER

Date Sampled...: 08/08/11 10:35 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	44.3	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNNH1AH
		Dilution Factor: 1		Analysis Time...: 00:47		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AL
		Dilution Factor: 1		Analysis Time...: 19:27		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AM
		Dilution Factor: 1		Analysis Time...: 19:27		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AK
		Dilution Factor: 1		Analysis Time...: 19:27		
Barium	53.0	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AN
		Dilution Factor: 1		Analysis Time...: 19:27		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AP
		Dilution Factor: 1		Analysis Time...: 19:27		
Calcium	104000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNNH1AQ
		Dilution Factor: 5		Analysis Time...: 15:41		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AR
		Dilution Factor: 1		Analysis Time...: 19:27		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AT
		Dilution Factor: 1		Analysis Time...: 19:27		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AU
		Dilution Factor: 1		Analysis Time...: 19:27		
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AV
		Dilution Factor: 1		Analysis Time...: 19:27		
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AW
		Dilution Factor: 1		Analysis Time...: 19:27		
Magnesium	29800	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AX
		Dilution Factor: 1		Analysis Time...: 13:49		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

TOTAL Metals

Lot-Sample #...: F1H090504-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1A0
		Dilution Factor: 1		Analysis Time...: 19:27		
Sodium	192000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNNH1A1
		Dilution Factor: 5		Analysis Time...: 15:41		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1A2
		Dilution Factor: 1		Analysis Time...: 19:27		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNNH1A3
		Dilution Factor: 1		Analysis Time...: 21:39		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AA
		Dilution Factor: 1		Analysis Time...: 19:27		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNNH1AC
		Dilution Factor: 1		Analysis Time...: 21:39		
Strontium	370	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNNH1AD
		Dilution Factor: 5		Analysis Time...: 15:41		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AE
		Dilution Factor: 1		Analysis Time...: 19:27		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AF
		Dilution Factor: 1		Analysis Time...: 19:27		
Zinc	65.5	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNNH1AG
		Dilution Factor: 1		Analysis Time...: 19:27		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

TOTAL Metals

Lot-Sample #...: F1H090504-010

Matrix.....: WATER

Date Sampled...: 08/08/11 11:30 Date Received...: 08/09/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1222062						
Uranium	6.2	1.0	ug/L	SW846 6020A	08/10-08/12/11	MLHNJ1AM
		Dilution Factor: 1		Analysis Time...: 00:54		
Prep Batch #...: 1222064						
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AQ
		Dilution Factor: 1		Analysis Time...: 19:33		
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AR
		Dilution Factor: 1		Analysis Time...: 19:33		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AP
		Dilution Factor: 1		Analysis Time...: 19:33		
Barium	67.4	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AT
		Dilution Factor: 1		Analysis Time...: 19:33		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AU
		Dilution Factor: 1		Analysis Time...: 19:33		
Calcium	124000	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNJ1AV
		Dilution Factor: 5		Analysis Time...: 15:47		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AW
		Dilution Factor: 1		Analysis Time...: 19:33		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AX
		Dilution Factor: 1		Analysis Time...: 19:33		
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1A0
		Dilution Factor: 1		Analysis Time...: 19:33		
Copper	220	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1A1
		Dilution Factor: 1		Analysis Time...: 19:33		
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1A2
		Dilution Factor: 1		Analysis Time...: 19:33		
Magnesium	30700	1000	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1A3
		Dilution Factor: 1		Analysis Time...: 13:56		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

TOTAL Metals

Lot-Sample #...: F1H090504-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	13.7 J	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AA
		Dilution Factor: 1		Analysis Time...: 19:33		
Sodium	197000 B	5000	ug/L	SW846 6010C	08/10-08/16/11	MLHNJ1AC
		Dilution Factor: 5		Analysis Time...: 15:47		
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AD
		Dilution Factor: 1		Analysis Time...: 19:33		
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNJ1AE
		Dilution Factor: 1		Analysis Time...: 21:45		
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AF
		Dilution Factor: 1		Analysis Time...: 19:33		
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNJ1AG
		Dilution Factor: 1		Analysis Time...: 21:45		
Strontium	542	25.0	ug/L	SW846 6010C	08/10-08/16/11	MLHNJ1AH
		Dilution Factor: 5		Analysis Time...: 15:47		
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AJ
		Dilution Factor: 1		Analysis Time...: 19:33		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AK
		Dilution Factor: 1		Analysis Time...: 19:33		
Zinc	38.9	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLHNJ1AL
		Dilution Factor: 1		Analysis Time...: 19:33		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090504
 MB Lot-Sample #: F1H180000-013

Work Order #...: MLRLL1AA

Matrix.....: WATER

Analysis Date...: 08/17/11
 Dilution Factor: 1

Prep Date.....: 08/17/11

Analysis Time...: 10:16

Prep Batch #...: 1230013

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	0.28 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	103	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H090504

Work Order #...: MLRLL1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	102	(70 - 120)		
4-Bromofluorobenzene	101	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H100000-062 Prep Batch #... : 1222062						
Uranium	ND	1.0	ug/L	SW846 6020A	08/10-08/11/11	MLH661AA
		Dilution Factor: 1				
		Analysis Time...: 22:41				
MB Lot-Sample #: F1H100000-064 Prep Batch #... : 1222064						
Aluminum	ND	200	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AF
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Antimony	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AW
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AD
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Barium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AG
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AH
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AK
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Calcium	ND	1000	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1AJ
		Dilution Factor: 1				
		Analysis Time...: 13:48				
Chromium	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AM
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AL
		Dilution Factor: 1				
		Analysis Time...: 17:31				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AN
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Iron	ND	100	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AP
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Lead	ND	10.0	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1AV
		Dilution Factor: 1				
		Analysis Time...: 19:43				
Magnesium	ND	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AQ
		Dilution Factor: 1				
		Analysis Time...: 11:56				
Manganese	ND	15.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AR
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Nickel	ND	40.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AU
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Selenium	ND	15.0	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1AX
		Dilution Factor: 1				
		Analysis Time...: 19:43				
Silver	ND	10.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AE
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Sodium	458 J	1000	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AT
		Dilution Factor: 1				
		Analysis Time...: 11:56				
Strontium	ND	5.0	ug/L	SW846 6010C	08/10-08/16/11	MLH7A1A0
		Dilution Factor: 1				
		Analysis Time...: 13:48				
Thallium	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1A1
		Dilution Factor: 1				
		Analysis Time...: 17:31				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AA
		Dilution Factor: 1				
		Analysis Time...: 17:31				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/10-08/12/11	MLH7A1AC

Dilution Factor: 1
Analysis Time...: 17:31

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H090504

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLRP81AA 0.20	mg/L	MB Lot-Sample #: F1H120000-130 MCAWW 300.0A	08/09/11	1224130
		Dilution Factor: 1 Analysis Time...: 02:51				
Fluoride	ND	Work Order #: MLRQA1AA 0.10	mg/L	MB Lot-Sample #: F1H120000-131 MCAWW 300.0A	08/09/11	1224131
		Dilution Factor: 1 Analysis Time...: 02:51				
Nitrate	ND	Work Order #: MLRQC1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-132 MCAWW 300.0A	08/09/11	1224132
		Dilution Factor: 1 Analysis Time...: 02:51				
Nitrite	ND	Work Order #: MLRQD1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-133 MCAWW 300.0A	08/09/11	1224133
		Dilution Factor: 1 Analysis Time...: 02:51				
Phosphate as P, Ortho	ND	Work Order #: MLRQE1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-134 MCAWW 300.0A	08/09/11	1224134
		Dilution Factor: 1 Analysis Time...: 02:51				
Sulfate	ND	Work Order #: MLRQF1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-135 MCAWW 300.0A	08/09/11	1224135
		Dilution Factor: 1 Analysis Time...: 02:51				
Total Alkalinity	ND	Work Order #: MLRFM1AA 5.0	mg/L	MB Lot-Sample #: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: MLQ961AA 10.0	mg/L	MB Lot-Sample #: F1H150000-174 MCAWW 160.1	08/15-08/16/11	1227174
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090504 Work Order #...: MLRLL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-013 MLRLL1AD-LCSD
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 09:23
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.58	(0-20)	SW846 8260B
Dibromochloromethane	102	(60 - 135)			SW846 8260B
	102	(60 - 135)	0.88	(0-20)	SW846 8260B
Vinyl chloride	94	(50 - 145)			SW846 8260B
	88	(50 - 145)	5.7	(0-20)	SW846 8260B
Bromomethane	106	(30 - 145)			SW846 8260B
	103	(30 - 145)	2.5	(0-20)	SW846 8260B
Chloroethane	94	(60 - 135)			SW846 8260B
	92	(60 - 135)	2.1	(0-20)	SW846 8260B
Acetone	92	(40 - 140)			SW846 8260B
	98	(40 - 140)	6.2	(0-20)	SW846 8260B
1,1-Dichloroethene	104	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.19	(0-20)	SW846 8260B
Methylene chloride	91	(55 - 140)			SW846 8260B
	95	(55 - 140)	4.8	(0-20)	SW846 8260B
Carbon disulfide	98	(35 - 160)			SW846 8260B
	95	(35 - 160)	3.2	(0-20)	SW846 8260B
1,1-Dichloroethane	96	(70 - 135)			SW846 8260B
	95	(70 - 135)	0.38	(0-20)	SW846 8260B
2-Butanone	89	(30 - 150)			SW846 8260B
	94	(30 - 150)	5.9	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	98	(85 - 115)			SW846 8260B
	98	(85 - 115)	0.15	(0-20)	SW846 8260B
Chloroform	93	(65 - 135)			SW846 8260B
	96	(65 - 135)	3.2	(0-20)	SW846 8260B
1,1,1-Trichloroethane	101	(65 - 130)			SW846 8260B
	104	(65 - 130)	3.1	(0-20)	SW846 8260B
Carbon tetrachloride	103	(65 - 140)			SW846 8260B
	103	(65 - 140)	0.090	(0-20)	SW846 8260B
1,2-Dichloroethane	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.9	(0-20)	SW846 8260B
Benzene	99	(80 - 120)			SW846 8260B
	99	(80 - 120)	0.14	(0-20)	SW846 8260B
Trichloroethene	93	(70 - 125)			SW846 8260B
	94	(70 - 125)	1.1	(0-20)	SW846 8260B
1,2-Dichloropropane	95	(75 - 125)			SW846 8260B
	95	(75 - 125)	0.37	(0-20)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H090504 Work Order #...: MLRLL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-013 MLRLL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	98	(75 - 120)			SW846 8260B
	98	(75 - 120)	0.070	(0-20)	SW846 8260B
1,1,2-Trichloroethane	95	(75 - 125)			SW846 8260B
	100	(75 - 125)	5.0	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	105	(55 - 140)			SW846 8260B
	104	(55 - 140)	1.2	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	106	(75 - 120)	0.28	(0-20)	SW846 8260B
1,3-Dichlorobenzene	101	(75 - 125)			SW846 8260B
	102	(75 - 125)	0.78	(0-20)	SW846 8260B
1,4-Dichlorobenzene	96	(75 - 125)			SW846 8260B
	97	(75 - 125)	0.88	(0-20)	SW846 8260B
2-Hexanone	89	(55 - 130)			SW846 8260B
	88	(55 - 130)	1.3	(0-20)	SW846 8260B
4-Methyl-2-pentanone	96	(60 - 135)			SW846 8260B
	100	(60 - 135)	3.9	(0-20)	SW846 8260B
Chlorobenzene	98	(80 - 120)			SW846 8260B
	98	(80 - 120)	0.37	(0-20)	SW846 8260B
Bromoform	104	(70 - 130)			SW846 8260B
	108	(70 - 130)	3.6	(0-20)	SW846 8260B
Ethylbenzene	105	(75 - 125)			SW846 8260B
	105	(75 - 125)	0.47	(0-20)	SW846 8260B
Styrene	111	(65 - 135)			SW846 8260B
	111	(65 - 135)	0.090	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	92	(65 - 130)			SW846 8260B
	96	(65 - 130)	4.1	(0-20)	SW846 8260B
Tetrachloroethene	105	(45 - 150)			SW846 8260B
	102	(45 - 150)	3.2	(0-20)	SW846 8260B
1,2-Dichlorobenzene	98	(70 - 120)			SW846 8260B
	102	(70 - 120)	3.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
	111	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
	107	(85 - 115)
1,2-Dichloroethane-d4	97	(70 - 120)
	102	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	101	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H100000-062 Prep Batch #...: 1222062					
Uranium	105	(80 - 120)	SW846 6020A	08/10-08/11/11	MLH661AC
		Dilution Factor: 1	Analysis Time...: 22:47		
LCS Lot-Sample#: F1H100000-064 Prep Batch #...: 1222064					
Vanadium	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A2
		Dilution Factor: 1	Analysis Time...: 17:38		
Zinc	114	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A3
		Dilution Factor: 1	Analysis Time...: 17:38		
Arsenic	106	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A4
		Dilution Factor: 1	Analysis Time...: 17:38		
Silver	95	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A5
		Dilution Factor: 1	Analysis Time...: 17:38		
Aluminum	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A6
		Dilution Factor: 1	Analysis Time...: 17:38		
Barium	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A7
		Dilution Factor: 1	Analysis Time...: 17:38		
Beryllium	113	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1A8
		Dilution Factor: 1	Analysis Time...: 17:38		
Calcium	108	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1A9
		Dilution Factor: 1	Analysis Time...: 13:54		
Cadmium	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CA
		Dilution Factor: 1	Analysis Time...: 17:38		
Cobalt	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CC
		Dilution Factor: 1	Analysis Time...: 17:38		
Chromium	105	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CD
		Dilution Factor: 1	Analysis Time...: 17:38		
Copper	103	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CE
		Dilution Factor: 1	Analysis Time...: 17:38		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Iron	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CF
		Dilution Factor: 1	Analysis Time...: 17:38		
Magnesium	101	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CG
		Dilution Factor: 1	Analysis Time...: 12:02		
Manganese	108	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CH
		Dilution Factor: 1	Analysis Time...: 17:38		
Sodium	109	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CJ
		Dilution Factor: 1	Analysis Time...: 12:02		
Nickel	104	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CK
		Dilution Factor: 1	Analysis Time...: 17:38		
Lead	101	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1CL
		Dilution Factor: 1	Analysis Time...: 19:49		
Antimony	102	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CM
		Dilution Factor: 1	Analysis Time...: 17:38		
Selenium	102	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1CN
		Dilution Factor: 1	Analysis Time...: 19:49		
Strontium	105	(80 - 120)	SW846 6010C	08/10-08/16/11	MLH7A1CP
		Dilution Factor: 1	Analysis Time...: 13:54		
Thallium	103	(80 - 120)	SW846 6010C	08/10-08/12/11	MLH7A1CQ
		Dilution Factor: 1	Analysis Time...: 17:38		

NOTE (S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090504

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	91	(90 - 110)	Work Order #: MLRP81AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-130 08/09/11 Analysis Time...: 02:37	1224130
Fluoride	99	(90 - 110)	Work Order #: MLRQA1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-131 08/09/11 Analysis Time...: 02:37	1224131
Nitrate	97	(90 - 110)	Work Order #: MLRQC1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-132 08/09/11 Analysis Time...: 02:37	1224132
Nitrite	99	(90 - 110)	Work Order #: MLRQD1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-133 08/09/11 Analysis Time...: 02:37	1224133
Phosphate as P, Ortho	97	(90 - 110)	Work Order #: MLRQE1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-134 08/09/11 Analysis Time...: 02:37	1224134
Sulfate	94	(90 - 110)	Work Order #: MLRQF1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-135 08/09/11 Analysis Time...: 02:37	1224135
Total Alkalinity	92	(90 - 110)	Work Order #: MLRFM1AC MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H170000-090 08/17/11 Analysis Time...: 00:00	1229090
Total Alkalinity	93	(90 - 110)	Work Order #: MLRFM1AD MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H170000-090 08/17/11 Analysis Time...: 00:00	1229090
Total Dissolved Solids	97	(90 - 113)	Work Order #: MLQ961AC MCAWW 160.1 Dilution Factor: 1	LCS Lot-Sample#: F1H150000-174 08/15-08/16/11 Analysis Time...: 00:00	1227174

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H090496-005 Prep Batch #...: 1222062						
Uranium	106	(80 - 120)		SW846 6020A	08/10-08/11/11	MLHLR1CH
	106	(80 - 120)	0.30 (0-20)	SW846 6020A	08/10-08/11/11	MLHLR1CJ
			Dilution Factor: 1			
			Analysis Time...: 23:21			
MS Lot-Sample #: F1H090496-005 Prep Batch #...: 1222064						
Aluminum	103	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CQ
	103	(80 - 120)	0.16 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CR
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Antimony	103	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1A4
	108	(80 - 120)	4.8 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1A5
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Arsenic	105	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CL
	105	(80 - 120)	0.04 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CM
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Barium	104	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CT
	105	(80 - 120)	0.57 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CU
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Beryllium	108	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CV
	109	(80 - 120)	0.74 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CW
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Cadmium	104	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1C1
	103	(80 - 120)	0.65 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C2
			Dilution Factor: 1			
			Analysis Time...: 17:50			
Calcium	96	(80 - 120)		SW846 6010C	08/10-08/16/11	MLHLR1CX
	122 N	(80 - 120)	3.1 (0-20)	SW846 6010C	08/10-08/16/11	MLHLR1C0
			Dilution Factor: 5			
			Analysis Time...: 14:07			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	100	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1C5
	100	(80 - 120)	0.11 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C6
Dilution Factor: 1						
Analysis Time...: 17:50						
Cobalt	98	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1C3
	99	(80 - 120)	0.16 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C4
Dilution Factor: 1						
Analysis Time...: 17:50						
Copper	100	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1C7
	100	(80 - 120)	0.65 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1C8
Dilution Factor: 1						
Analysis Time...: 17:50						
Iron	103	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1C9
	103	(80 - 120)	0.24 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DA
Dilution Factor: 1						
Analysis Time...: 17:50						
Lead	99	(80 - 120)		SW846 6010C	08/10-08/16/11	MLHLR1DL
	100	(80 - 120)	0.14 (0-20)	SW846 6010C	08/10-08/16/11	MLHLR1DM
Dilution Factor: 1						
Analysis Time...: 20:02						
Magnesium	99	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1DC
	98	(80 - 120)	0.17 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DD
Dilution Factor: 1						
Analysis Time...: 12:15						
Manganese	102	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1DE
	103	(80 - 120)	0.17 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DF
Dilution Factor: 1						
Analysis Time...: 17:50						
Nickel	98	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1DJ
	99	(80 - 120)	0.56 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DK
Dilution Factor: 1						
Analysis Time...: 17:50						
Selenium	104	(80 - 120)		SW846 6010C	08/10-08/16/11	MLHLR1A6
	104	(80 - 120)	0.18 (0-20)	SW846 6010C	08/10-08/16/11	MLHLR1A7
Dilution Factor: 1						
Analysis Time...: 20:02						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H090504

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	91	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CN
	92	(80 - 120)	1.3 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CP
		Dilution Factor: 1				
		Analysis Time...: 17:50				
Sodium	101	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1DG
	99	(80 - 120)	0.59 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1DH
		Dilution Factor: 1				
		Analysis Time...: 12:15				
Strontium	109	(80 - 120)		SW846 6010C	08/10-08/16/11	MLHLR1A8
	115	(80 - 120)	3.5 (0-20)	SW846 6010C	08/10-08/16/11	MLHLR1A9
		Dilution Factor: 5				
		Analysis Time...: 14:07				
Thallium	99	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CA
	99	(80 - 120)	0.02 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CC
		Dilution Factor: 1				
		Analysis Time...: 17:50				
Vanadium	102	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CD
	102	(80 - 120)	0.0 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CE
		Dilution Factor: 1				
		Analysis Time...: 17:50				
Zinc	112	(80 - 120)		SW846 6010C	08/10-08/12/11	MLHLR1CF
	111	(80 - 120)	0.85 (0-20)	SW846 6010C	08/10-08/12/11	MLHLR1CG
		Dilution Factor: 1				
		Analysis Time...: 17:50				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090504

Matrix.....: WATER

Date Sampled...: 08/08/11 10:35 Date Received...: 08/09/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	100	Work Order #...: MLHNA1CG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090504-004 08/09/11	1224130
		Dilution Factor: 100		Analysis Time...: 03:34	
Fluoride	100	Work Order #...: MLHNA1CJ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090504-004 08/09/11	1224131
		Dilution Factor: 1		Analysis Time...: 03:05	
Nitrate	98	Work Order #...: MLHNA1CL (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090504-004 08/09/11	1224132
		Dilution Factor: 1		Analysis Time...: 03:05	
Nitrite	68 N	Work Order #...: MLHNA1CN (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090504-004 08/09/11	1224133
		Dilution Factor: 10		Analysis Time...: 03:20	
Phosphate as P, Ortho	80 N	Work Order #...: MLHNA1CQ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090504-004 08/09/11	1224134
		Dilution Factor: 1		Analysis Time...: 03:05	
Sulfate	94	Work Order #...: MLHNA1CT (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H090504-004 08/09/11	1224135
		Dilution Factor: 10		Analysis Time...: 03:20	
Total Alkalinity	98	Work Order #...: MLHLC1EA (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H090496-002 08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090504

Work Order #...: MLHNA-SMP
MLHNA-DUP

Matrix.....: WATER

Date Sampled...: 08/08/11 10:35 Date Received...: 08/09/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	298	296	mg/L	0.75	(0-20)	SD Lot-Sample #: F1H090504-004 MCAWW 300.0A	08/09/11	1224130
			Dilution Factor: 100			Analysis Time...: 03:34		
Fluoride	0.83	0.88	mg/L	6.1	(0-20)	SD Lot-Sample #: F1H090504-004 MCAWW 300.0A	08/09/11	1224131
			Dilution Factor: 1			Analysis Time...: 03:05		
Nitrate	0.044	0.043	mg/L	3.1	(0-20)	SD Lot-Sample #: F1H090504-004 MCAWW 300.0A	08/09/11	1224132
			Dilution Factor: 1			Analysis Time...: 03:05		
Nitrite	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H090504-004 MCAWW 300.0A	08/09/11	1224133
			Dilution Factor: 10			Analysis Time...: 03:20		
Phosphate as P, Ortho	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H090504-004 MCAWW 300.0A	08/09/11	1224134
			Dilution Factor: 1			Analysis Time...: 03:05		
Sulfate	51.3	50.6	mg/L	1.3	(0-20)	SD Lot-Sample #: F1H090504-004 MCAWW 300.0A	08/09/11	1224135
			Dilution Factor: 10			Analysis Time...: 03:20		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090504

Work Order #...: MLHM6-SMP
MLHM6-DUP

Matrix.....: WATER

Date Sampled...: 08/08/11 09:10 Date Received...: 08/09/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	626	625	mg/L	0.16	(0-0.0)	MCAWW 160.1	08/15-08/16/11	1227174

SD Lot-Sample #: F1H090504-001
Dilution Factor: 1 Analysis Time...: 00:00

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H090504

Work Order #...: MLHLC-SMP
MLHLC-DUP

Matrix.....: WATER

Date Sampled...: 08/05/11 09:30 Date Received...: 08/06/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	252	252	mg/L	0.0	(0-20)	SD Lot-Sample #: F1H090496-002 MCAWW 310.1	08/17/11	1229090
			Dilution Factor: 1			Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001

Radiochemistry

Lab Sample ID: F1H090504-001

Date Collected: 08/08/11 0910

Work Order: MLHM6

Date Received: 08/09/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 76
Uranium 234	4.13		0.51	0.10	0.06	08/17/11	08/17/11
Uranium 235/236	0.26		0.11	0.10	0.05	08/17/11	08/17/11
Uranium 238	4.56		0.55	0.10	0.02	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001

Radiochemistry

Lab Sample ID: F1H090504-002
Work Order: MLHM7
Matrix: WATER

Date Collected: 08/08/11 1040
Date Received: 08/09/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 76
Uranium 234	6.07		0.69	0.10	0.06	08/17/11	08/17/11
Uranium 235/236	0.32		0.12	0.10	0.05	08/17/11	08/17/11
Uranium 238	6.48		0.73	0.10	0.04	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

60 of 82

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001

Radiochemistry

Lab Sample ID: F1H090504-003

Date Collected: 08/08/11 1140

Work Order: MLHM9

Date Received: 08/09/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 37
Uranium 234	0.37		0.17	0.10	0.10	08/17/11	08/17/11
Uranium 235/236	-0.006	U	0.012	0.100	0.11	08/17/11	08/17/11
Uranium 238	0.24		0.14	0.10	0.09	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1H090504** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

Radiochemistry

Lab Sample ID: F1H090504-004
 Work Order: MLHNA
 Matrix: WATER

Date Collected: 08/08/11 1035
 Date Received: 08/09/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R-MOD				pCi/L		Batch # 1229042	Yld % 73
Uranium 234	13.2		1.3	0.1	0.06	08/17/11	08/17/11
Uranium 235/236	0.72		0.20	0.10	0.03	08/17/11	08/17/11
Uranium 238	13.2		1.3	0.1	0.05	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

62 of 82

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

Radiochemistry

Lab Sample ID: F1H090504-005
 Work Order: MLHNC
 Matrix: WATER

Date Collected: 08/08/11 1130
 Date Received: 08/09/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1229042		Yld % 75
Uranium 234	2.09		0.33	0.10	0.06	08/17/11	08/17/11
Uranium 235/236	0.028	U	0.040	0.100	0.059	08/17/11	08/17/11
Uranium 238	1.59		0.27	0.10	0.05	08/17/11	08/17/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1H090504** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW110001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090504-006
 Work Order: MLHNE
 Matrix: WATER

Date Collected: 08/08/11 0910
 Date Received: 08/09/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 69
Uranium 234	4.75		0.58	0.10	0.05	08/17/11	08/17/11
Uranium 235/236	0.22		0.11	0.10	0.05	08/17/11	08/17/11
Uranium 238	4.65		0.58	0.10	0.05	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

64 of 82

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW090001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090504-007

Date Collected: 08/08/11 1040

Work Order: MLHNF

Date Received: 08/09/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso. URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 75
Uranium 234	6.26		0.72	0.10	0.06	08/17/11	08/17/11
Uranium 235/236	0.28		0.12	0.10	0.03	08/17/11	08/17/11
Uranium 238	6.70		0.76	0.10	0.03	08/17/11	08/17/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW080001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H090504-008

Date Collected: 08/08/11 1140

Work Order: MLHNG

Date Received: 08/09/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 71
Uranium 234	0.40		0.13	0.10	0.05	08/17/11	08/17/11
Uranium 235/236	0.022	U	0.035	0.100	0.056	08/17/11	08/17/11
Uranium 238	0.34		0.12	0.10	0.03	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 01

Radiochemistry

Lab Sample ID: F1H090504-009
Work Order: MLHNNH
Matrix: WATER

Date Collected: 08/08/11 1035
Date Received: 08/09/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R-MOD				pCi/L		Batch # 1229042	Yld % 55
Uranium 234	15.4		1.6	0.1	0.07	08/17/11	08/17/11
Uranium 235/236	0.67		0.21	0.10	0.07	08/17/11	08/17/11
Uranium 238	15.3		1.6	0.1	0.07	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

67 of 82

Shaw Environmental & Infrastructure Inc

Client Sample ID: SEEP 02

Radiochemistry

Lab Sample ID: F1H090504-010
Work Order: MLH NJ
Matrix: WATER

Date Collected: 08/08/11 1130
Date Received: 08/09/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 58
Uranium 234	1.89		0.34	0.10	0.05	08/17/11	08/17/11
Uranium 235/236	0.088		0.072	0.100	0.040	08/17/11	08/17/11
Uranium 238	2.13		0.36	0.10	0.05	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H090504

68 of 82

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H090504
Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Prep Date	Lab Sample ID
			(2 σ+/-)				Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1229042	Yld %	83 F1H170000-042B
Uranium 234	-0.0060	U	0.0070	0.100	0.047	08/17/11	08/17/11
Uranium 235/236	-0.0025	U	0.0050	0.100	0.046	08/17/11	08/17/11
Uranium 238	0.020	U	0.028	0.100	0.043	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H090504
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID		
					% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H170000-042C
Uranium 234	3.27	3.26	0.42	0.04	82	100	(76 - 136)
Uranium 238	3.39	3.50	0.44	0.02	82	103	(76 - 134)
Batch #:		1229042		Analysis Date:		08/17/11	

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H090504
 Matrix: WATER

Date Sampled: 08/05/11
 Date Received: 08/06/11

Parameter	SAMPLE Result	Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result	Total Uncert. (2σ+/-)	% Yld	QC Sample ID Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H090496-005
Uranium 234	21.6	2.1	64	23.1	2.2	62	7 %RPD
Uranium 235/236	1.05	0.26	64	1.22	0.28	62	15 %RPD
Uranium 238	21.2	2.0	64	22.7	2.2	62	7 %RPD
Batch #:		1229042 (Sample)		1229042 (Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H090504

71 of 82

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R251,2-9,METS,V

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 10

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A02MW110001			2011-08-08 / 910	MLHM6	WATER
SAMPLE COMMENTS:						
MN IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX IS	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Project Manager: LMF

Quote #: 89251

SDG:

Storage Loc: R251,2-9,METS,V

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 10

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity,	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
		W		Total		PERFORMED / DIRECT				LOC	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A02MW090001			2011-08-08 / 1040	MLHM7	WATER

SAMPLE COMMENTS:

BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK	06	TIC: N
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06	
XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK	06	
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK	06	
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	DO	MCAW	300.0A	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R251,2-9,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 10

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A02MW080001			2011-08-08 / 1140	MLHM9	WATER
<u>SAMPLE COMMENTS:</u>						
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET

F1H090504

CLIENT ANALYSIS SUMMARY

Storage Loc: R251,2-9,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 8020 for total uranium instead of 200.8

XX	GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	SEEP 01			2011-08-08 / 1035	MLHNA	WATER

SAMPLE COMMENTS:

CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK LOC	06
XX	CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

TIC: N

F1H090504

CLIENT ANALYSIS SUMMARY

Storage Loc: R251,2-9,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 10

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	SEEP 02			2011-08-08 / 1130	MLHNC	WATER

SAMPLE COMMENTS:

CR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK LOC	06	

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R251,2-9,METS,V

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS In LOT: 10

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A02MW110001 DISSOLVED			2011-08-08 / 910	MLHNE	WATER
SAMPLE COMMENTS:						
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	A02MW090001 DISSOLVED			2011-08-08 / 1040	MLHNF	WATER
SAMPLE COMMENTS:						
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R251,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW848	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	A02MW080001 DISSOLVED			2011-08-08 / 1140	MLHNG	WATER

SAMPLE COMMENTS:

MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW848	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R251,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 9 SEEP 01 2011-08-08 / 1035 MLHNNH WATER

SAMPLE COMMENTS:

BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H090504

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R251,METS

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-09

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-17

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-19

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 10

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
----	----	-----	---------------	------------------------------------	----	---	----	-------------------	---------	------------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	SEEP 02			2011-08-08 / 1130	MLHNJ	WATER

SAMPLE COMMENTS:

MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

715 Rider Trail North

th City, MO 63045

me 314.298.8566 fax 314.298.8757

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]

	Company: Shaw E & I. Inc.	Date/Time: 8/8/11 1650	R
	Company: BFL0	Date/Time: 08-08-11 17:15	R
	Company: BFL0	Date/Time: 8/8/11 1730	R

es America St. Louis

Lot #(s): F1H090504

TestAmerica St. Louis

CUR Form #: 326

CONDITION UPON RECEIPT FORM

Client: Shaw

Quote No: 89251

COC/RFA No: 004

Initiated By: AB

Date: 8-9-11

Time: 0920

Shipping Information

Shipper: RedEx UPS DHL Courier Client Other: _____

Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 02583105
2. 3127
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 2
2. ambient
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. Y <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y <u>N</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>M</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Received bottles for Filtered Metals, Total-U, + Iso-U not on COC. 1 log per LF

Corrective Action:

Client Contact Name: _____

Informed by: _____

Sample(s) processed "as is"

Sample(s) on hold until: _____

If released, notify:

Project Management Review: _____

Date: 8/10/11

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.


TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

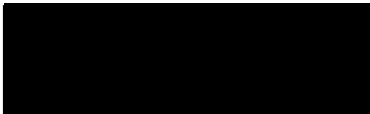
PROJECT NO. 140415

Guteryl Steel

Lot #: F1H100419


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

August 24, 2011

Case Narrative

LOT NUMBER: F1H100419

This report contains the analytical results for the six samples received under chain of custody by TestAmerica in St. Louis on August 10, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1230013**

There was insufficient sample volume to perform MS/MSD analysis. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F1H100419 (1): MW705D0001

F1H100419 (2): MW705DD0001

F1H100419 (3): A04DMW711D0001

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1223088**

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

The MSD recovery for calcium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Strontium was observed in the CCB above 3X the MDL. Associated samples which are either non-detect for the contaminant or exhibit concentrations greater than ten (10) times the concentrations observed in the CCB, do not require re-analysis.

Affected Samples:

F1H100419 (1): MW705D0001

F1H100419 (2): MW705DD0001

F1H100419 (3): A04DMW711D0001

F1H100419 (4): MW705D0001 DISSOLVED

F1H100419 (5): MW705DD0001 DISSOLVED

F1H100419 (6): A04DMW711D0001 DISSOLVED

Chloride (MCAWW 300.0A)**Batch: 1224136**

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H100419 (1): MW705D0001

F1H100419 (2): MW705DD0001

F1H100419 (3): A04DMW711D0001

Sulfate (MCAWW 300.0A)**Batch: 1224141**

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H100419 (1): MW705D0001
F1H100419 (2): MW705DD0001
F1H100419 (3): A04DMW711D0001

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1224140**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H100419 (1): MW705D0001
F1H100419 (2): MW705DD0001
F1H100419 (3): A04DMW711D0001

Nitrite as N (MCAWW 300.0A)**Batch: 1227147**

The following samples were reported ND at dilution for Nitrite, due to interference with Chloride in the undiluted runs. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Samples F1H100419-001 and 002 were analyzed within 48 hour hold for Nitrite on 8/10/11, but due to a failed bracketing CCV, they were re-analyzed for Nitrite in batch 1227147 on 8/11/11, out of 48 hour hold.

Affected Samples:

F1H100419 (1): MW705D0001
F1H100419 (2): MW705DD0001
F1H100419 (3): A04DMW711D0001

Sample F1H100419-003 was analyzed upon receipt, within 48 hour hold, on 8/10/11. However, due to a failed bracketing CCV for Nitrite, this sample required re-analysis on 8/11/11. Due to mis-injection in that run, this sample was finally re-analyzed on 8/12/11 for Nitrite in batch 1224151. Results are reported from the latter run, out of 48 hour hold.

Affected Samples:

F1H100419 (3): A04DMW711D0001

Total Dissolved Solids (MCAWW 160.1)**Batch: 1228283**

The sample was analyzed at a dilution based on high concentrations of target analytes. The reporting limit has been adjusted accordingly.

Affected Samples:

F1H100419 (2): MW705DD0001

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H100419

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

- EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F1H100419**

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
MLH8E	001	MW705D0001	08/09/11	08:35
MLH8K	002	MW705DD0001	08/09/11	09:30
MLH8M	003	A04DMW711D0001	08/09/11	14:45
MLH8P	004	MW705D0001 DISSOLVED	08/09/11	08:35
MLH8V	005	MW705DD0001 DISSOLVED	08/09/11	09:30
MLH8W	006	A04DMW711D0001 DISSOLVED	08/09/11	14:45

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001

GC/MS Volatiles

Lot-Sample #...: F1H100419-001 Work Order #...: MLH8E1AC Matrix.....: WATER
 Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 11:35
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	6.3	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	1.3 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.13 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.61 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.13 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001

GC/MS Volatiles

Lot-Sample #...: F1H100419-001 Work Order #...: MLH8E1AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
1,2-Dichloroethane-d4	107	(70 - 120)
4-Bromofluorobenzene	105	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001

TOTAL Metals

Lot-Sample #...: F1H100419-001

Matrix.....: WATER

Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1223087						
Uranium	0.89 J	1.0	ug/L	SW846 6020A	08/11-08/13/11	MLH8E1A5
		Dilution Factor: 1		Analysis Time...: 04:21		
Prep Batch #...: 1223088						
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AF
		Dilution Factor: 1		Analysis Time...: 20:06		
Aluminum	80.3 J	200	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AG
		Dilution Factor: 1		Analysis Time...: 20:06		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AE
		Dilution Factor: 1		Analysis Time...: 20:06		
Barium	25.8 J	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AH
		Dilution Factor: 1		Analysis Time...: 20:06		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AJ
		Dilution Factor: 1		Analysis Time...: 20:06		
Calcium	125000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8E1AK
		Dilution Factor: 5		Analysis Time...: 16:19		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AL
		Dilution Factor: 1		Analysis Time...: 20:06		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AM
		Dilution Factor: 1		Analysis Time...: 20:06		
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AN
		Dilution Factor: 1		Analysis Time...: 20:06		
Copper	ND	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AP
		Dilution Factor: 1		Analysis Time...: 20:06		
Iron	48.2 J	100	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AQ
		Dilution Factor: 1		Analysis Time...: 20:06		
Magnesium	31000	1000	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AR
		Dilution Factor: 1		Analysis Time...: 14:27		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001

TOTAL Metals

Lot-Sample #...: F1H100419-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	9.5 J	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AT
		Dilution Factor: 1		Analysis Time...: 20:06		
Sodium	174000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8E1AU
		Dilution Factor: 5		Analysis Time...: 16:19		
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AV
		Dilution Factor: 1		Analysis Time...: 20:06		
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8E1AW
		Dilution Factor: 1		Analysis Time...: 22:17		
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1AX
		Dilution Factor: 1		Analysis Time...: 20:06		
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8E1A0
		Dilution Factor: 1		Analysis Time...: 22:17		
Strontium	1680	25.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8E1A1
		Dilution Factor: 5		Analysis Time...: 16:19		
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1A2
		Dilution Factor: 1		Analysis Time...: 20:06		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1A3
		Dilution Factor: 1		Analysis Time...: 20:06		
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8E1A4
		Dilution Factor: 1		Analysis Time...: 20:06		

NOTE(S):

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001

General Chemistry

Lot-Sample #...: F1H100419-001 Work Order #...: MLH8E Matrix.....: WATER
 Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	108	20.0	mg/L	MCAWW 300.0A	08/10/11	1224136
		Dilution Factor: 100		Analysis Time...: 05:20		
Fluoride	0.44	0.10	mg/L	MCAWW 300.0A	08/10/11	1224137
		Dilution Factor: 1		Analysis Time...: 04:51		
Nitrate	0.012 B	0.020	mg/L	MCAWW 300.0A	08/10/11	1224138
		Dilution Factor: 1		Analysis Time...: 04:51		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/12/11	1227147
		Dilution Factor: 10		Analysis Time...: 03:14		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/10/11	1224140
		Dilution Factor: 1		Analysis Time...: 04:51		
Sulfate	748	50.0	mg/L	MCAWW 300.0A	08/10/11	1224141
		Dilution Factor: 100		Analysis Time...: 05:20		
Total Alkalinity	184	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1550	10.0	mg/L	MCAWW 160.1	08/16-08/18/11	1228283
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001

GC/MS Volatiles

Lot-Sample #....: F1H100419-002 Work Order #....: MLH8K1AN Matrix.....: WATER
 Date Sampled....: 08/09/11 09:30 Date Received...: 08/10/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #....: 1230013 Analysis Time...: 12:02
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	0.50 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	4.4	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.71 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	0.76 J	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.82 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	2.1	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	4.2 J	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001

GC/MS Volatiles

Lot-Sample #....: F1H100419-002 Work Order #....: MLH8K1AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	111	(85 - 120)
Dibromofluoromethane	107	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001

TOTAL Metals

Lot-Sample #...: F1H100419-002

Matrix.....: WATER

Date Sampled...: 08/09/11 09:30 Date Received...: 08/10/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1223087						
Uranium	1.7	1.0	ug/L	SW846 6020A	08/11-08/13/11	MLH8K1AG
		Dilution Factor: 1		Analysis Time...: 04:49		
Prep Batch #...: 1223088						
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AR
		Dilution Factor: 1		Analysis Time...: 20:31		
Aluminum	ND	200	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AT
		Dilution Factor: 1		Analysis Time...: 20:31		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AQ
		Dilution Factor: 1		Analysis Time...: 20:31		
Barium	24.7 J	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AU
		Dilution Factor: 1		Analysis Time...: 20:31		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AV
		Dilution Factor: 1		Analysis Time...: 20:31		
Calcium	531000	20000	ug/L	SW846 6010C	08/11-08/17/11	MLH8K1AW
		Dilution Factor: 20		Analysis Time...: 09:02		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AX
		Dilution Factor: 1		Analysis Time...: 20:31		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A0
		Dilution Factor: 1		Analysis Time...: 20:31		
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A1
		Dilution Factor: 1		Analysis Time...: 20:31		
Copper	ND	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A2
		Dilution Factor: 1		Analysis Time...: 20:31		
Iron	36.1 J	100	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A3
		Dilution Factor: 1		Analysis Time...: 20:31		
Magnesium	287000	10000	ug/L	SW846 6010C	08/11-08/16/11	MLH8K1A4
		Dilution Factor: 10		Analysis Time...: 16:44		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001

TOTAL Metals

Lot-Sample #...: F1H100419-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	14.5 J	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A5
		Dilution Factor: 1		Analysis Time...: 20:31		
Sodium	983000	10000	ug/L	SW846 6010C	08/11-08/16/11	MLH8K1A6
		Dilution Factor: 10		Analysis Time...: 16:44		
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A7
		Dilution Factor: 1		Analysis Time...: 20:31		
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8K1A8
		Dilution Factor: 1		Analysis Time...: 22:43		
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1A9
		Dilution Factor: 1		Analysis Time...: 20:31		
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8K1AA
		Dilution Factor: 1		Analysis Time...: 22:43		
Strontium	13500	100	ug/L	SW846 6010C	08/11-08/17/11	MLH8K1AC
		Dilution Factor: 20		Analysis Time...: 09:02		
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AD
		Dilution Factor: 1		Analysis Time...: 20:31		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AE
		Dilution Factor: 1		Analysis Time...: 20:31		
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8K1AF
		Dilution Factor: 1		Analysis Time...: 20:31		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001

General Chemistry

Lot-Sample #...: F1H100419-002 Work Order #...: MLH8K Matrix.....: WATER
 Date Sampled...: 08/09/11 09:30 Date Received...: 08/10/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	2180	200	mg/L	MCAWW 300.0A	08/12/11	1227150
		Dilution Factor: 1000		Analysis Time...: 04:41		
Fluoride	ND	0.10	mg/L	MCAWW 300.0A	08/10/11	1224137
		Dilution Factor: 1		Analysis Time...: 07:01		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/10/11	1224138
		Dilution Factor: 1		Analysis Time...: 07:01		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/12/11	1227147
		Dilution Factor: 10		Analysis Time...: 04:26		
Phosphate as P, Ortho	0.13 B	0.50	mg/L	MCAWW 300.0A	08/10/11	1224140
		Dilution Factor: 1		Analysis Time...: 07:01		
Sulfate	1850	50.0	mg/L	MCAWW 300.0A	08/10/11	1224141
		Dilution Factor: 100		Analysis Time...: 07:58		
Total Alkalinity	159	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	6720	100	mg/L	MCAWW 160.1	08/16-08/18/11	1228283
		Dilution Factor: 10		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001

GC/MS Volatiles

Lot-Sample #....: F1H100419-003 Work Order #....: MLH8M1AN Matrix.....: WATER
 Date Sampled....: 08/09/11 14:45 Date Received...: 08/10/11
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #....: 1230013 Analysis Time...: 12:28
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	12	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.62 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.8	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	0.31 J	1.0	ug/L
1,2-Dichloroethene	0.77 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.69 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.12 J	1.0	ug/L
1,1,1-Trichloroethane	0.74 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.83 J	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001

GC/MS Volatiles

Lot-Sample #...: F1H100419-003 Work Order #...: MLH8M1AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	107	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
4-Bromofluorobenzene	117	(75 - 120)

NOTE (S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001

TOTAL Metals

Lot-Sample #...: F1H100419-003

Matrix.....: WATER

Date Sampled...: 08/09/11 14:45 Date Received...: 08/10/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1223087						
Uranium	9.0	1.0	ug/L	SW846 6020A	08/11-08/13/11	MLH8M1AG
		Dilution Factor: 1		Analysis Time...: 05:04		
Prep Batch #...: 1223088						
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AR
		Dilution Factor: 1		Analysis Time...: 20:44		
Aluminum	ND	200	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AT
		Dilution Factor: 1		Analysis Time...: 20:44		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AQ
		Dilution Factor: 1		Analysis Time...: 20:44		
Barium	53.3	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AU
		Dilution Factor: 1		Analysis Time...: 20:44		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AV
		Dilution Factor: 1		Analysis Time...: 20:44		
Calcium	120000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8M1AW
		Dilution Factor: 5		Analysis Time...: 16:57		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AX
		Dilution Factor: 1		Analysis Time...: 20:44		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A0
		Dilution Factor: 1		Analysis Time...: 20:44		
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A1
		Dilution Factor: 1		Analysis Time...: 20:44		
Copper	121	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A2
		Dilution Factor: 1		Analysis Time...: 20:44		
Iron	93.2 J	100	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A3
		Dilution Factor: 1		Analysis Time...: 20:44		
Magnesium	39100	1000	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A4
		Dilution Factor: 1		Analysis Time...: 15:05		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001

TOTAL Metals

Lot-Sample #...: F1H100419-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	55.7	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A5
		Dilution Factor: 1		Analysis Time...: 20:44		
Sodium	165000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8M1A6
		Dilution Factor: 5		Analysis Time...: 16:57		
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A7
		Dilution Factor: 1		Analysis Time...: 20:44		
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8M1A8
		Dilution Factor: 1		Analysis Time...: 22:56		
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1A9
		Dilution Factor: 1		Analysis Time...: 20:44		
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8M1AA
		Dilution Factor: 1		Analysis Time...: 22:56		
Strontium	615	25.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8M1AC
		Dilution Factor: 5		Analysis Time...: 16:57		
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AD
		Dilution Factor: 1		Analysis Time...: 20:44		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AE
		Dilution Factor: 1		Analysis Time...: 20:44		
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8M1AF
		Dilution Factor: 1		Analysis Time...: 20:44		

NOTE(S):

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001

General Chemistry

Lot-Sample #...: F1H100419-003 Work Order #...: MLH8M Matrix.....: WATER
 Date Sampled...: 08/09/11 14:45 Date Received...: 08/10/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	199	20.0	mg/L	MCAWW 300.0A	08/10/11	1224136
		Dilution Factor: 100		Analysis Time...: 08:41		
Fluoride	0.62	0.10	mg/L	MCAWW 300.0A	08/10/11	1224137
		Dilution Factor: 1		Analysis Time...: 08:13		
Nitrate	0.0086 B	0.020	mg/L	MCAWW 300.0A	08/10/11	1224138
		Dilution Factor: 1		Analysis Time...: 08:13		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 10		Analysis Time...: 11:32		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/10/11	1224140
		Dilution Factor: 1		Analysis Time...: 08:13		
Sulfate	150	5.0	mg/L	MCAWW 300.0A	08/10/11	1224141
		Dilution Factor: 10		Analysis Time...: 08:27		
Total Alkalinity	302	5.0	mg/L	MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	936	10.0	mg/L	MCAWW 160.1	08/16-08/18/11	1228283
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H100419-004

Matrix.....: WATER

Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1223087						
Uranium	2.8	1.0	ug/L	SW846 6020A	08/11-08/13/11	MLH8P1A2
		Dilution Factor: 1		Analysis Time...: 05:11		
Prep Batch #...: 1223088						
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AC
		Dilution Factor: 1		Analysis Time...: 20:51		
Aluminum	ND	200	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AD
		Dilution Factor: 1		Analysis Time...: 20:51		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AA
		Dilution Factor: 1		Analysis Time...: 20:51		
Barium	26.9 J	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AE
		Dilution Factor: 1		Analysis Time...: 20:51		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AF
		Dilution Factor: 1		Analysis Time...: 20:51		
Calcium	94200	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8P1AG
		Dilution Factor: 5		Analysis Time...: 17:03		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AH
		Dilution Factor: 1		Analysis Time...: 20:51		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AJ
		Dilution Factor: 1		Analysis Time...: 20:51		
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AK
		Dilution Factor: 1		Analysis Time...: 20:51		
Copper	ND	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AL
		Dilution Factor: 1		Analysis Time...: 20:51		
Iron	ND	100	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AM
		Dilution Factor: 1		Analysis Time...: 20:51		
Magnesium	35200	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8P1AN
		Dilution Factor: 5		Analysis Time...: 17:03		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H100419-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	20.6	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AP
		Dilution Factor: 1		Analysis Time...: 20:51		
Sodium	194000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8P1AQ
		Dilution Factor: 5		Analysis Time...: 17:03		
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AR
		Dilution Factor: 1		Analysis Time...: 20:51		
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8P1AT
		Dilution Factor: 1		Analysis Time...: 23:02		
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AU
		Dilution Factor: 1		Analysis Time...: 20:51		
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8P1AV
		Dilution Factor: 1		Analysis Time...: 23:02		
Strontium	1310	25.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8P1AW
		Dilution Factor: 5		Analysis Time...: 17:03		
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1AX
		Dilution Factor: 1		Analysis Time...: 20:51		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1A0
		Dilution Factor: 1		Analysis Time...: 20:51		
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8P1A1
		Dilution Factor: 1		Analysis Time...: 20:51		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H100419-005

Matrix.....: WATER

Date Sampled...: 08/09/11 09:30 Date Received...: 08/10/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1223087						
Uranium	0.37 J	1.0	ug/L	SW846 6020A	08/11-08/15/11	MLH8V1AD
		Dilution Factor: 1		Analysis Time...: 23:52		
Prep Batch #...: 1223088						
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AG
		Dilution Factor: 1		Analysis Time...: 21:10		
Aluminum	ND	200	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AH
		Dilution Factor: 1		Analysis Time...: 21:10		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AF
		Dilution Factor: 1		Analysis Time...: 21:10		
Barium	23.9 J	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AJ
		Dilution Factor: 1		Analysis Time...: 21:10		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AK
		Dilution Factor: 1		Analysis Time...: 21:10		
Calcium	372000	10000	ug/L	SW846 6010C	08/11-08/16/11	MLH8V1AL
		Dilution Factor: 10		Analysis Time...: 17:22		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AM
		Dilution Factor: 1		Analysis Time...: 21:10		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AN
		Dilution Factor: 1		Analysis Time...: 21:10		
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AP
		Dilution Factor: 1		Analysis Time...: 21:10		
Copper	ND	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AQ
		Dilution Factor: 1		Analysis Time...: 21:10		
Iron	ND	100	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AR
		Dilution Factor: 1		Analysis Time...: 21:10		
Magnesium	234000	10000	ug/L	SW846 6010C	08/11-08/16/11	MLH8V1AT
		Dilution Factor: 10		Analysis Time...: 17:22		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H100419-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AU
		Dilution Factor: 1		Analysis Time...: 21:10		
Sodium	449000	10000	ug/L	SW846 6010C	08/11-08/16/11	MLH8V1AV
		Dilution Factor: 10		Analysis Time...: 17:22		
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AW
		Dilution Factor: 1		Analysis Time...: 21:10		
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8V1AX
		Dilution Factor: 1		Analysis Time...: 23:22		
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1A0
		Dilution Factor: 1		Analysis Time...: 21:10		
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8V1A1
		Dilution Factor: 1		Analysis Time...: 23:22		
Strontium	8860	50.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8V1A2
		Dilution Factor: 10		Analysis Time...: 17:22		
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1A3
		Dilution Factor: 1		Analysis Time...: 21:10		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AA
		Dilution Factor: 1		Analysis Time...: 21:10		
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8V1AC
		Dilution Factor: 1		Analysis Time...: 21:10		

NOTE(S):

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H100419-006

Matrix.....: WATER

Date Sampled...: 08/09/11 14:45 Date Received...: 08/10/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1223087						
Uranium	7.4	1.0	ug/L	SW846 6020A	08/11-08/15/11	MLH8W1AH
		Dilution Factor: 1		Analysis Time...: 23:59		
Prep Batch #...: 1223088						
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AL
		Dilution Factor: 1		Analysis Time...: 21:17		
Aluminum	ND	200	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AM
		Dilution Factor: 1		Analysis Time...: 21:17		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AK
		Dilution Factor: 1		Analysis Time...: 21:17		
Barium	56.0	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AN
		Dilution Factor: 1		Analysis Time...: 21:17		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AP
		Dilution Factor: 1		Analysis Time...: 21:17		
Calcium	118000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8W1AQ
		Dilution Factor: 5		Analysis Time...: 17:28		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AR
		Dilution Factor: 1		Analysis Time...: 21:17		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AT
		Dilution Factor: 1		Analysis Time...: 21:17		
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AU
		Dilution Factor: 1		Analysis Time...: 21:17		
Copper	104	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AV
		Dilution Factor: 1		Analysis Time...: 21:17		
Iron	33.8 J	100	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AW
		Dilution Factor: 1		Analysis Time...: 21:17		
Magnesium	38900	1000	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AX
		Dilution Factor: 1		Analysis Time...: 15:36		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H100419-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	59.6	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1A0
		Dilution Factor: 1		Analysis Time...: 21:17		
Sodium	164000	5000	ug/L	SW846 6010C	08/11-08/16/11	MLH8W1A1
		Dilution Factor: 5		Analysis Time...: 17:28		
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1A2
		Dilution Factor: 1		Analysis Time...: 21:17		
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8W1A3
		Dilution Factor: 1		Analysis Time...: 23:28		
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AA
		Dilution Factor: 1		Analysis Time...: 21:17		
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8W1AC
		Dilution Factor: 1		Analysis Time...: 23:28		
Strontium	572	25.0	ug/L	SW846 6010C	08/11-08/16/11	MLH8W1AD
		Dilution Factor: 5		Analysis Time...: 17:28		
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AE
		Dilution Factor: 1		Analysis Time...: 21:17		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AF
		Dilution Factor: 1		Analysis Time...: 21:17		
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLH8W1AG
		Dilution Factor: 1		Analysis Time...: 21:17		

NOTE (S) :

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H100419
 MB Lot-Sample #: F1H180000-013

Work Order #...: MLRLL1AA

Matrix.....: WATER

Analysis Date...: 08/17/11
 Dilution Factor: 1

Prep Date.....: 08/17/11

Analysis Time...: 10:16

Prep Batch #...: 1230013

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	0.28 J	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	103	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H100419

Work Order #...: MLRLL1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	102	(70 - 120)		
4-Bromofluorobenzene	101	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H110000-087 Prep Batch #...: 1223087						
Uranium	ND	1.0	ug/L	SW846 6020A	08/11-08/13/11	MLJ8A1AA
		Dilution Factor: 1				
		Analysis Time...: 04:07				
MB Lot-Sample #: F1H110000-088 Prep Batch #...: 1223088						
Aluminum	ND	200	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AD
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Antimony	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AU
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AA
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Barium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AE
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AF
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AH
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Calcium	ND	1000	ug/L	SW846 6010C	08/11-08/16/11	MLJ8D1AG
		Dilution Factor: 1				
		Analysis Time...: 16:06				
Chromium	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AK
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AJ
		Dilution Factor: 1				
		Analysis Time...: 19:53				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: F1H100419

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AL
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Iron	ND	100	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AM
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Lead	ND	10.0	ug/L	SW846 6010C	08/11-08/16/11	MLJ8D1AT
		Dilution Factor: 1				
		Analysis Time...: 22:04				
Magnesium	ND	1000	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AN
		Dilution Factor: 1				
		Analysis Time...: 14:14				
Manganese	ND	15.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AP
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Nickel	ND	40.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AR
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Selenium	ND	15.0	ug/L	SW846 6010C	08/11-08/16/11	MLJ8D1AV
		Dilution Factor: 1				
		Analysis Time...: 22:04				
Silver	ND	10.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AC
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Sodium	ND	1000	ug/L	SW846 6010C	08/11-08/16/11	MLJ8D1AQ
		Dilution Factor: 1				
		Analysis Time...: 16:06				
Strontium	ND	5.0	ug/L	SW846 6010C	08/11-08/16/11	MLJ8D1AW
		Dilution Factor: 1				
		Analysis Time...: 16:06				
Thallium	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1AX
		Dilution Factor: 1				
		Analysis Time...: 19:53				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1A0
		Dilution Factor: 1				
		Analysis Time...: 19:53				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/11-08/12/11	MLJ8D1A1

Dilution Factor: 1
Analysis Time...: 19:53

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H100419

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLPPW1AA 0.20	mg/L	MB Lot-Sample #: F1H120000-136 MCAWW 300.0A	08/10/11	1224136
		Dilution Factor: 1 Analysis Time...: 04:36				
Chloride	ND	Work Order #: MLPTM1AA 0.20	mg/L	MB Lot-Sample #: F1H150000-150 MCAWW 300.0A	08/11/11	1227150
		Dilution Factor: 1 Analysis Time...: 07:04				
Fluoride	ND	Work Order #: MLPP01AA 0.10	mg/L	MB Lot-Sample #: F1H120000-137 MCAWW 300.0A	08/10/11	1224137
		Dilution Factor: 1 Analysis Time...: 04:36				
Nitrate	ND	Work Order #: MLPP21AA 0.020	mg/L	MB Lot-Sample #: F1H120000-138 MCAWW 300.0A	08/10/11	1224138
		Dilution Factor: 1 Analysis Time...: 04:36				
Nitrite	ND	Work Order #: MLPTL1AA 0.020	mg/L	MB Lot-Sample #: F1H150000-147 MCAWW 300.0A	08/11/11	1227147
		Dilution Factor: 1 Analysis Time...: 07:04				
Nitrite	ND	Work Order #: MLTCL1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-151 MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 1 Analysis Time...: 04:20				
Phosphate as P, Ortho	ND	Work Order #: MLPP71AA 0.50	mg/L	MB Lot-Sample #: F1H120000-140 MCAWW 300.0A	08/10/11	1224140
		Dilution Factor: 1 Analysis Time...: 04:36				
Sulfate	ND	Work Order #: MLPP91AA 0.50	mg/L	MB Lot-Sample #: F1H120000-141 MCAWW 300.0A	08/10/11	1224141
		Dilution Factor: 1 Analysis Time...: 04:36				
Total Alkalinity	ND	Work Order #: MLRFM1AA 5.0	mg/L	MB Lot-Sample #: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1 Analysis Time...: 00:00				

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H100419

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Dissolved Solids	ND	10.0	mg/L	MCAWW 160.1	08/16-08/18/11	1228283
Work Order #: MLTMD1AA MB Lot-Sample #: F1H160000-283						
Dilution Factor: 1						
Analysis Time.: 00:00						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H100419 Work Order #...: MLRLL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-013 MLRLL1AD-LCSD
 Prep Date.....: 08/17/11 Analysis Date...: 08/17/11
 Prep Batch #...: 1230013 Analysis Time...: 09:23
 Dilution Factor: 1

PARAMETER	PERCENT	RECOVERY	RPD		METHOD
	RECOVERY	LIMITS	RPD	LIMITS	
cis-1,3-Dichloropropene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.58	(0-20)	SW846 8260B
Dibromochloromethane	102	(60 - 135)			SW846 8260B
	102	(60 - 135)	0.88	(0-20)	SW846 8260B
Vinyl chloride	94	(50 - 145)			SW846 8260B
	88	(50 - 145)	5.7	(0-20)	SW846 8260B
Bromomethane	106	(30 - 145)			SW846 8260B
	103	(30 - 145)	2.5	(0-20)	SW846 8260B
Chloroethane	94	(60 - 135)			SW846 8260B
	92	(60 - 135)	2.1	(0-20)	SW846 8260B
Acetone	92	(40 - 140)			SW846 8260B
	98	(40 - 140)	6.2	(0-20)	SW846 8260B
1,1-Dichloroethene	104	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.19	(0-20)	SW846 8260B
Methylene chloride	91	(55 - 140)			SW846 8260B
	95	(55 - 140)	4.8	(0-20)	SW846 8260B
Carbon disulfide	98	(35 - 160)			SW846 8260B
	95	(35 - 160)	3.2	(0-20)	SW846 8260B
1,1-Dichloroethane	96	(70 - 135)			SW846 8260B
	95	(70 - 135)	0.38	(0-20)	SW846 8260B
2-Butanone	89	(30 - 150)			SW846 8260B
	94	(30 - 150)	5.9	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	98	(85 - 115)			SW846 8260B
	98	(85 - 115)	0.15	(0-20)	SW846 8260B
Chloroform	93	(65 - 135)			SW846 8260B
	96	(65 - 135)	3.2	(0-20)	SW846 8260B
1,1,1-Trichloroethane	101	(65 - 130)			SW846 8260B
	104	(65 - 130)	3.1	(0-20)	SW846 8260B
Carbon tetrachloride	103	(65 - 140)			SW846 8260B
	103	(65 - 140)	0.090	(0-20)	SW846 8260B
1,2-Dichloroethane	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.9	(0-20)	SW846 8260B
Benzene	99	(80 - 120)			SW846 8260B
	99	(80 - 120)	0.14	(0-20)	SW846 8260B
Trichloroethene	93	(70 - 125)			SW846 8260B
	94	(70 - 125)	1.1	(0-20)	SW846 8260B
1,2-Dichloropropane	95	(75 - 125)			SW846 8260B
	95	(75 - 125)	0.37	(0-20)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H100419 Work Order #...: MLRLL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-013 MLRLL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	98	(75 - 120)			SW846 8260B
	98	(75 - 120)	0.070	(0-20)	SW846 8260B
1,1,2-Trichloroethane	95	(75 - 125)			SW846 8260B
	100	(75 - 125)	5.0	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	105	(55 - 140)			SW846 8260B
	104	(55 - 140)	1.2	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	106	(75 - 120)	0.28	(0-20)	SW846 8260B
1,3-Dichlorobenzene	101	(75 - 125)			SW846 8260B
	102	(75 - 125)	0.78	(0-20)	SW846 8260B
1,4-Dichlorobenzene	96	(75 - 125)			SW846 8260B
	97	(75 - 125)	0.88	(0-20)	SW846 8260B
2-Hexanone	89	(55 - 130)			SW846 8260B
	88	(55 - 130)	1.3	(0-20)	SW846 8260B
4-Methyl-2-pentanone	96	(60 - 135)			SW846 8260B
	100	(60 - 135)	3.9	(0-20)	SW846 8260B
Chlorobenzene	98	(80 - 120)			SW846 8260B
	98	(80 - 120)	0.37	(0-20)	SW846 8260B
Bromoform	104	(70 - 130)			SW846 8260B
	108	(70 - 130)	3.6	(0-20)	SW846 8260B
Ethylbenzene	105	(75 - 125)			SW846 8260B
	105	(75 - 125)	0.47	(0-20)	SW846 8260B
Styrene	111	(65 - 135)			SW846 8260B
	111	(65 - 135)	0.090	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	92	(65 - 130)			SW846 8260B
	96	(65 - 130)	4.1	(0-20)	SW846 8260B
Tetrachloroethene	105	(45 - 150)			SW846 8260B
	102	(45 - 150)	3.2	(0-20)	SW846 8260B
1,2-Dichlorobenzene	98	(70 - 120)			SW846 8260B
	102	(70 - 120)	3.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
	111	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
	107	(85 - 115)
1,2-Dichloroethane-d4	97	(70 - 120)
	102	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	101	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H110000-087 Prep Batch #...: 1223087					
Uranium	108	(80 - 120)	SW846 6020A	08/11-08/13/11	MLJ8A1AC
		Dilution Factor: 1		Analysis Time...: 04:14	
LCS Lot-Sample#: F1H110000-088 Prep Batch #...: 1223088					
Arsenic	103	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A2
		Dilution Factor: 1		Analysis Time...: 19:59	
Silver	93	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A3
		Dilution Factor: 1		Analysis Time...: 19:59	
Aluminum	102	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A4
		Dilution Factor: 1		Analysis Time...: 19:59	
Barium	107	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A5
		Dilution Factor: 1		Analysis Time...: 19:59	
Beryllium	112	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A6
		Dilution Factor: 1		Analysis Time...: 19:59	
Calcium	104	(80 - 120)	SW846 6010C	08/11-08/16/11	MLJ8D1A7
		Dilution Factor: 1		Analysis Time...: 16:13	
Cadmium	105	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A8
		Dilution Factor: 1		Analysis Time...: 19:59	
Cobalt	102	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1A9
		Dilution Factor: 1		Analysis Time...: 19:59	
Chromium	103	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CA
		Dilution Factor: 1		Analysis Time...: 19:59	
Copper	102	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CC
		Dilution Factor: 1		Analysis Time...: 19:59	
Iron	106	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CD
		Dilution Factor: 1		Analysis Time...: 19:59	
Magnesium	100	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CE
		Dilution Factor: 1		Analysis Time...: 14:21	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	105	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CF
		Dilution Factor: 1	Analysis Time...: 19:59		
Sodium	103	(80 - 120)	SW846 6010C	08/11-08/16/11	MLJ8D1CG
		Dilution Factor: 1	Analysis Time...: 16:13		
Nickel	102	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CH
		Dilution Factor: 1	Analysis Time...: 19:59		
Lead	102	(80 - 120)	SW846 6010C	08/11-08/16/11	MLJ8D1CJ
		Dilution Factor: 1	Analysis Time...: 22:11		
Antimony	105	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CK
		Dilution Factor: 1	Analysis Time...: 19:59		
Selenium	106	(80 - 120)	SW846 6010C	08/11-08/16/11	MLJ8D1CL
		Dilution Factor: 1	Analysis Time...: 22:11		
Strontium	100	(80 - 120)	SW846 6010C	08/11-08/16/11	MLJ8D1CM
		Dilution Factor: 1	Analysis Time...: 16:13		
Thallium	100	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CN
		Dilution Factor: 1	Analysis Time...: 19:59		
Vanadium	103	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CP
		Dilution Factor: 1	Analysis Time...: 19:59		
Zinc	111	(80 - 120)	SW846 6010C	08/11-08/12/11	MLJ8D1CQ
		Dilution Factor: 1	Analysis Time...: 19:59		

NOTE (S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	93	Work Order #: MLPPW1AC (90 - 110)	LCS Lot-Sample#: F1H120000-136 MCAWW 300.0A	08/10/11	1224136
		Dilution Factor: 1	Analysis Time...: 04:22		
Chloride	92	Work Order #: MLPTM1AC (90 - 110)	LCS Lot-Sample#: F1H150000-150 MCAWW 300.0A	08/11/11	1227150
		Dilution Factor: 1	Analysis Time...: 06:49		
Fluoride	95	Work Order #: MLPP01AC (90 - 110)	LCS Lot-Sample#: F1H120000-137 MCAWW 300.0A	08/10/11	1224137
		Dilution Factor: 1	Analysis Time...: 04:22		
Nitrate	94	Work Order #: MLPP21AC (90 - 110)	LCS Lot-Sample#: F1H120000-138 MCAWW 300.0A	08/10/11	1224138
		Dilution Factor: 1	Analysis Time...: 04:22		
Nitrite	97	Work Order #: MLTCL1AC (90 - 110)	LCS Lot-Sample#: F1H120000-151 MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 1	Analysis Time...: 04:05		
Nitrite	96	Work Order #: MLPTL1AC (90 - 110)	LCS Lot-Sample#: F1H150000-147 MCAWW 300.0A	08/11/11	1227147
		Dilution Factor: 1	Analysis Time...: 06:49		
Phosphate as P, Ortho	97	Work Order #: MLPP71AC (90 - 110)	LCS Lot-Sample#: F1H120000-140 MCAWW 300.0A	08/10/11	1224140
		Dilution Factor: 1	Analysis Time...: 04:22		
Sulfate	94	Work Order #: MLPP91AC (90 - 110)	LCS Lot-Sample#: F1H120000-141 MCAWW 300.0A	08/10/11	1224141
		Dilution Factor: 1	Analysis Time...: 04:22		
Total Alkalinity	92	Work Order #: MLRFM1AC (90 - 110)	LCS Lot-Sample#: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	93	Work Order #: MLRFM1AD (90 - 110)	LCS Lot-Sample#: F1H170000-090 MCAWW 310.1	08/17/11	1229090
		Dilution Factor: 1	Analysis Time...: 00:00		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Dissolved Solids	99	(90 - 113)	MCAWW 160.1	08/16-08/18/11	1228283
		Dilution Factor: 1	Analysis Time...: 00:00		

Work Order #: MLTMD1AC LCS Lot-Sample#: F1H160000-283

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H100419-001 Prep Batch #...: 1223087						
Uranium	112	(80 - 120)		SW846 6020A	08/11-08/13/11	MLH8E1CG
	113	(80 - 120)	0.47 (0-20)	SW846 6020A	08/11-08/13/11	MLH8E1CH
		Dilution Factor: 1				
		Analysis Time...: 04:35				
MS Lot-Sample #: F1H100419-001 Prep Batch #...: 1223088						
Aluminum	104	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1CN
	104	(80 - 120)	0.11 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1CP
		Dilution Factor: 1				
		Analysis Time...: 20:12				
Antimony	104	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1DL
	103	(80 - 120)	0.71 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1DM
		Dilution Factor: 1				
		Analysis Time...: 20:12				
Arsenic	105	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1CJ
	104	(80 - 120)	1.2 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1CK
		Dilution Factor: 1				
		Analysis Time...: 20:12				
Barium	103	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1CQ
	104	(80 - 120)	1.8 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1CR
		Dilution Factor: 1				
		Analysis Time...: 20:12				
Beryllium	108	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1CT
	110	(80 - 120)	2.6 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1CU
		Dilution Factor: 1				
		Analysis Time...: 20:12				
Cadmium	101	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1CX
	99	(80 - 120)	1.5 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1C0
		Dilution Factor: 1				
		Analysis Time...: 20:12				
Calcium	180 N	(80 - 120)		SW846 6010C	08/11-08/16/11	MLH8E1CV
	130 N	(80 - 120)	3.6 (0-20)	SW846 6010C	08/11-08/16/11	MLH8E1CW
		Dilution Factor: 5				
		Analysis Time...: 16:25				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	98	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1C3
	99	(80 - 120)	0.73 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1C4
Dilution Factor: 1						
Analysis Time...: 20:12						
Cobalt	98	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1C1
	98	(80 - 120)	0.04 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1C2
Dilution Factor: 1						
Analysis Time...: 20:12						
Copper	100	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1C5
	101	(80 - 120)	0.91 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1C6
Dilution Factor: 1						
Analysis Time...: 20:12						
Iron	101	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1C7
	102	(80 - 120)	0.47 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1C8
Dilution Factor: 1						
Analysis Time...: 20:12						
Lead	97	(80 - 120)		SW846 6010C	08/11-08/16/11	MLH8E1DJ
	97	(80 - 120)	0.23 (0-20)	SW846 6010C	08/11-08/16/11	MLH8E1DK
Dilution Factor: 1						
Analysis Time...: 22:24						
Magnesium	101	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1C9
	103	(80 - 120)	0.58 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1DA
Dilution Factor: 1						
Analysis Time...: 14:33						
Manganese	101	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1DC
	102	(80 - 120)	1.2 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1DD
Dilution Factor: 1						
Analysis Time...: 20:12						
Nickel	98	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1DG
	97	(80 - 120)	1.7 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1DH
Dilution Factor: 1						
Analysis Time...: 20:12						
Selenium	83	(80 - 120)		SW846 6010C	08/11-08/16/11	MLH8E1DN
	83	(80 - 120)	0.73 (0-20)	SW846 6010C	08/11-08/16/11	MLH8E1DP
Dilution Factor: 1						
Analysis Time...: 22:24						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H100419

Matrix.....: WATER

Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	92	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1CL
	92	(80 - 120)	0.08 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1CM
Dilution Factor: 1						
Analysis Time...: 20:12						
Sodium	200 N	(80 - 120)		SW846 6010C	08/11-08/16/11	MLH8E1DE
	137 N	(80 - 120)	3.3 (0-20)	SW846 6010C	08/11-08/16/11	MLH8E1DF
Dilution Factor: 5						
Analysis Time...: 16:25						
Strontium	117	(80 - 120)		SW846 6010C	08/11-08/16/11	MLH8E1DQ
	110	(80 - 120)	2.3 (0-20)	SW846 6010C	08/11-08/16/11	MLH8E1DR
Dilution Factor: 5						
Analysis Time...: 16:25						
Thallium	96	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1DT
	94	(80 - 120)	1.7 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1DU
Dilution Factor: 1						
Analysis Time...: 20:12						
Vanadium	100	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1DV
	102	(80 - 120)	1.3 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1DW
Dilution Factor: 1						
Analysis Time...: 20:12						
Zinc	111	(80 - 120)		SW846 6010C	08/11-08/12/11	MLH8E1DX
	109	(80 - 120)	2.2 (0-20)	SW846 6010C	08/11-08/12/11	MLH8E1D0
Dilution Factor: 1						
Analysis Time...: 20:12						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419

Matrix.....: WATER

Date Sampled...: 08/09/11 08:35 Date Received...: 08/10/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	95	Work Order #...: MLH8E1D1 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-001 08/10/11	1224136
		Dilution Factor: 100 Analysis Time...: 05:20			
Chloride	103	Work Order #...: MLH8K1CG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-002 08/12/11	1227150
		Dilution Factor: 1000 Analysis Time...: 04:41			
Fluoride	95	Work Order #...: MLH8E1D3 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-001 08/10/11	1224137
		Dilution Factor: 1 Analysis Time...: 04:51			
Nitrate	106	Work Order #...: MLH8E1D5 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-001 08/10/11	1224138
		Dilution Factor: 1 Analysis Time...: 04:51			
Nitrite	80 N	Work Order #...: MLH8E1EE (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-001 08/12/11	1227147
		Dilution Factor: 10 Analysis Time...: 03:14			
Nitrite	71 N	Work Order #...: MLN11CN (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224151
		Dilution Factor: 5 Analysis Time...: 04:49			
Phosphate as P, Ortho	58 N	Work Order #...: MLH8E1D9 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-001 08/10/11	1224140
		Dilution Factor: 1 Analysis Time...: 04:51			
Sulfate	97	Work Order #...: MLH8E1EC (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H100419-001 08/10/11	1224141
		Dilution Factor: 100 Analysis Time...: 05:20			
Total Alkalinity	98	Work Order #...: MLHLC1EA (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H090496-002 08/17/11	1229090
		Dilution Factor: 1 Analysis Time...: 00:00			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419

Work Order #...: MLLN1-SMP

Matrix.....: WATER

MLLN1-DUP

Date Sampled...: 08/11/11 09:15

Date Received...: 08/12/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrite						SD Lot-Sample #: F1H120447-006		
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/12/11	1224151
			Dilution Factor: 5			Analysis Time...: 04:49		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419 Work Order #...: MLH8K-SMP Matrix.....: WATER
MLH8K-DUP
Date Sampled...: 08/09/11 09:30 Date Received...: 08/10/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	2180	2200	mg/L	0.93	(0-20)	SD Lot-Sample #: F1H100419-002 MCAWW 300.0A	08/12/11	1227150
				Dilution Factor: 1000		Analysis Time...: 04:41		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419

Work Order #...: MLH8M-SMP
MLH8M-DUP

Matrix.....: WATER

Date Sampled...: 08/09/11 14:45 Date Received...: 08/10/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: F1H100419-003		
	936	944	mg/L	0.85	(0-0.0)	MCAWW 160.1	08/16-08/18/11	1228283
			Dilution Factor: 1			Analysis Time...: 00:00		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H100419

Work Order #...: MLHLC-SMP

Matrix.....: WATER

MLHLC-DUP

Date Sampled...: 08/05/11 09:30

Date Received...: 08/06/11

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE RESULT</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD LIMIT</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Alkalinity						SD Lot-Sample #:	F1H090496-002	
	252	252	mg/L	0.0	(0-20)	MCAWW 310.1	08/17/11	1229090
			Dilution Factor: 1			Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001

Radiochemistry

Lab Sample ID: F1H100419-001
Work Order: MLH8E
Matrix: WATER

Date Collected: 08/09/11 0835
Date Received: 08/10/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 80
Uranium 234	0.212		0.086	0.100	0.037	08/17/11	08/17/11
Uranium 235/236	0.018	U	0.029	0.100	0.047	08/17/11	08/17/11
Uranium 238	0.185		0.080	0.100	0.044	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001

Radiochemistry

Lab Sample ID: F1H100419-002
 Work Order: MLH8K
 Matrix: WATER

Date Collected: 08/09/11 0930
 Date Received: 08/10/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 87
Uranium 234	0.51		0.13	0.10	0.02	08/17/11	08/17/11
Uranium 235/236	0.029		0.033	0.100	0.026	08/17/11	08/17/11
Uranium 238	0.291		0.098	0.100	0.021	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW711D0001

Radiochemistry

Lab Sample ID: F1H100419-003
Work Order: MLH8M
Matrix: WATER

Date Collected: 08/09/11 1445
Date Received: 08/10/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 60
Uranium 234	2.78		0.42	0.10	0.03	08/17/11	08/17/11
Uranium 235/236	0.092		0.070	0.100	0.036	08/17/11	08/17/11
Uranium 238	2.68		0.41	0.10	0.03	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H100419

53 of 67

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H100419-004
 Work Order: MLH8P
 Matrix: WATER

Date Collected: 08/09/11 0835
 Date Received: 08/10/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 79
Uranium 234	0.50		0.14	0.10	0.05	08/17/11	08/17/11
Uranium 235/236	0.022	U	0.032	0.100	0.030	08/17/11	08/17/11
Uranium 238	0.47		0.14	0.10	0.04	08/17/11	08/17/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: MW705DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H100419-005
 Work Order: MLH8V
 Matrix: WATER

Date Collected: 08/09/11 0930
 Date Received: 08/10/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 85
Uranium 234	0.253		0.094	0.100	0.037	08/17/11	08/17/11
Uranium 235/236	0.0	U	0.010	0.100	0.028	08/17/11	08/17/11
Uranium 238	0.189		0.080	0.100	0.022	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04DMW711D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H100419-006
Work Order: MLH8W
Matrix: WATER

Date Collected: 08/09/11 1445
Date Received: 08/10/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1229042	Yld % 51
Uranium 234	2.70		0.44	0.10	0.04	08/17/11	08/17/11
Uranium 235/236	0.16		0.11	0.10	0.08	08/17/11	08/17/11
Uranium 238	2.30		0.40	0.10	0.04	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H100419
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1229042	Yld % 83	F1H170000-042B
Uranium 234	-0.0060	U	0.0070	0.100	0.047	08/17/11	08/17/11
Uranium 235/236	-0.0025	U	0.0050	0.100	0.046	08/17/11	08/17/11
Uranium 238	0.020	U	0.028	0.100	0.043	08/17/11	08/17/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H100419
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID		
					% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H170000-042C
Uranium 234	3.27	3.26	0.42	0.04	82	100	(76 - 136)
Uranium 238	3.39	3.50	0.44	0.02	82	103	(76 - 134)
Batch #:		1229042	Analysis Date:		08/17/11		

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H100419
 Matrix: WATER

Date Sampled: 08/05/11
 Date Received: 08/06/11

Parameter	SAMPLE Result	Total Uncert. (2 σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H090496-005
Uranium 234	21.6	2.1	64	23.1	2.2	62	7 %RPD
Uranium 235/236	1.05	0.26	64	1.22	0.28	62	15 %RPD
Uranium 238	21.2	2.0	64	22.7	2.2	62	7 %RPD
Batch #:		1229042 (Sample)		1229042 (Duplicate)			

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H100419

59 of 67

F1H100419

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis, R202, 2-12, METS,
Storage Loc.

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-10

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-18

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	MW705D0001			2011-08-09 / 835	MLH8E	WATER
SAMPLE COMMENTS:						
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H100419

TestAmerica - St. Louis

Logged In by:

BRUNSONA

2011-08-10

11:04:52

printed on: Wednesday, August 10, 2011 12:12

60 of 67

Page 1 of 6

F1H100419

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R252,2-12,METS,

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-10

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-18

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS In LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
----	----	--------------	---------------------------------	----	--	----	-------------------	---------	---------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	MW705DD0001			2011-08-09 / 930	MLH8K	WATER

SAMPLE COMMENTS:

ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

F1H100419

61 of 67

F1H100419

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R252/2-12, METS,

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guteryl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-10
 Analytical Due Date: 2011-08-18
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04DMW711D0001			2011-08-09 / 1445	MLH8M	WATER
SAMPLE COMMENTS:						
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H100419

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc. R252,2-12,METS,

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guteryl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Date Received: 2011-08-10
 Analytical Due Date: 2011-08-18
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	MW705D0001 DISSOLVED			2011-08-09 / 835	MLH8P	WATER
SAMPLE COMMENTS:						
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	MW705DD0001 DISSOLVED			2011-08-09 / 930	MLH8V	WATER
SAMPLE COMMENTS:						
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F1H100419

TestAmerica - St. Louis

Logged in by: BRUNSONA 2011-08-10 11:04:52

printed on: Wednesday, August 10, 2011 12:12

63 of 67

Page 4 of 6

F1H100419

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R252, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-10

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-18

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04DMW711D0001 DISSOLVED			2011-08-09 / 1445	MLH8W	WATER

SAMPLE COMMENTS:

MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H100419

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-10

11:04:52

printed on: Wednesday, August 10, 2011 12:12

64 of 67

Page 5 of 6

F1H100419

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R252,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-10

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-18

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS In LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F1H100419

TestAmerica - St. Louis

Logged in by:

BRUNSONA

2011-08-10

11:04:52

printed on:

Wednesday, August 10, 2011 12:12

65 of 67

Page 6 of 6

15 Rider Trail North

h City, MO 63045

ne 314.298.8566 fax 314.298.8757

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]

Company: Shaw E & I. Inc.	Date/Time: 8/9/11 1650	Company: BFLO	Date/Time: 08-09-11 16:50
Company: BFLO	Date/Time: 08-09-11 17:10	Company: BFLO	Date/Time: 08/09/11 17:10
Company: BFLO	Date/Time: 08/09/11	Company: TA STZ	Date/Time: 08/10/11 0920

CONDITION UPON RECEIPT FORM

Client: SHAW

Quote No: 89251

COC/RFA No: 005



Initiated By: NVO

Date: 8/10/11

Time: 0920

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____

Multiple Packages: ☒ Y ☐ N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 3252
2. 4485 0258 3263
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 2
2. Ambient
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

Client Contact Name: _____

Informed by: _____

1. Sample(s) processed "as is"

1. Sample(s) on hold until _____

If released, notify: _____

Project Management Review _____

Date: 8/10/11

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON MUST INITIAL AND DATE NEXT TO THAT ITEM.




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

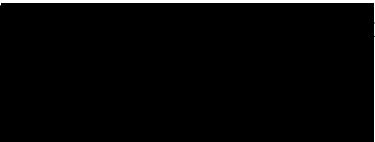
PROJECT NO. 140415

Guteryl Steel

Lot #: F1H110460


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

August 24, 2011

F1H110460

1 of 109

Case Narrative
LOT NUMBER: F1H110460

This report contains the analytical results for the 14 samples received under chain of custody by TestAmerica in St. Louis on August 11, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1230199**

Tetrahydrofuran was removed from the initial calibration lowest point due to poor response. Isobutanol, n-Butanol, 2-Chloroethylvinyl ether, 4-Methyl-2-pentanone and 2-Hexanone were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration. The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

Affected Samples:

F1H110460 (8): A04MW604D0001
 F1H110460 (9): A04DMW709D0001
 F1H110460 (10): A04BMW605D0001
 F1H110460 (11): A04BMW260001
 F1H110460 (12): A04BMW9000
 F1H110460 (13): A04BMW9001
 F1H110460 (14): A04DMW704DD0001

The sample was screened to determine if high concentrations of target analytes were present. The sample was analyzed at a dilution of 5X and 50X due to high concentrations of target analytes. The reporting limit has been adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F1H110460 (11): A04BMW260001

The internal standard(s) recovery is outside the lower QC limit, indicating a potential positive bias. There were no target analytes associated with this internal standard observed above the reporting limit in the sample; therefore the sample data was not adversely affected by this excursion. The original sample results are provided.

Affected Samples:

F1H110460 (10): A04BMW605D0001
 F1H110460 (11): A04BMW260001
 F1H110460 (12): A04BMW9000

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1224018**

Strontium was observed in the CCB above the reporting limit. Associated samples which exhibit concentrations greater than ten (10) times the concentrations observed in the CCB, do not require re-analysis. Original results are reported.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H110460 (1): A04MW604D0001 DISSOLVED
F1H110460 (2): A04DMW709DD0001 DISSOLVED
F1H110460 (3): A04BMW605D0001 DISSOLVED
F1H110460 (4): A04BMW260001 DISSOLVED
F1H110460 (6): A04BMW9001 DISSOLVED
F1H110460 (7): A04DMW704DD0001 DISSOLVED
F1H110460 (8): A04MW604D0001
F1H110460 (9): A04DMW709D0001
F1H110460 (11): A04BMW260001
F1H110460 (13): A04BMW9001
F1H110460 (14): A04DMW704DD0001

Fluoride (MCAWW 300.0A)**Batch: 1224143**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H110460 (10): A04BMW605D0001
F1H110460 (12): A04BMW9000

Nitrate as N (MCAWW 300.0A)**Batch: 1224144**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H110460 (13): A04BMW9001
F1H110460 (14): A04DMW704DD0001

Sulfate (MCAWW 300.0A)**Batch: 1224147**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H110460 (8): A04MW604D0001
F1H110460 (9): A04DMW709D0001
F1H110460 (10): A04BMW605D0001
F1H110460 (11): A04BMW260001
F1H110460 (12): A04BMW9000
F1H110460 (13): A04BMW9001
F1H110460 (14): A04DMW704DD0001

Nitrite as N (MCAWW 300.0A)**Batch: 1224145**

The following samples were reported ND for Nitrite, due to matrix interference with Chloride in the undiluted analyse. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H110460 (8): A04MW604D0001
 F1H110460 (9): A04DMW709D0001
 F1H110460 (10): A04BMW605D0001
 F1H110460 (11): A04BMW260001
 F1H110460 (12): A04BMW9000
 F1H110460 (13): A04BMW9001
 F1H110460 (14): A04DMW704DD0001

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1224146**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H110460 (8): A04MW604D0001
 F1H110460 (9): A04DMW709D0001
 F1H110460 (10): A04BMW605D0001
 F1H110460 (11): A04BMW260001
 F1H110460 (12): A04BMW9000
 F1H110460 (13): A04BMW9001
 F1H110460 (14): A04DMW704DD0001

Isotopic Uranium by Alpha Spectroscopy (A-01-R MOD)**Batch: 1231145**

The reporting limit for Uranium 238 was not met due to the presence of the nuclide in the sample. The data is reported with the MDA achieved.

Affected Samples:

F1H110460 (3): A04BMW605D0001 DISSOLVED
 F1H110460 (10): A04BMW605D0001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H110460

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F1H110460**

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
MLKHP	001	A04MW604D0001 DISSOLVED	08/10/11	08:30
MLKHV	002	A04DMW709DD0001 DISSOLVED	08/10/11	09:30
MLKH4	003	A04BMW605D0001 DISSOLVED	08/10/11	10:15
MLKH8	004	A04BMW260001 DISSOLVED	08/10/11	13:20
MLKJD	005	A04BMW9000 DISSOLVED	08/10/11	
MLKJE	006	A04BMW9001 DISSOLVED	08/10/11	
MLKJJ	007	A04DMW704DD0001 DISSOLVED	08/10/11	11:15
MLKJL	008	A04MW604D0001	08/10/11	08:30
MLKJ5	009	A04DMW709D0001	08/10/11	09:30
MLKKA	010	A04BMW605D0001	08/10/11	10:15
MLKKD	011	A04BMW260001	08/10/11	13:20
MLKKH	012	A04BMW9000	08/10/11	
MLKKK	013	A04BMW9001	08/10/11	
MLKKN	014	A04DMW704DD0001	08/10/11	11:15

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-001

Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	101	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKHP1A3
		Dilution Factor: 1		Analysis Time...: 21:32		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AD
		Dilution Factor: 1		Analysis Time...: 13:26		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AE
		Dilution Factor: 1		Analysis Time...: 13:26		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AC
		Dilution Factor: 1		Analysis Time...: 13:26		
Barium	74.3	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AF
		Dilution Factor: 1		Analysis Time...: 13:26		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AG
		Dilution Factor: 1		Analysis Time...: 13:26		
Calcium	98600	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AH
		Dilution Factor: 1		Analysis Time...: 13:26		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AJ
		Dilution Factor: 1		Analysis Time...: 13:26		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AK
		Dilution Factor: 1		Analysis Time...: 13:26		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AL
		Dilution Factor: 1		Analysis Time...: 13:26		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AM
		Dilution Factor: 1		Analysis Time...: 13:26		
Iron	ND	100	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AN
		Dilution Factor: 1		Analysis Time...: 13:26		
Magnesium	25800	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AP
		Dilution Factor: 1		Analysis Time...: 13:26		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	33.6	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AQ
		Dilution Factor: 1		Analysis Time...: 13:26		
Sodium	296000 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKHP1AR
		Dilution Factor: 5		Analysis Time...: 16:26		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AT
		Dilution Factor: 1		Analysis Time...: 13:26		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AU
		Dilution Factor: 1		Analysis Time...: 13:26		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AV
		Dilution Factor: 1		Analysis Time...: 13:26		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AW
		Dilution Factor: 1		Analysis Time...: 13:26		
Strontium	413	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1AX
		Dilution Factor: 1		Analysis Time...: 13:26		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1A0
		Dilution Factor: 1		Analysis Time...: 13:26		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1A1
		Dilution Factor: 1		Analysis Time...: 13:26		
Zinc	118	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHP1A2
		Dilution Factor: 1		Analysis Time...: 13:26		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-002

Matrix.....: WATER

Date Sampled...: 08/10/11 09:30 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	55.4	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKHV1AE
		Dilution Factor: 1		Analysis Time...: 21:58		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AJ
		Dilution Factor: 1		Analysis Time...: 13:58		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AK
		Dilution Factor: 1		Analysis Time...: 13:58		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AH
		Dilution Factor: 1		Analysis Time...: 13:58		
Barium	68.5	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AL
		Dilution Factor: 1		Analysis Time...: 13:58		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AM
		Dilution Factor: 1		Analysis Time...: 13:58		
Calcium	121000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AN
		Dilution Factor: 1		Analysis Time...: 13:58		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AP
		Dilution Factor: 1		Analysis Time...: 13:58		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AQ
		Dilution Factor: 1		Analysis Time...: 13:58		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AR
		Dilution Factor: 1		Analysis Time...: 13:58		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AT
		Dilution Factor: 1		Analysis Time...: 13:58		
Iron	127	100	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AU
		Dilution Factor: 1		Analysis Time...: 13:58		
Magnesium	37800	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AV
		Dilution Factor: 1		Analysis Time...: 13:58		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	25.6	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AW
		Dilution Factor: 1		Analysis Time...: 13:58		
Sodium	203000 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKHV1AX
		Dilution Factor: 5		Analysis Time...: 16:45		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AO
		Dilution Factor: 1		Analysis Time...: 13:58		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1A1
		Dilution Factor: 1		Analysis Time...: 13:58		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1A2
		Dilution Factor: 1		Analysis Time...: 13:58		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1A3
		Dilution Factor: 1		Analysis Time...: 13:58		
Strontium	1240	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1A4
		Dilution Factor: 1		Analysis Time...: 13:58		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AA
		Dilution Factor: 1		Analysis Time...: 13:58		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AC
		Dilution Factor: 1		Analysis Time...: 13:58		
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKHV1AD
		Dilution Factor: 1		Analysis Time...: 13:58		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-003

Matrix.....: WATER

Date Sampled...: 08/10/11 10:15 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	209	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKH41AE
		Dilution Factor: 1		Analysis Time...: 22:12		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AJ
		Dilution Factor: 1		Analysis Time...: 14:11		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AK
		Dilution Factor: 1		Analysis Time...: 14:11		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AH
		Dilution Factor: 1		Analysis Time...: 14:11		
Barium	46.5 J	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AL
		Dilution Factor: 1		Analysis Time...: 14:11		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AM
		Dilution Factor: 1		Analysis Time...: 14:11		
Calcium	68100	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AN
		Dilution Factor: 1		Analysis Time...: 14:11		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AP
		Dilution Factor: 1		Analysis Time...: 14:11		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AQ
		Dilution Factor: 1		Analysis Time...: 14:11		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AR
		Dilution Factor: 1		Analysis Time...: 14:11		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AT
		Dilution Factor: 1		Analysis Time...: 14:11		
Iron	132	100	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AU
		Dilution Factor: 1		Analysis Time...: 14:11		
Magnesium	34300	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AV
		Dilution Factor: 1		Analysis Time...: 14:11		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	278	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AW
		Dilution Factor: 1		Analysis Time...: 14:11		
Sodium	60100 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKH41AX
		Dilution Factor: 5		Analysis Time...: 16:58		
Nickel	19.3 J	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41A0
		Dilution Factor: 1		Analysis Time...: 14:11		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41A1
		Dilution Factor: 1		Analysis Time...: 14:11		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41A2
		Dilution Factor: 1		Analysis Time...: 14:11		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41A3
		Dilution Factor: 1		Analysis Time...: 14:11		
Strontium	178	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41A4
		Dilution Factor: 1		Analysis Time...: 14:11		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AA
		Dilution Factor: 1		Analysis Time...: 14:11		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AC
		Dilution Factor: 1		Analysis Time...: 14:11		
Zinc	22.5	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH41AD
		Dilution Factor: 1		Analysis Time...: 14:11		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-004

Matrix.....: WATER

Date Sampled...: 08/10/11 13:20 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	94.6	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKH81AE
		Dilution Factor: 1		Analysis Time...: 22:18		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AJ
		Dilution Factor: 1		Analysis Time...: 14:24		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AK
		Dilution Factor: 1		Analysis Time...: 14:24		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AH
		Dilution Factor: 1		Analysis Time...: 14:24		
Barium	59.1	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AL
		Dilution Factor: 1		Analysis Time...: 14:24		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AM
		Dilution Factor: 1		Analysis Time...: 14:24		
Calcium	85500	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AN
		Dilution Factor: 1		Analysis Time...: 14:24		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AP
		Dilution Factor: 1		Analysis Time...: 14:24		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AQ
		Dilution Factor: 1		Analysis Time...: 14:24		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AR
		Dilution Factor: 1		Analysis Time...: 14:24		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AT
		Dilution Factor: 1		Analysis Time...: 14:24		
Iron	52.9 J	100	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AU
		Dilution Factor: 1		Analysis Time...: 14:24		
Magnesium	23000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AV
		Dilution Factor: 1		Analysis Time...: 14:24		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	115	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AW
		Dilution Factor: 1		Analysis Time...: 14:24		
Sodium	321000 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKH81AX
		Dilution Factor: 5		Analysis Time...: 17:11		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81A0
		Dilution Factor: 1		Analysis Time...: 14:24		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81A1
		Dilution Factor: 1		Analysis Time...: 14:24		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81A2
		Dilution Factor: 1		Analysis Time...: 14:24		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81A3
		Dilution Factor: 1		Analysis Time...: 14:24		
Strontium	382	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81A4
		Dilution Factor: 1		Analysis Time...: 14:24		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AA
		Dilution Factor: 1		Analysis Time...: 14:24		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AC
		Dilution Factor: 1		Analysis Time...: 14:24		
Zinc	57.5	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKH81AD
		Dilution Factor: 1		Analysis Time...: 14:24		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-005

Matrix.....: WATER

Date Sampled...: 08/10/11

Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	212	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKJD1AE
		Dilution Factor: 1		Analysis Time...: 22:38		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AJ
		Dilution Factor: 1		Analysis Time...: 14:30		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AK
		Dilution Factor: 1		Analysis Time...: 14:30		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AH
		Dilution Factor: 1		Analysis Time...: 14:30		
Barium	45.6 J	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AL
		Dilution Factor: 1		Analysis Time...: 14:30		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AM
		Dilution Factor: 1		Analysis Time...: 14:30		
Calcium	67200	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AN
		Dilution Factor: 1		Analysis Time...: 14:30		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AP
		Dilution Factor: 1		Analysis Time...: 14:30		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AQ
		Dilution Factor: 1		Analysis Time...: 14:30		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AR
		Dilution Factor: 1		Analysis Time...: 14:30		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AT
		Dilution Factor: 1		Analysis Time...: 14:30		
Iron	121	100	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AU
		Dilution Factor: 1		Analysis Time...: 14:30		
Magnesium	34000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AV
		Dilution Factor: 1		Analysis Time...: 14:30		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	278	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AW
		Dilution Factor: 1		Analysis Time...: 14:30		
Sodium	62400 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKJD1AX
		Dilution Factor: 5		Analysis Time...: 17:30		
Nickel	19.8 J	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AO
		Dilution Factor: 1		Analysis Time...: 14:30		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1A1
		Dilution Factor: 1		Analysis Time...: 14:30		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1A2
		Dilution Factor: 1		Analysis Time...: 14:30		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1A3
		Dilution Factor: 1		Analysis Time...: 14:30		
Strontium	180	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1A4
		Dilution Factor: 5		Analysis Time...: 08:44		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AA
		Dilution Factor: 1		Analysis Time...: 14:30		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AC
		Dilution Factor: 1		Analysis Time...: 14:30		
Zinc	21.2	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJD1AD
		Dilution Factor: 1		Analysis Time...: 14:30		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-006

Matrix.....: WATER

Date Sampled...: 08/10/11

Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	26.9	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKJE1AE
		Dilution Factor: 1		Analysis Time...: 22:45		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AJ
		Dilution Factor: 1		Analysis Time...: 14:37		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AK
		Dilution Factor: 1		Analysis Time...: 14:37		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AH
		Dilution Factor: 1		Analysis Time...: 14:37		
Barium	55.4	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AL
		Dilution Factor: 1		Analysis Time...: 14:37		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AM
		Dilution Factor: 1		Analysis Time...: 14:37		
Calcium	273000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AN
		Dilution Factor: 1		Analysis Time...: 14:37		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AP
		Dilution Factor: 1		Analysis Time...: 14:37		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AQ
		Dilution Factor: 1		Analysis Time...: 14:37		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AR
		Dilution Factor: 1		Analysis Time...: 14:37		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AT
		Dilution Factor: 1		Analysis Time...: 14:37		
Iron	ND	100	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AU
		Dilution Factor: 1		Analysis Time...: 14:37		
Magnesium	107000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AV
		Dilution Factor: 1		Analysis Time...: 14:37		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	68.8	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AW
		Dilution Factor: 1		Analysis Time...: 14:37		
Sodium	109000 B	10000	ug/L	SW846 6010C	08/12-08/19/11	MLKJE1AX
		Dilution Factor: 10		Analysis Time...: 17:36		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1A0
		Dilution Factor: 1		Analysis Time...: 14:37		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1A1
		Dilution Factor: 1		Analysis Time...: 14:37		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1A2
		Dilution Factor: 1		Analysis Time...: 14:37		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1A3
		Dilution Factor: 1		Analysis Time...: 14:37		
Strontium	4730	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1A4
		Dilution Factor: 1		Analysis Time...: 14:37		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AA
		Dilution Factor: 1		Analysis Time...: 14:37		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AC
		Dilution Factor: 1		Analysis Time...: 14:37		
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJE1AD
		Dilution Factor: 1		Analysis Time...: 14:37		

NOTE (S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-007

Matrix.....: WATER

Date Sampled...: 08/10/11 11:15 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	26.3	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKJJ1AE
		Dilution Factor: 1		Analysis Time...: 22:52		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AJ
		Dilution Factor: 1		Analysis Time...: 14:43		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AK
		Dilution Factor: 1		Analysis Time...: 14:43		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AH
		Dilution Factor: 1		Analysis Time...: 14:43		
Barium	55.8	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AL
		Dilution Factor: 1		Analysis Time...: 14:43		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AM
		Dilution Factor: 1		Analysis Time...: 14:43		
Calcium	275000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AN
		Dilution Factor: 1		Analysis Time...: 14:43		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AP
		Dilution Factor: 1		Analysis Time...: 14:43		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AQ
		Dilution Factor: 1		Analysis Time...: 14:43		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AR
		Dilution Factor: 1		Analysis Time...: 14:43		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AT
		Dilution Factor: 1		Analysis Time...: 14:43		
Iron	ND	100	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AU
		Dilution Factor: 1		Analysis Time...: 14:43		
Magnesium	107000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AV
		Dilution Factor: 1		Analysis Time...: 14:43		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H110460-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	66.7	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AW
		Dilution Factor: 1		Analysis Time...: 14:43		
Sodium	112000 B	10000	ug/L	SW846 6010C	08/12-08/19/11	MLKJJ1AX
		Dilution Factor: 10		Analysis Time...: 17:43		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1A0
		Dilution Factor: 1		Analysis Time...: 14:43		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1A1
		Dilution Factor: 1		Analysis Time...: 14:43		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1A2
		Dilution Factor: 1		Analysis Time...: 14:43		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1A3
		Dilution Factor: 1		Analysis Time...: 14:43		
Strontium	4890	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1A4
		Dilution Factor: 1		Analysis Time...: 14:43		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AA
		Dilution Factor: 1		Analysis Time...: 14:43		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AC
		Dilution Factor: 1		Analysis Time...: 14:43		
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJJ1AD
		Dilution Factor: 1		Analysis Time...: 14:43		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001

GC/MS Volatiles

Lot-Sample #....: F1H110460-008 Work Order #....: MLKJL1AC Matrix.....: WATER
 Date Sampled....: 08/10/11 08:30 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 15:34
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.41 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	18	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	3.9	1.0	ug/L
1,2-Dichloroethene	21	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	0.42 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	42	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	16	1.0	ug/L
Vinyl chloride	1.2 J	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001

GC/MS Volatiles

Lot-Sample #...: F1H110460-008 Work Order #...: MLKJL1AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	112	(85 - 115)
1,2-Dichloroethane-d4	108	(70 - 120)
4-Bromofluorobenzene	105	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001

TOTAL Metals

Lot-Sample #...: F1H110460-008

Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	103	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKJL1A5
		Dilution Factor: 1		Analysis Time...: 22:58		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AF
		Dilution Factor: 1		Analysis Time...: 14:50		
Aluminum	725	200	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AG
		Dilution Factor: 1		Analysis Time...: 14:50		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AE
		Dilution Factor: 1		Analysis Time...: 14:50		
Barium	78.7	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AH
		Dilution Factor: 1		Analysis Time...: 14:50		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AJ
		Dilution Factor: 1		Analysis Time...: 14:50		
Calcium	106000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AK
		Dilution Factor: 1		Analysis Time...: 14:50		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AL
		Dilution Factor: 1		Analysis Time...: 14:50		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AM
		Dilution Factor: 1		Analysis Time...: 14:50		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AN
		Dilution Factor: 1		Analysis Time...: 14:50		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AP
		Dilution Factor: 1		Analysis Time...: 14:50		
Iron	552	100	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AQ
		Dilution Factor: 1		Analysis Time...: 14:50		
Magnesium	28400	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AR
		Dilution Factor: 1		Analysis Time...: 14:50		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001

TOTAL Metals

Lot-Sample #...: F1H110460-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	114	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AT
		Dilution Factor: 1		Analysis Time...: 14:50		
Sodium	307000 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKJL1AU
		Dilution Factor: 5		Analysis Time...: 17:49		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AV
		Dilution Factor: 1		Analysis Time...: 14:50		
Lead	2.5 J	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AW
		Dilution Factor: 1		Analysis Time...: 14:50		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1AX
		Dilution Factor: 1		Analysis Time...: 14:50		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1A0
		Dilution Factor: 1		Analysis Time...: 14:50		
Strontium	419	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1A1
		Dilution Factor: 1		Analysis Time...: 14:50		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1A2
		Dilution Factor: 1		Analysis Time...: 14:50		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1A3
		Dilution Factor: 1		Analysis Time...: 14:50		
Zinc	170	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJL1A4
		Dilution Factor: 1		Analysis Time...: 14:50		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001

General Chemistry

Lot-Sample #...: F1H110460-008 Work Order #...: MLKJL Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	471	100	mg/L	MCAWW 300.0A	08/12/11	1224148
		Dilution Factor: 500		Analysis Time...: 11:47		
Fluoride	1.2	0.10	mg/L	MCAWW 300.0A	08/11/11	1224143
		Dilution Factor: 1		Analysis Time...: 07:18		
Nitrate	0.044	0.020	mg/L	MCAWW 300.0A	08/11/11	1224144
		Dilution Factor: 1		Analysis Time...: 07:18		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/11/11	1224145
		Dilution Factor: 10		Analysis Time...: 07:33		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/11/11	1224146
		Dilution Factor: 1		Analysis Time...: 07:18		
Sulfate	50.2	5.0	mg/L	MCAWW 300.0A	08/11/11	1224147
		Dilution Factor: 10		Analysis Time...: 07:33		
Total Alkalinity	323	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1240	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709D0001

GC/MS Volatiles

Lot-Sample #...: F1H110460-009 Work Order #...: MLKJ51AN Matrix.....: WATER
 Date Sampled...: 08/10/11 09:30 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 16:00
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	0.13 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.18 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	0.13 J	2.0	ug/L
Chloroform	0.49 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	33	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	13	1.0	ug/L
1,2-Dichloroethene	31	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	0.25 J	1.0	ug/L
Toluene	0.32 J	1.0	ug/L
1,1,1-Trichloroethane	19	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	16	1.0	ug/L
Vinyl chloride	1.3 J	2.0	ug/L
Xylenes (total)	0.47 J	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709D0001

GC/MS Volatiles

Lot-Sample #....: F1H110460-009 Work Order #....: MLKJ51AN Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
1,2-Dichloroethane-d4	101	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709D0001

TOTAL Metals

Lot-Sample #...: F1H110460-009

Matrix.....: WATER

Date Sampled...: 08/10/11 09:30 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	52.8	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKJ51AG
		Dilution Factor: 1		Analysis Time...: 23:05		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AR
		Dilution Factor: 1		Analysis Time...: 15:09		
Aluminum	102 J	200	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AT
		Dilution Factor: 1		Analysis Time...: 15:09		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AQ
		Dilution Factor: 1		Analysis Time...: 15:09		
Barium	73.4	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AU
		Dilution Factor: 1		Analysis Time...: 15:09		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AV
		Dilution Factor: 1		Analysis Time...: 15:09		
Calcium	125000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AW
		Dilution Factor: 1		Analysis Time...: 15:09		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AX
		Dilution Factor: 1		Analysis Time...: 15:09		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A0
		Dilution Factor: 1		Analysis Time...: 15:09		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A1
		Dilution Factor: 1		Analysis Time...: 15:09		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A2
		Dilution Factor: 1		Analysis Time...: 15:09		
Iron	239	100	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A3
		Dilution Factor: 1		Analysis Time...: 15:09		
Magnesium	38500	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A4
		Dilution Factor: 1		Analysis Time...: 15:09		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709D0001

TOTAL Metals

Lot-Sample #...: F1H110460-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	35.7	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A5
		Dilution Factor: 1		Analysis Time...: 15:09		
Sodium	203000 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKJ51A6
		Dilution Factor: 5		Analysis Time...: 17:55		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A7
		Dilution Factor: 1		Analysis Time...: 15:09		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A8
		Dilution Factor: 1		Analysis Time...: 15:09		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51A9
		Dilution Factor: 1		Analysis Time...: 15:09		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AA
		Dilution Factor: 1		Analysis Time...: 15:09		
Strontium	1270	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AC
		Dilution Factor: 1		Analysis Time...: 15:09		
Thallium	4.4 J	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AD
		Dilution Factor: 1		Analysis Time...: 15:09		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AE
		Dilution Factor: 1		Analysis Time...: 15:09		
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKJ51AF
		Dilution Factor: 1		Analysis Time...: 15:09		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709D0001

General Chemistry

Lot-Sample #...: F1H110460-009 Work Order #...: MLKJ5 Matrix.....: WATER
 Date Sampled...: 08/10/11 09:30 Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	346	20.0	mg/L	MCAWW 300.0A	08/13/11	1224148
		Dilution Factor: 100		Analysis Time...: 12:16		
Fluoride	0.98	0.10	mg/L	MCAWW 300.0A	08/11/11	1224143
		Dilution Factor: 1		Analysis Time...: 09:28		
Nitrate	0.014 B	0.020	mg/L	MCAWW 300.0A	08/11/11	1224144
		Dilution Factor: 1		Analysis Time...: 09:28		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/11/11	1224145
		Dilution Factor: 10		Analysis Time...: 10:11		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/11/11	1224146
		Dilution Factor: 1		Analysis Time...: 09:28		
Sulfate	153	5.0	mg/L	MCAWW 300.0A	08/11/11	1224147
		Dilution Factor: 10		Analysis Time...: 10:11		
Total Alkalinity	256	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1100	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001

GC/MS Volatiles

Lot-Sample #....: F1H110460-010 Work Order #....: MLKKA1A1 Matrix.....: WATER
 Date Sampled....: 08/10/11 10:15 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 16:26
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.20 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.2	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	0.16 J	1.0	ug/L
1,2-Dichloroethene	0.34 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	3.1	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.4	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001

GC/MS Volatiles

Lot-Sample #...: F1H110460-010 Work Order #...: MLKKA1A1 Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001

TOTAL Metals

Lot-Sample #...: F1H110460-010

Matrix.....: WATER

Date Sampled...: 08/10/11 10:15 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	214	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKKA1AT
		Dilution Factor: 1		Analysis Time...: 23:11		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A4
		Dilution Factor: 1		Analysis Time...: 15:15		
Aluminum	937	200	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A5
		Dilution Factor: 1		Analysis Time...: 15:15		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A3
		Dilution Factor: 1		Analysis Time...: 15:15		
Barium	53.0	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A6
		Dilution Factor: 1		Analysis Time...: 15:15		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A7
		Dilution Factor: 1		Analysis Time...: 15:15		
Calcium	85700	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A8
		Dilution Factor: 1		Analysis Time...: 15:15		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1A9
		Dilution Factor: 1		Analysis Time...: 15:15		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AA
		Dilution Factor: 1		Analysis Time...: 15:15		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AC
		Dilution Factor: 1		Analysis Time...: 15:15		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AD
		Dilution Factor: 1		Analysis Time...: 15:15		
Iron	957	100	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AE
		Dilution Factor: 1		Analysis Time...: 15:15		
Magnesium	40800	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AF
		Dilution Factor: 1		Analysis Time...: 15:15		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001

TOTAL Metals

Lot-Sample #...: F1H110460-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	413	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AG
		Dilution Factor: 1		Analysis Time...: 15:15		
Sodium	62200 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKKA1AH
		Dilution Factor: 5		Analysis Time...: 18:02		
Nickel	24.6 J	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AJ
		Dilution Factor: 1		Analysis Time...: 15:15		
Lead	5.0 J	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AK
		Dilution Factor: 1		Analysis Time...: 15:15		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AL
		Dilution Factor: 1		Analysis Time...: 15:15		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AM
		Dilution Factor: 1		Analysis Time...: 15:15		
Strontium	190	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AN
		Dilution Factor: 5		Analysis Time...: 08:50		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AP
		Dilution Factor: 1		Analysis Time...: 15:15		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AQ
		Dilution Factor: 1		Analysis Time...: 15:15		
Zinc	73.1	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKA1AR
		Dilution Factor: 1		Analysis Time...: 15:15		

NOTE(S):

B Method blank contamination. Analyte detected at a reportable level in blank.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001

General Chemistry

Lot-Sample #....: F1H110460-010 Work Order #....: MLKKA Matrix.....: WATER
 Date Sampled....: 08/10/11 10:15 Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	38.8	2.0	mg/L	MCAWW 300.0A	08/13/11	1224148
		Dilution Factor: 10		Analysis Time...: 12:30		
Fluoride	3.3	0.50	mg/L	MCAWW 300.0A	08/11/11	1224143
		Dilution Factor: 5		Analysis Time...: 10:54		
Nitrate	0.57	0.020	mg/L	MCAWW 300.0A	08/11/11	1224144
		Dilution Factor: 1		Analysis Time...: 10:40		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/11/11	1224145
		Dilution Factor: 5		Analysis Time...: 10:54		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/11/11	1224146
		Dilution Factor: 1		Analysis Time...: 10:40		
Sulfate	89.6	2.5	mg/L	MCAWW 300.0A	08/11/11	1224147
		Dilution Factor: 5		Analysis Time...: 10:54		
Total Alkalinity	354	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	502	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

GC/MS Volatiles

Lot-Sample #....: F1H110460-011 Work Order #....: MLKKD1A1 Matrix.....: WATER
 Date Sampled....: 08/10/11 13:20 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 20:23
 Dilution Factor: 5
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	10	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	10	ug/L
Dibromochloromethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,1-Dichloroethane	56 D	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
1,1-Dichloroethene	21 D	5.0	ug/L
1,2-Dichloroethene	64 D	10	ug/L
(total)			
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
2-Hexanone	ND	25	ug/L
Methylene chloride	1.8 J,D	5.0	ug/L
4-Methyl-2-pentanone	ND	25	ug/L
Styrene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	44 D	5.0	ug/L
Vinyl chloride	6.0 J,D	10	ug/L
Xylenes (total)	ND	25	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

GC/MS Volatiles

Lot-Sample #....: F1H110460-011 Work Order #....: MLKKD1A1 Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

NOTE(S) :

D Result was obtained from the analysis of a dilution.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

GC/MS Volatiles

Lot-Sample #....: F1H110460-011 Work Order #....: MLKKD2A1 Matrix.....: WATER
Date Sampled....: 08/10/11 13:20 Date Received...: 08/11/11
Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
Prep Batch #....: 1230199 Analysis Time...: 16:53
Dilution Factor: 50
Method.....: SW846 8260B

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
1,1,1-Trichloroethane	290 D	50	ug/L
		RECOVERY	
SURROGATE	PERCENT RECOVERY	LIMITS	
Toluene-d8	108	(85 - 120)	
Dibromofluoromethane	108	(85 - 115)	
1,2-Dichloroethane-d4	105	(70 - 120)	
4-Bromofluorobenzene	100	(75 - 120)	

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

TOTAL Metals

Lot-Sample #...: F1H110460-011

Matrix.....: WATER

Date Sampled...: 08/10/11 13:20 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	107	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKKD1AT
		Dilution Factor: 1		Analysis Time...: 23:18		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A4
		Dilution Factor: 1		Analysis Time...: 15:22		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A5
		Dilution Factor: 1		Analysis Time...: 15:22		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A3
		Dilution Factor: 1		Analysis Time...: 15:22		
Barium	54.5	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A6
		Dilution Factor: 1		Analysis Time...: 15:22		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A7
		Dilution Factor: 1		Analysis Time...: 15:22		
Calcium	83000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A8
		Dilution Factor: 1		Analysis Time...: 15:22		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1A9
		Dilution Factor: 1		Analysis Time...: 15:22		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AA
		Dilution Factor: 1		Analysis Time...: 15:22		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AC
		Dilution Factor: 1		Analysis Time...: 15:22		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AD
		Dilution Factor: 1		Analysis Time...: 15:22		
Iron	166	100	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AE
		Dilution Factor: 1		Analysis Time...: 15:22		
Magnesium	22100	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AF
		Dilution Factor: 1		Analysis Time...: 15:22		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

TOTAL Metals

Lot-Sample #...: F1H110460-011

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	145	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AG
		Dilution Factor: 1		Analysis Time...: 15:22		
Sodium	325000 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKKD1AH
		Dilution Factor: 5		Analysis Time...: 18:08		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AJ
		Dilution Factor: 1		Analysis Time...: 15:22		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AK
		Dilution Factor: 1		Analysis Time...: 15:22		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AL
		Dilution Factor: 1		Analysis Time...: 15:22		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AM
		Dilution Factor: 1		Analysis Time...: 15:22		
Strontium	373	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AN
		Dilution Factor: 1		Analysis Time...: 15:22		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AP
		Dilution Factor: 1		Analysis Time...: 15:22		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AQ
		Dilution Factor: 1		Analysis Time...: 15:22		
Zinc	59.4	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKD1AR
		Dilution Factor: 1		Analysis Time...: 15:22		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

General Chemistry

Lot-Sample #....: F1H110460-011 Work Order #....: MLKKD Matrix.....: WATER
 Date Sampled....: 08/10/11 13:20 Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	530	100	mg/L	MCAWW 300.0A	08/13/11	1224148
				Dilution Factor: 500	Analysis Time...: 01:13	
Fluoride	1.7	0.10	mg/L	MCAWW 300.0A	08/11/11	1224143
				Dilution Factor: 1	Analysis Time...: 11:38	
Nitrate	0.061	0.020	mg/L	MCAWW 300.0A	08/11/11	1224144
				Dilution Factor: 1	Analysis Time...: 11:38	
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/11/11	1224145
				Dilution Factor: 10	Analysis Time...: 11:52	
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/11/11	1224146
				Dilution Factor: 1	Analysis Time...: 11:38	
Sulfate	63.2	5.0	mg/L	MCAWW 300.0A	08/11/11	1224147
				Dilution Factor: 10	Analysis Time...: 11:52	
Total Alkalinity	159	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
				Dilution Factor: 1	Analysis Time...: 00:00	
Total Dissolved Solids	1230	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
				Dilution Factor: 1	Analysis Time...: 00:00	

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000

GC/MS Volatiles

Lot-Sample #....: F1H110460-012 Work Order #....: MLKKH1A1 Matrix.....: WATER
 Date Sampled....: 08/10/11 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 17:19
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.20 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.0	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	0.14 J	1.0	ug/L
1,2-Dichloroethene	0.25 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.30 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	2.8	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.2	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000

GC/MS Volatiles

Lot-Sample #...: F1H110460-012 Work Order #...: MLKKH1A1 Matrix.....: WATER

<u>SURROGATE</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE (S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000

TOTAL Metals

Lot-Sample #...: F1H110460-012

Matrix.....: WATER

Date Sampled...: 08/10/11

Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	210	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKKH1AT
		Dilution Factor: 1		Analysis Time...: 23:25		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A4
		Dilution Factor: 1		Analysis Time...: 15:28		
Aluminum	1620	200	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A5
		Dilution Factor: 1		Analysis Time...: 15:28		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A3
		Dilution Factor: 1		Analysis Time...: 15:28		
Barium	57.7	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A6
		Dilution Factor: 1		Analysis Time...: 15:28		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A7
		Dilution Factor: 1		Analysis Time...: 15:28		
Calcium	94900	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A8
		Dilution Factor: 1		Analysis Time...: 15:28		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1A9
		Dilution Factor: 1		Analysis Time...: 15:28		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AA
		Dilution Factor: 1		Analysis Time...: 15:28		
Chromium	3.2 J	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AC
		Dilution Factor: 1		Analysis Time...: 15:28		
Copper	6.4 J	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AD
		Dilution Factor: 1		Analysis Time...: 15:28		
Iron	1570	100	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AE
		Dilution Factor: 1		Analysis Time...: 15:28		
Magnesium	44700	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AF
		Dilution Factor: 1		Analysis Time...: 15:28		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000

TOTAL Metals

Lot-Sample #...: F1H110460-012

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	489	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AG
		Dilution Factor: 1		Analysis Time...: 15:28		
Sodium	60100 B	5000	ug/L	SW846 6010C	08/12-08/19/11	MLKKH1AH
		Dilution Factor: 5		Analysis Time...: 18:14		
Nickel	28.6 J	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AJ
		Dilution Factor: 1		Analysis Time...: 15:28		
Lead	8.6 J	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AK
		Dilution Factor: 1		Analysis Time...: 15:28		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AL
		Dilution Factor: 1		Analysis Time...: 15:28		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AM
		Dilution Factor: 1		Analysis Time...: 15:28		
Strontium	188	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AN
		Dilution Factor: 5		Analysis Time...: 08:56		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AP
		Dilution Factor: 1		Analysis Time...: 15:28		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AQ
		Dilution Factor: 1		Analysis Time...: 15:28		
Zinc	109	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKH1AR
		Dilution Factor: 1		Analysis Time...: 15:28		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000

General Chemistry

Lot-Sample #...: F1H110460-012

Work Order #...: MLKKH

Matrix.....: WATER

Date Sampled...: 08/10/11

Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	38.4	2.0	mg/L	MCAWW 300.0A	08/13/11	1224148
		Dilution Factor: 10		Analysis Time...: 01:28		
Fluoride	3.4	0.50	mg/L	MCAWW 300.0A	08/12/11	1224143
		Dilution Factor: 5		Analysis Time...: 01:04		
Nitrate	0.30	0.020	mg/L	MCAWW 300.0A	08/12/11	1224144
		Dilution Factor: 1		Analysis Time...: 12:21		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/12/11	1224145
		Dilution Factor: 5		Analysis Time...: 01:04		
Phosphate as P, Ortho	0.12 B,J	0.50	mg/L	MCAWW 300.0A	08/12/11	1224146
		Dilution Factor: 1		Analysis Time...: 12:21		
Sulfate	87.2	2.5	mg/L	MCAWW 300.0A	08/12/11	1224147
		Dilution Factor: 5		Analysis Time...: 01:04		
Total Alkalinity	354	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	496	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001

GC/MS Volatiles

Lot-Sample #....: F1H110460-013 Work Order #....: MLKKK1A1 Matrix.....: WATER
 Date Sampled....: 08/10/11 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 17:45
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	0.18 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	2.7	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.8	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.67 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.41 J	1.0	ug/L
1,1,1-Trichloroethane	2.3	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	0.49 J	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001

GC/MS Volatiles

Lot-Sample #...: F1H110460-013 Work Order #...: MLKKK1A1 Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	105	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
1,2-Dichloroethane-d4	105	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001

TOTAL Metals

Lot-Sample #...: F1H110460-013

Matrix.....: WATER

Date Sampled...: 08/10/11

Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	24.7	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKKK1AT
		Dilution Factor: 1		Analysis Time...: 23:31		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A4
		Dilution Factor: 1		Analysis Time...: 15:35		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A5
		Dilution Factor: 1		Analysis Time...: 15:35		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A3
		Dilution Factor: 1		Analysis Time...: 15:35		
Barium	55.7	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A6
		Dilution Factor: 1		Analysis Time...: 15:35		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A7
		Dilution Factor: 1		Analysis Time...: 15:35		
Calcium	271000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A8
		Dilution Factor: 1		Analysis Time...: 15:35		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1A9
		Dilution Factor: 1		Analysis Time...: 15:35		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AA
		Dilution Factor: 1		Analysis Time...: 15:35		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AC
		Dilution Factor: 1		Analysis Time...: 15:35		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AD
		Dilution Factor: 1		Analysis Time...: 15:35		
Iron	ND	100	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AE
		Dilution Factor: 1		Analysis Time...: 15:35		
Magnesium	106000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AF
		Dilution Factor: 1		Analysis Time...: 15:35		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001

TOTAL Metals

Lot-Sample #...: F1H110460-013

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	65.5	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AG
		Dilution Factor: 1		Analysis Time...: 15:35		
Sodium	107000 B	10000	ug/L	SW846 6010C	08/12-08/19/11	MLKKK1AH
		Dilution Factor: 10		Analysis Time...: 18:21		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AJ
		Dilution Factor: 1		Analysis Time...: 15:35		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AK
		Dilution Factor: 1		Analysis Time...: 15:35		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AL
		Dilution Factor: 1		Analysis Time...: 15:35		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AM
		Dilution Factor: 1		Analysis Time...: 15:35		
Strontium	4840	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AN
		Dilution Factor: 1		Analysis Time...: 15:35		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AP
		Dilution Factor: 1		Analysis Time...: 15:35		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AQ
		Dilution Factor: 1		Analysis Time...: 15:35		
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKK1AR
		Dilution Factor: 1		Analysis Time...: 15:35		

NOTE(S) :

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001

General Chemistry

Lot-Sample #...: F1H110460-013 Work Order #...: MLKKK Matrix.....: WATER
 Date Sampled...: 08/10/11 Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	206	20.0	mg/L	MCAWW 300.0A	08/13/11	1224148
		Dilution Factor: 100		Analysis Time...: 01:42		
Fluoride	0.34	0.10	mg/L	MCAWW 300.0A	08/12/11	1224143
		Dilution Factor: 1		Analysis Time...: 01:48		
Nitrate	43.8	2.0	mg/L	MCAWW 300.0A	08/12/11	1224144
		Dilution Factor: 100		Analysis Time...: 02:16		
Nitrite	0.15 B	0.20	mg/L	MCAWW 300.0A	08/12/11	1224145
		Dilution Factor: 10		Analysis Time...: 02:02		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224146
		Dilution Factor: 1		Analysis Time...: 01:48		
Sulfate	787	50.0	mg/L	MCAWW 300.0A	08/12/11	1224147
		Dilution Factor: 100		Analysis Time...: 02:16		
Total Alkalinity	85.6	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	2170	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001

GC/MS Volatiles

Lot-Sample #....: F1H110460-014 Work Order #....: MLKKN1A1 Matrix.....: WATER
 Date Sampled....: 08/10/11 11:15 Date Received...: 08/11/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 18:12
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	0.19 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	2.9	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.9	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.75 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.43 J	1.0	ug/L
1,1,1-Trichloroethane	2.4	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	0.28 J	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001

GC/MS Volatiles

Lot-Sample #....: F1H110460-014 Work Order #....: MLKKN1A1 Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	111	(85 - 115)
1,2-Dichloroethane-d4	108	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001

TOTAL Metals

Lot-Sample #...: F1H110460-014

Matrix.....: WATER

Date Sampled...: 08/10/11 11:15 Date Received...: 08/11/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1224017						
Uranium	23.5	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLKKN1AT
		Dilution Factor: 1		Analysis Time...: 23:38		
Prep Batch #...: 1224018						
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A4
		Dilution Factor: 1		Analysis Time...: 15:41		
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A5
		Dilution Factor: 1		Analysis Time...: 15:41		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A3
		Dilution Factor: 1		Analysis Time...: 15:41		
Barium	56.9	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A6
		Dilution Factor: 1		Analysis Time...: 15:41		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A7
		Dilution Factor: 1		Analysis Time...: 15:41		
Calcium	274000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A8
		Dilution Factor: 1		Analysis Time...: 15:41		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1A9
		Dilution Factor: 1		Analysis Time...: 15:41		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AA
		Dilution Factor: 1		Analysis Time...: 15:41		
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AC
		Dilution Factor: 1		Analysis Time...: 15:41		
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AD
		Dilution Factor: 1		Analysis Time...: 15:41		
Iron	30.2 J	100	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AE
		Dilution Factor: 1		Analysis Time...: 15:41		
Magnesium	106000	1000	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AF
		Dilution Factor: 1		Analysis Time...: 15:41		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001

TOTAL Metals

Lot-Sample #...: F1H110460-014

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	69.4	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AG
		Dilution Factor: 1		Analysis Time...: 15:41		
Sodium	105000 B	10000	ug/L	SW846 6010C	08/12-08/19/11	MLKKN1AH
		Dilution Factor: 10		Analysis Time...: 18:27		
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AJ
		Dilution Factor: 1		Analysis Time...: 15:41		
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AK
		Dilution Factor: 1		Analysis Time...: 15:41		
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AL
		Dilution Factor: 1		Analysis Time...: 15:41		
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AM
		Dilution Factor: 1		Analysis Time...: 15:41		
Strontium	4990	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AN
		Dilution Factor: 1		Analysis Time...: 15:41		
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AP
		Dilution Factor: 1		Analysis Time...: 15:41		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AQ
		Dilution Factor: 1		Analysis Time...: 15:41		
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLKKN1AR
		Dilution Factor: 1		Analysis Time...: 15:41		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001

General Chemistry

Lot-Sample #...: F1H110460-014 Work Order #...: MLKKN Matrix.....: WATER
 Date Sampled...: 08/10/11 11:15 Date Received...: 08/11/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	206	20.0	mg/L	MCAWW 300.0A	08/13/11	1224148
		Dilution Factor: 100		Analysis Time...: 01:57		
Fluoride	0.34	0.10	mg/L	MCAWW 300.0A	08/12/11	1224143
		Dilution Factor: 1		Analysis Time...: 02:31		
Nitrate	44.8	2.0	mg/L	MCAWW 300.0A	08/12/11	1224144
		Dilution Factor: 100		Analysis Time...: 03:00		
Nitrite	0.10 B	0.20	mg/L	MCAWW 300.0A	08/12/11	1224145
		Dilution Factor: 10		Analysis Time...: 02:45		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224146
		Dilution Factor: 1		Analysis Time...: 02:31		
Sulfate	782	50.0	mg/L	MCAWW 300.0A	08/12/11	1224147
		Dilution Factor: 100		Analysis Time...: 03:00		
Total Alkalinity	88.4	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	2130	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H110460
 MB Lot-Sample #: F1H180000-199

Work Order #...: MLTVV1AA

Matrix.....: WATER

Analysis Date...: 08/18/11

Prep Date.....: 08/18/11

Analysis Time...: 11:50

Dilution Factor: 1

Prep Batch #...: 1230199

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	107	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H110460

Work Order #...: MLTVV1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2-Dichloroethane-d4	106	(70 - 120)		
4-Bromofluorobenzene	100	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H120000-017 Prep Batch #... : 1224017						
Uranium	ND	1.0	ug/L	SW846 6020A	08/12-08/17/11	MLK321AA
		Dilution Factor: 1				
		Analysis Time...: 21:19				
MB Lot-Sample #: F1H120000-018 Prep Batch #... : 1224018						
Aluminum	ND	200	ug/L	SW846 6010C	08/12-08/20/11	MLK351AD
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Antimony	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AU
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AA
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Barium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AE
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AF
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AH
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Calcium	ND	1000	ug/L	SW846 6010C	08/12-08/20/11	MLK351AG
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Chromium	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AK
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AJ
		Dilution Factor: 1				
		Analysis Time...: 13:13				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AL
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Iron	ND	100	ug/L	SW846 6010C	08/12-08/20/11	MLK351AM
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Lead	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AT
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Magnesium	ND	1000	ug/L	SW846 6010C	08/12-08/20/11	MLK351AN
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Manganese	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AP
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Nickel	ND	40.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AR
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Selenium	ND	15.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AV
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Silver	ND	10.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AC
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Sodium	498 J	1000	ug/L	SW846 6010C	08/12-08/19/11	MLK351AQ
		Dilution Factor: 1				
		Analysis Time...: 16:13				
Strontium	ND	5.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AW
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Thallium	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351AX
		Dilution Factor: 1				
		Analysis Time...: 13:13				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351A0
		Dilution Factor: 1				
		Analysis Time...: 13:13				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/12-08/20/11	MLK351A1

Dilution Factor: 1
Analysis Time..: 13:13

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLTCF1AA 0.20	mg/L	MB Lot-Sample #: F1H120000-148 MCAWW 300.0A	08/12/11	1224148
		Dilution Factor: 1 Analysis Time...: 04:20				
Fluoride	ND	Work Order #: MLPTC1AA 0.10	mg/L	MB Lot-Sample #: F1H120000-143 MCAWW 300.0A	08/11/11	1224143
		Dilution Factor: 1 Analysis Time...: 07:04				
Nitrate	ND	Work Order #: MLPTD1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-144 MCAWW 300.0A	08/11/11	1224144
		Dilution Factor: 1 Analysis Time...: 07:04				
Nitrite	ND	Work Order #: MLPTF1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-145 MCAWW 300.0A	08/11/11	1224145
		Dilution Factor: 1 Analysis Time...: 07:04				
Phosphate as P, Ortho	0.084 B	Work Order #: MLPTG1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-146 MCAWW 300.0A	08/11/11	1224146
		Dilution Factor: 1 Analysis Time...: 07:04				
Sulfate	ND	Work Order #: MLPTJ1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-147 MCAWW 300.0A	08/11/11	1224147
		Dilution Factor: 1 Analysis Time...: 07:04				
Total Alkalinity	ND	Work Order #: MLWW41AC 5.0	mg/L	MB Lot-Sample #: F1H220000-085 MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: MLQ6G1AA 10.0	mg/L	MB Lot-Sample #: F1H170000-108 MCAWW 160.1	08/17-08/22/11	1229108
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H110460 Work Order #...: MLTVV1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-199
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 10:30
 Dilution Factor: 1

PARAMETER	PERCENT	RECOVERY	METHOD
	RECOVERY	LIMITS	
1,2-Dichloroethane	97	(70 - 130)	SW846 8260B
Benzene	95	(80 - 120)	SW846 8260B
Trichloroethene	90	(70 - 125)	SW846 8260B
1,2-Dichloropropane	91	(75 - 125)	SW846 8260B
Bromodichloromethane	98	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	98	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	107	(55 - 140)	SW846 8260B
Toluene	103	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	102	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	96	(75 - 125)	SW846 8260B
2-Hexanone	95	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	103	(60 - 135)	SW846 8260B
Chlorobenzene	96	(80 - 120)	SW846 8260B
Bromoform	108	(70 - 130)	SW846 8260B
Ethylbenzene	101	(75 - 125)	SW846 8260B
Styrene	109	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	93	(65 - 130)	SW846 8260B
Tetrachloroethene	101	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	104	(70 - 130)	SW846 8260B
Dibromochloromethane	104	(60 - 135)	SW846 8260B
Vinyl chloride	87	(50 - 145)	SW846 8260B
Bromomethane	99	(30 - 145)	SW846 8260B
Chloroethane	90	(60 - 135)	SW846 8260B
Acetone	93	(40 - 140)	SW846 8260B
1,1-Dichloroethene	95	(70 - 130)	SW846 8260B
Methylene chloride	88	(55 - 140)	SW846 8260B
Carbon disulfide	84	(35 - 160)	SW846 8260B
1,1-Dichloroethane	93	(70 - 135)	SW846 8260B
2-Butanone	88	(30 - 150)	SW846 8260B
1,2-Dichloroethene	96	(85 - 115)	SW846 8260B
(total)			
Chloroform	93	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	99	(65 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H110460 Work Order #...: MLTVV1AC Matrix.....: WATER
LCS Lot-Sample#: F1H180000-199

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Carbon tetrachloride	99	(65 - 140)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	105	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	101	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H120000-017 Prep Batch #... : 1224017					
Uranium	103	(80 - 120)	SW846 6020A	08/12-08/17/11	MLK321AC
		Dilution Factor: 1		Analysis Time...: 21:25	
LCS Lot-Sample#: F1H120000-018 Prep Batch #... : 1224018					
Arsenic	101	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A2
		Dilution Factor: 1		Analysis Time...: 13:20	
Silver	92	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A3
		Dilution Factor: 1		Analysis Time...: 13:20	
Aluminum	100	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A4
		Dilution Factor: 1		Analysis Time...: 13:20	
Barium	103	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A5
		Dilution Factor: 1		Analysis Time...: 13:20	
Beryllium	108	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A6
		Dilution Factor: 1		Analysis Time...: 13:20	
Calcium	104	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A7
		Dilution Factor: 1		Analysis Time...: 13:20	
Cadmium	102	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A8
		Dilution Factor: 1		Analysis Time...: 13:20	
Cobalt	98	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351A9
		Dilution Factor: 1		Analysis Time...: 13:20	
Chromium	98	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CA
		Dilution Factor: 1		Analysis Time...: 13:20	
Copper	97	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CC
		Dilution Factor: 1		Analysis Time...: 13:20	
Iron	102	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CD
		Dilution Factor: 1		Analysis Time...: 13:20	
Magnesium	100	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CE
		Dilution Factor: 1		Analysis Time...: 13:20	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	101	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CF
		Dilution Factor: 1		Analysis Time...: 13:20	
Sodium	111	(80 - 120)	SW846 6010C	08/12-08/19/11	MLK351CG
		Dilution Factor: 1		Analysis Time...: 16:20	
Nickel	99	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CH
		Dilution Factor: 1		Analysis Time...: 13:20	
Lead	99	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CJ
		Dilution Factor: 1		Analysis Time...: 13:20	
Antimony	103	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CK
		Dilution Factor: 1		Analysis Time...: 13:20	
Selenium	102	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CL
		Dilution Factor: 1		Analysis Time...: 13:20	
Strontium	109	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CM
		Dilution Factor: 1		Analysis Time...: 13:20	
Thallium	98	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CN
		Dilution Factor: 1		Analysis Time...: 13:20	
Vanadium	99	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CP
		Dilution Factor: 1		Analysis Time...: 13:20	
Zinc	108	(80 - 120)	SW846 6010C	08/12-08/20/11	MLK351CQ
		Dilution Factor: 1		Analysis Time...: 13:20	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H110460

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	91	(90 - 110)	Work Order #: MLTCF1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-148 08/12/11 Analysis Time...: 04:05	1224148
Fluoride	93	(90 - 110)	Work Order #: MLPTC1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-143 08/11/11 Analysis Time...: 06:49	1224143
Nitrate	97	(90 - 110)	Work Order #: MLPTD1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-144 08/11/11 Analysis Time...: 06:49	1224144
Nitrite	96	(90 - 110)	Work Order #: MLPTF1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-145 08/11/11 Analysis Time...: 06:49	1224145
Phosphate as P, Ortho	97	(90 - 110)	Work Order #: MLPTG1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-146 08/11/11 Analysis Time...: 06:49	1224146
Sulfate	93	(90 - 110)	Work Order #: MLPTJ1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-147 08/11/11 Analysis Time...: 06:49	1224147
Total Alkalinity	93	(90 - 110)	Work Order #: MLWW41AA MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H220000-085 08/22/11 Analysis Time...: 00:00	1234085
Total Alkalinity	94	(90 - 110)	Work Order #: MLWW41AD MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H220000-085 08/22/11 Analysis Time...: 00:00	1234085
Total Dissolved Solids	97	(90 - 113)	Work Order #: MLQ6G1AC MCAWW 160.1 Dilution Factor: 1	LCS Lot-Sample#: F1H170000-108 08/17-08/22/11 Analysis Time...: 00:00	1229108

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H110460 Work Order #...: MLLN11CV-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-006 MLLN11CW-MSD
 Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 19:05
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	86	(70 - 130)			SW846 8260B
	98	(70 - 130)	13	(0-20)	SW846 8260B
Dibromochloromethane	94	(60 - 135)			SW846 8260B
	103	(60 - 135)	8.5	(0-20)	SW846 8260B
Vinyl chloride	78	(50 - 145)			SW846 8260B
	91	(50 - 145)	15	(0-20)	SW846 8260B
Bromomethane	87	(30 - 145)			SW846 8260B
	95	(30 - 145)	9.2	(0-20)	SW846 8260B
Chloroethane	87	(60 - 135)			SW846 8260B
	97	(60 - 135)	11	(0-20)	SW846 8260B
Acetone	94	(40 - 140)			SW846 8260B
	96	(40 - 140)	2.0	(0-20)	SW846 8260B
1,1-Dichloroethene	97	(70 - 130)			SW846 8260B
	105	(70 - 130)	7.2	(0-20)	SW846 8260B
Methylene chloride	88	(55 - 140)			SW846 8260B
	95	(55 - 140)	7.3	(0-20)	SW846 8260B
Carbon disulfide	91	(35 - 160)			SW846 8260B
	96	(35 - 160)	5.6	(0-20)	SW846 8260B
1,1-Dichloroethane	92	(70 - 135)			SW846 8260B
	100	(70 - 135)	8.3	(0-20)	SW846 8260B
2-Butanone	88	(30 - 150)			SW846 8260B
	94	(30 - 150)	7.1	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	91	(85 - 115)			SW846 8260B
	100	(85 - 115)	9.8	(0-20)	SW846 8260B
Chloroform	89	(65 - 135)			SW846 8260B
	97	(65 - 135)	8.4	(0-20)	SW846 8260B
1,1,1-Trichloroethane	95	(65 - 130)			SW846 8260B
	103	(65 - 130)	8.8	(0-20)	SW846 8260B
Carbon tetrachloride	95	(65 - 140)			SW846 8260B
	103	(65 - 140)	8.2	(0-20)	SW846 8260B
1,2-Dichloroethane	89	(70 - 130)			SW846 8260B
	100	(70 - 130)	12	(0-20)	SW846 8260B
Benzene	92	(80 - 120)			SW846 8260B
	100	(80 - 120)	8.3	(0-20)	SW846 8260B
Trichloroethene	89	(70 - 125)			SW846 8260B
	93	(70 - 125)	4.5	(0-20)	SW846 8260B
1,2-Dichloropropane	89	(75 - 125)			SW846 8260B
	96	(75 - 125)	8.4	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H110460 Work Order #...: MLLN11CV-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-006 MLLN11CW-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	94	(75 - 120)			SW846 8260B
	102	(75 - 120)	8.1	(0-20)	SW846 8260B
1,1,2-Trichloroethane	92	(75 - 125)			SW846 8260B
	102	(75 - 125)	11	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	96	(55 - 140)			SW846 8260B
	106	(55 - 140)	9.7	(0-20)	SW846 8260B
Toluene	100	(75 - 120)			SW846 8260B
	103	(75 - 120)	3.2	(0-20)	SW846 8260B
1,3-Dichlorobenzene	98	(75 - 125)			SW846 8260B
	102	(75 - 125)	3.4	(0-20)	SW846 8260B
1,4-Dichlorobenzene	94	(75 - 125)			SW846 8260B
	99	(75 - 125)	4.5	(0-20)	SW846 8260B
2-Hexanone	82	(55 - 130)			SW846 8260B
	98	(55 - 130)	17	(0-20)	SW846 8260B
4-Methyl-2-pentanone	88	(60 - 135)			SW846 8260B
	102	(60 - 135)	15	(0-20)	SW846 8260B
Chlorobenzene	93	(80 - 120)			SW846 8260B
	98	(80 - 120)	5.5	(0-20)	SW846 8260B
Bromoform	100	(70 - 130)			SW846 8260B
	108	(70 - 130)	7.6	(0-20)	SW846 8260B
Ethylbenzene	98	(75 - 125)			SW846 8260B
	104	(75 - 125)	5.7	(0-20)	SW846 8260B
Styrene	106	(65 - 135)			SW846 8260B
	112	(65 - 135)	6.0	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	90	(65 - 130)			SW846 8260B
	99	(65 - 130)	9.1	(0-20)	SW846 8260B
Tetrachloroethene	96	(45 - 150)			SW846 8260B
	101	(45 - 150)	5.7	(0-20)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 120)			SW846 8260B
	100	(70 - 120)	5.3	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(85 - 120)
	105	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
	108	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
	105	(70 - 120)
4-Bromofluorobenzene	97	(75 - 120)
	98	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H110460

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H110460-001 Prep Batch #...: 1224017						
Uranium	102	(80 - 120)		SW846 6020A	08/12-08/17/11	MLKHP1A5
	102	(80 - 120)	0.17 (0-20)	SW846 6020A	08/12-08/17/11	MLKHP1A6
			Dilution Factor: 1			
			Analysis Time...: 21:45			
MS Lot-Sample #: F1H110460-001 Prep Batch #...: 1224018						
Aluminum	99	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1CC
	99	(80 - 120)	0.34 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CD
			Dilution Factor: 1			
			Analysis Time...: 13:32			
Antimony	100	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1C9
	99	(80 - 120)	1.1 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1DA
			Dilution Factor: 1			
			Analysis Time...: 13:32			
Arsenic	100	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1A7
	99	(80 - 120)	1.2 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1A8
			Dilution Factor: 1			
			Analysis Time...: 13:32			
Barium	97	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1CE
	98	(80 - 120)	1.0 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CF
			Dilution Factor: 1			
			Analysis Time...: 13:32			
Beryllium	104	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1CG
	105	(80 - 120)	1.1 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CH
			Dilution Factor: 1			
			Analysis Time...: 13:32			
Cadmium	97	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1CL
	95	(80 - 120)	1.7 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CM
			Dilution Factor: 1			
			Analysis Time...: 13:32			
Calcium	85	(80 - 120)		SW846 6010C	08/12-08/20/11	MLKHP1CJ
	90	(80 - 120)	0.43 (0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CK
			Dilution Factor: 1			
			Analysis Time...: 13:32			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	93	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1CQ
	93	(80 - 120)	0.12	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CR
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Cobalt	92	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1CN
	92	(80 - 120)	0.53	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CP
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Copper	95	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1CT
	95	(80 - 120)	0.19	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CU
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Iron	96	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1CV
	95	(80 - 120)	0.44	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CW
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Lead	92	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1C7
	91	(80 - 120)	1.4	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1C8
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Magnesium	90	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1CX
	93	(80 - 120)	0.86	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1C0
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Manganese	95	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1C1
	95	(80 - 120)	0.34	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1C2
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Nickel	93	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1C5
	92	(80 - 120)	1.8	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1C6
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Selenium	100	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1DC
	98	(80 - 120)	2.3	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1DD
			Dilution Factor: 1				
			Analysis Time...: 13:32				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H110460

Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	90	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1A9
	90	(80 - 120)	0.34	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1CA
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Sodium	80	(80 - 120)			SW846 6010C	08/12-08/19/11	MLKHP1C3
	85	(80 - 120)	0.17	(0-20)	SW846 6010C	08/12-08/19/11	MLKHP1C4
			Dilution Factor: 5				
			Analysis Time...: 16:32				
Strontium	103	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1DE
	103	(80 - 120)	0.09	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1DF
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Thallium	91	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1DG
	90	(80 - 120)	1.2	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1DH
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Vanadium	95	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1DJ
	95	(80 - 120)	0.32	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1DK
			Dilution Factor: 1				
			Analysis Time...: 13:32				
Zinc	106	(80 - 120)			SW846 6010C	08/12-08/20/11	MLKHP1DL
	104	(80 - 120)	2.2	(0-20)	SW846 6010C	08/12-08/20/11	MLKHP1DM
			Dilution Factor: 1				
			Analysis Time...: 13:32				

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H110460

Matrix.....: WATER

Date Sampled...: 08/10/11 08:30 Date Received...: 08/11/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	103	Work Order #...: MLKJL1CV (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/13/11	1224148
		Dilution Factor: 500		Analysis Time...: 11:47	
Chloride	95	Work Order #...: MLN11CG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224148
		Dilution Factor: 100		Analysis Time...: 05:18	
Fluoride	102	Work Order #...: MLKJL1CH (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/11/11	1224143
		Dilution Factor: 1		Analysis Time...: 07:18	
Nitrate	98	Work Order #...: MLKJL1CK (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/11/11	1224144
		Dilution Factor: 1		Analysis Time...: 07:18	
Nitrite	58 N	Work Order #...: MLKJL1CM (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/11/11	1224145
		Dilution Factor: 10		Analysis Time...: 07:33	
Phosphate as P, Ortho	77 N	Work Order #...: MLKJL1CP (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/11/11	1224146
		Dilution Factor: 1		Analysis Time...: 07:18	
Sulfate	97	Work Order #...: MLKJL1CR (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/11/11	1224147
		Dilution Factor: 10		Analysis Time...: 07:33	
Total Alkalinity	96	Work Order #...: MLKJ51CF (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H110460-009 08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H110460

Work Order #...: MLLN1-SMP
MLLN1-DUP

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Chloride	87.7	86.1	mg/L	1.9	(0-20)	SD Lot-Sample #: F1H120447-006 MCAWW 300.0A	08/12/11	1224148
				Dilution Factor: 100		Analysis Time...: 05:18		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H110460

Work Order #...: MLKJL-SMP

Matrix.....: WATER

MLKJL-DUP

Date Sampled...: 08/10/11 08:30

Date Received...: 08/11/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	1240	1240	mg/L	0.81	(0-0.0)	MCAWW 160.1	08/17-08/22/11	1229108
				Dilution Factor: 1		Analysis Time...: 00:00		
Fluoride	1.2	1.2	mg/L	1.0	(0-20)	MCAWW 300.0A	08/11/11	1224143
				Dilution Factor: 1		Analysis Time...: 07:18		
Nitrate	0.044	0.043	mg/L	0.76	(0-20)	MCAWW 300.0A	08/11/11	1224144
				Dilution Factor: 1		Analysis Time...: 07:18		
Nitrite	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/11/11	1224145
				Dilution Factor: 10		Analysis Time...: 07:33		
Phosphate as P, Ortho	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/11/11	1224146
				Dilution Factor: 1		Analysis Time...: 07:18		
Sulfate	50.2	49.7	mg/L	1.1	(0-20)	MCAWW 300.0A	08/11/11	1224147
				Dilution Factor: 10		Analysis Time...: 07:33		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F1H110460 Work Order #....: MLKJ5-SMP Matrix.....: WATER
MLKJ5-DUP
Date Sampled....: 08/10/11 09:30 Date Received...: 08/11/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	256	257	mg/L	0.31	(0-20)	SD Lot-Sample #: F1H110460-009 MCAWW 310.1	08/22/11	1234085
				Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04MW604D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-001
 Work Order: MLKHP
 Matrix: WATER

Date Collected: 08/10/11 0830
 Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 57
Uranium 234	31.4		2.9	0.1	0.06	08/19/11	08/21/11
Uranium 235/236	1.52		0.33	0.10	0.04	08/19/11	08/21/11
Uranium 238	30.4		2.8	0.1	0.03	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H110460

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-002
 Work Order: MLKHV
 Matrix: WATER

Date Collected: 08/10/11 0930
 Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 67
Uranium 234	18.5		1.8	0.1	0.06	08/19/11	08/21/11
Uranium 235/236	0.70		0.20	0.10	0.07	08/19/11	08/21/11
Uranium 238	17.4		1.7	0.1	0.06	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW605D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-003
 Work Order: MLKH4
 Matrix: WATER

Date Collected: 08/10/11 1015
 Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 37
Uranium 234	68.6		6.2	0.1	0.09	08/19/11	08/21/11
Uranium 235/236	3.38		0.64	0.10	0.06	08/19/11	08/21/11
Uranium 238	67.1		6.1	0.1	0.2	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW260001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-004
Work Order: MLKH8
Matrix: WATER

Date Collected: 08/10/11 1320
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 53
Uranium 234	32.1		3.0	0.1	0.09	08/19/11	08/21/11
Uranium 235/236	1.62		0.35	0.10	0.1	08/19/11	08/21/11
Uranium 238	32.7		3.0	0.1	0.08	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-005
Work Order: MLKJD
Matrix: WATER

Date Collected: 08/10/11 0000
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 35
Uranium 234	70.0		6.3	0.1	0.1	08/19/11	08/21/11
Uranium 235/236	3.67		0.66	0.10	0.06	08/19/11	08/21/11
Uranium 238	67.5		6.1	0.1	0.1	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H110460

83 of 109

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-006
Work Order: MLKJE
Matrix: WATER

Date Collected: 08/10/11 0000
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1231145		Yld % 74
Uranium 234	10.8		1.1	0.1	0.04	08/19/11	08/21/11
Uranium 235/236	0.41		0.14	0.10	0.07	08/19/11	08/21/11
Uranium 238	8.77		0.93	0.10	0.06	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H110460-007
 Work Order: MLKJJ
 Matrix: WATER

Date Collected: 08/10/11 1115
 Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 74
Uranium 234	10.8		1.1	0.1	0.06	08/19/11	08/21/11
Uranium 235/236	0.46		0.15	0.10	0.06	08/19/11	08/21/11
Uranium 238	8.36		0.89	0.10	0.06	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW604D0001

Radiochemistry

Lab Sample ID: F1H110460-008

Date Collected: 08/10/11 0830

Work Order: MLKJL

Date Received: 08/11/11 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 45
Uranium 234	37.1		3.5	0.1	0.1	08/19/11	08/21/11
Uranium 235/236	1.79		0.40	0.10	0.05	08/19/11	08/21/11
Uranium 238	37.0		3.5	0.1	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709D0001

Radiochemistry

Lab Sample ID: F1H110460-009
Work Order: MLKJ5
Matrix: WATER

Date Collected: 08/10/11 0930
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 65
Uranium 234	16.8		1.6	0.1	0.06	08/19/11	08/21/11
Uranium 235/236	0.71		0.20	0.10	0.06	08/19/11	08/21/11
Uranium 238	16.0		1.6	0.1	0.07	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H110460

87 of 109

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0001

Radiochemistry

Lab Sample ID: F1H110460-010
 Work Order: MLKKA
 Matrix: WATER

Date Collected: 08/10/11 1015
 Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 40
Uranium 234	67.5		6.1	0.1	0.1	08/19/11	08/21/11
Uranium 235/236	3.43		0.61	0.10	0.1	08/19/11	08/21/11
Uranium 238	65.8		5.9	0.1	0.1	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260001

Radiochemistry

Lab Sample ID: F1H110460-011
 Work Order: MLKKD
 Matrix: WATER

Date Collected: 08/10/11 1320
 Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 52
Uranium 234	34.7		3.2	0.1	0.09	08/19/11	08/21/11
Uranium 235/236	1.97		0.39	0.10	0.07	08/19/11	08/21/11
Uranium 238	35.0		3.2	0.1	0.03	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9000

Radiochemistry

Lab Sample ID: F1H110460-012
Work Order: MLKKH
Matrix: WATER

Date Collected: 08/10/11 0000
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 38
Uranium 234	69.2		6.2	0.1	0.1	08/19/11	08/21/11
Uranium 235/236	3.13		0.60	0.10	0.10	08/19/11	08/21/11
Uranium 238	68.1		6.1	0.1	0.08	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9001

Radiochemistry

Lab Sample ID: F1H110460-013
Work Order: MLKKK
Matrix: WATER

Date Collected: 08/10/11 0000
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 80
Uranium 234	9.54		0.99	0.10	0.05	08/19/11	08/21/11
Uranium 235/236	0.30		0.12	0.10	0.05	08/19/11	08/21/11
Uranium 238	7.26		0.79	0.10	0.04	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0001

Radiochemistry

Lab Sample ID: F1H110460-014
Work Order: MLKKN
Matrix: WATER

Date Collected: 08/10/11 1115
Date Received: 08/11/11 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231145	Yld % 79
Uranium 234	9.35		0.98	0.10	0.05	08/19/11	08/21/11
Uranium 235/236	0.38		0.13	0.10	0.03	08/19/11	08/21/11
Uranium 238	7.31		0.80	0.10	0.05	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H110460

92 of 109

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H110460
Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Prep Date	Lab Sample ID
			(2 σ+/-)				Analysis Date
<hr/>							
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1231145	Yld % 98	F1H190000-145B
Uranium 234	0.005	U	0.015	0.100	0.033	08/19/11	08/21/11
Uranium 235/236	0.0	U	0.0089	0.100	0.024	08/19/11	08/21/11
Uranium 238	0.005	U	0.015	0.100	0.032	08/19/11	08/21/11
<hr/>							

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H110460

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H190000-145C	
Uranium 234	3.26	3.55	0.47	79	109	(76 - 136)	
Spk 2	3.26	3.11	0.40	88	95	(76 - 136)	13 %RPD
Uranium 238	3.39	3.48	0.46	79	103	(76 - 134)	
Spk 2	3.39	3.41	0.43	88	101	(76 - 134)	2 %RPD
Batch #:		1231145		Analysis Date: 08/21/11			

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guteryl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-11
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22

Report Type: B Standard Report
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04MW604D0001 DISSOLVED			2011-08-10 / 830	MLKHP	WATER
<u>SAMPLE COMMENTS:</u>						
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A04DMW709DD0001 DISSOLVED			2011-08-10 / 930	MLKHV	WATER
<u>SAMPLE COMMENTS:</u>						
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

TestAmerica - St. Louis

F1H110460

Logged In by: WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

95 of 109

Page 1 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256

Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
SDG:
Guteryl Steel
Report to: [REDACTED]

Date Received: 2011-08-11
Analytical Due Date: 2011-08-19
Report Due Date: 2011-08-22

Report Type: B Standard Report
EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04BMW605D0001 DISSOLVED			2011-08-10 / 1015	MLKH4	WATER
<u>SAMPLE COMMENTS:</u>						
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X

F1H110460

TestAmerica - St. Louis

Logged in by: WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

96 of 109

Page 2 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guteryl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-11
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22

Report Type: B Standard Report
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A04BMW260001 DISSOLVED			2011-08-10 / 1320	MLKH8	WATER

SAMPLE COMMENTS:

ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06

F1H110460

TestAmerica - St. Louis

Logged in by: WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

97 of 109

Page 3 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 0

Date Received: 2011-08-11
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
SAMPLE #		CLIENT SAMPLE ID			Site ID	Client Matrix	DATE/TIME SAMPLED		WORKORDER I		
5		A04BMW9000 DISSOLVED					2011-08-10 / 0		MLKJD	WATER	
SAMPLE COMMENTS:											
MN	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID			Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER			!	
6	A04BMW9001 DISSOLVED					2011-08-10 / 0	MLKJE			WATER	
<u>SAMPLE COMMENTS:</u>											
MN	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-11

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706

Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!			
7	A04DMW704DD0001 DISSOLVED			2011-08-10 / 1115	MLKJJ	WATER			
SAMPLE COMMENTS:									
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-11

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER
 8 A04MW604D0001 2011-08-10 / 830 MLKJL WATER

SAMPLE COMMENTS:

CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

TestAmerica - St. Louis

Logged in by: WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

100 of 109

Page 6 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Lot: R256, V11

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-11

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW	300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A04DMW709D0001			2011-08-10 / 930	MLKJ5	WATER

SAMPLE COMMENTS:

PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256,V11

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 0

Date Received: 2011-08-11
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

10 A04BMW605D0001 2011-08-10 / 1015 MLKKA WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	

F1H110460

TestAmerica - St. Louis

Logged in by: WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

102 of 109

Page 8 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256,V11

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-11

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706

Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
11	A04BMW260001			2011-08-10 / 1320	MLKKD	WATER

SAMPLE COMMENTS:

VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

TestAmerica - St. Louis

Logged in by:

WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

103 of 109

Page 9 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256,V11

Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guteryl Steel
Report to: [REDACTED]

#SMPS in LOT: 0

Date Received: 2011-08-11
Analytical Due Date: 2011-08-19
Report Due Date: 2011-08-22
Report Type: B Standard Report
EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER
12	A04BMW9000			2011-08-10 / 0	MLKKH WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

TestAmerica - St. Louis

Logged in by:

WILSONS

2011-08-11

13:23:13

printed on: Thursday, August 11, 2011 03:03 P

104 of 109

Page 10 of 13

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256,V11

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 0

Date Received: 2011-08-11
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	
13	A04BMW9001			2011-08-10 / 0	MLKKK	WATER

SAMPLE COMMENTS:

CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

105 of 109

F1H110460

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R256,V11

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-11

Project: 140415

Guteryl Steel

Analytical Due Date: 2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
14	A04DMW704DD0001			2011-08-10 / 1115	MLKKN	WATER

SAMPLE COMMENTS:

CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H110460

106 of 109

F1H110460

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R256,V11

Project Manager: LMF Quote #: 89251 SDG:
Project: 140415 Guteryl Steel
PO#: 697886 Report to: XXXXXXXXXX
Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-11
Analytical Due Date: 2011-08-19
Report Due Date: 2011-08-22

Report Type: B Standard Report
EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW W	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW W	300.0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW W	300.0A	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW W	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW W	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW W	300.0A	WATER, 300.0A, Phosphate as P, Ortho	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW W	300.0A	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW W	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Karl Van Keuren, PG, PMP						Date: 08/10/2011								COC No: 006					
Law Environmental & Infrastructure, Inc.	Tel/Fax: (513) 782-4745 / (513) 782-4807						Lab Contact: Lynn Fussner								Carrier:		1 of 1 COCs			
50 Section Avenue Cincinnati, Ohio 45212	Analysis Turnaround Time																Job No. 140416.09020100			
3) 782-4700 Phone	Calendar (C) or Work Days (W)																			
3) 782-4807 FAX	TAT if different from Below _____																			
Subject Name: Former Guterl Specialty Steel Corporation FUSRA	<input checked="" type="checkbox"/> 2 weeks																			
Address: Lockport, NY	<input type="checkbox"/> 1 week																			
Contact #	<input type="checkbox"/> 2 days																			
	<input type="checkbox"/> 1 day																			
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Isotopic Thorium (α -spec)	Isotopic Uranium (α -spec)	Total Uranium	TAL Metals except Mercury	Anions	Alkalinity	Total Dissolved Solids	Volatile Organic Compounds (VOCs)	TCCLP Volatiles	TCCLP Semi-volatiles	TCCLP Metals except Mercury	Mercury	Sample Specific Notes:	
4MW604D0001	8/10/2011	0830	Grab	GW	10	X	X	X	X	X	X	X	X	X						
4DMW709DD0001	8/10/2011	0930	Grab	GW	10	X	X	X	X	X	X	X	X	X						
4BMW605D0001	8/10/2011	1015	Grab	GW	10	X	X	X	X	X	X	X	X	X						
4BMW260001	8/10/2011	1320	Grab	GW	10	X	X	X	X	X	X	X	X	X						
4BMW9000	8/10/2011	--	Grab	GW	10	X	X	X	X	X	X	X	X	X						
4BMW9001	8/10/2011	--	Grab	GW	10	X	X	X	X	X	X	X	X	X						
4DMW704DD0001	8/10/2011	1115	Grab	GW	10	X	X	X	X	X	X	X	X	X						
Preservation Used: 1= Ice, 2= HCl; 3= H ₂ SO ₄ ; 4=HNO ₃ ; 5=NaOH; 6= Other 1, 2, and 4						Total Dissolved Solids 2xLP 250P 250P 500P 8.1.1A 5x40														
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)														
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months														

Special Instructions/QC Requirements & Comments:			
inqu	[REDACTED]	Company: Shaw E & I. Inc.	Date/Time: 8/10/11 17:00
inqu	[REDACTED]	Company: TEST AMERICA	Date/Time: 8/10/2011 @ 17:00
inqu	[REDACTED]	Company: TEST AMERICA	Date/Time: 8/11/11 0930
inqu	[REDACTED]	Company:	Date/Time:

CONDITION UPON RECEIPT FORM

Client: Shaw Env.

Quote No: 89251

COC/RFA No: EN 006

Initiated By: EN

Date: 8.11.11

Time: 0930



Shipping Information

Shipper: FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

Y N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 3333
2. 3403
3. 3425
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 2
2. ambient
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. <u>Y</u> <u>N</u>	Are there custody seals present on bottles?
2. <u>Y</u> <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. <u>Y</u> <u>N</u> <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> <u>N</u> N/A	Was sample received with proper pH? (if not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. <u>Y</u> <u>N</u> <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. <u>Y</u> <u>N</u>	Was sample received broken?	13. <u>Y</u> <u>N</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. <u>Y</u> N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

M
A048W709000001 filtered & total and
60400001
had pH of 7; per L.F. used HNO₃ lot K11059
to correct pH.

Corrective Action:

☐ Client Contact Name:

Informed by:

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until:

If released, notify:

Project Management Review:

Date: 8/12/11

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON MUST APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.


TestAmerica Laboratories, Inc.

ANALYTICAL REPORT


PROJECT NO. Y40415

Guteryl Steel

Lot #: F1H120447


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


August 25, 2011

Case Narrative
LOT NUMBER: F1H120447

This report contains the analytical results for the 10 samples received under chain of custody by TestAmerica in St. Louis on August 12, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1230199 and 1231041**

Tetrahydrofuran was removed from the initial calibration lowest point due to poor response. Isobutanol, n-Butanol, 2-Chloroethylvinyl ether, 4-Methyl-2-pentanone and 2-Hexanone were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration. The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

Affected Samples:

F1H120447 (6): A04MW602D0001

F1H120447 (7): A04MW702DD0001

F1H120447 (9): A04DMW708DD0001

F1H120447 (10): A04DMW9002

Batch: 1230199

The internal standard(s) recovery is outside the lower QC limit, indicating a potential positive bias. There were no target analytes associated with this internal standard observed above the reporting limit in the sample; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H120447 (6): A04MW602D0001

Batch: 1231041

The sample was analyzed at a dilution due to high concentrations of target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

The internal standard recoveries are within QC limits as compared to the IS limits set by the CCV for this 12 hour clock. However, the client requirement for DOD4.1 has the IS limits set to the mid-point of the ICAL as requested. The internal standard(s) recovery is outside the lower QC limit, indicating a potential positive bias. There were no target analytes associated with this internal standard observed above the reporting limit in the sample; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H120447 (9): A04DMW708DD0001

F1H120447 (10): A04DMW9002

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1227139**

The MS (MSD) recovery for calcium and sodium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Strontium was observed in the CCB above the reporting limit. Associated samples which exhibit concentrations greater than ten (10) times the concentrations observed in the CCB, do not require re-analysis.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H120447 (1): A04MW602D0001 DISSOLVED
F1H120447 (2): A04MW702DD0001 DISSOLVED
F1H120447 (3): A03AMW13D0001 DISSOLVED
F1H120447 (4): A04DMW708DD0001 DISSOLVED
F1H120447 (5): A04DMW9002 DISSOLVED
F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

Chloride (MCAWW 300.0A)**Batch: 1224148**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

Fluoride (MCAWW 300.0A)**Batch: 1224149**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

Sulfate (MCAWW 300.0A)**Batch: 1224153**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

Nitrite as N (MCAWW 300.0A)**Batch: 1224151**

The following samples were reported ND at dilution for Nitrite, due to interference with Chloride in the undiluted runs. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1224152**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample provided to perform the sample duplicate, an LCS duplicate was used instead.

Affected Samples:

F1H120447 (1): A04MW602D0001 DISSOLVED
F1H120447 (2): A04MW702DD0001 DISSOLVED
F1H120447 (3): A03AMW13D0001 DISSOLVED
F1H120447 (4): A04DMW708DD0001 DISSOLVED
F1H120447 (5): A04DMW9002 DISSOLVED
F1H120447 (6): A04MW602D0001
F1H120447 (7): A04MW702DD0001
F1H120447 (8): A03AMW13D0001
F1H120447 (9): A04DMW708DD0001
F1H120447 (10): A04DMW9002

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. Count times were adjusted accordingly to meet client reporting limits. The Uranium reporting limit was achieved without adjustment to the count time.

Affected Samples:

F1H120447 (1): A04MW602D0001 DISSOLVED

Total Dissolved Solids (MCAWW 160.1)

The samples were analyzed at a dilution based on high concentrations of target analytes. The reporting limit has been adjusted accordingly.

Affected Samples:

F1H120447 (7): A04MW702DD0001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H120447

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H120447

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLLNJ	001	A04MW602D0001 DISSOLVED	08/11/11	09:15
MLLNT	002	A04MW702DD0001 DISSOLVED	08/11/11	10:15
MLLNV	003	A03AMW13D0001 DISSOLVED	08/11/11	12:00
MLLNW	004	A04DMW708DD0001 DISSOLVED	08/11/11	14:10
MLLNK	005	A04DMW9002 DISSOLVED	08/11/11	
MLLN1	006	A04MW602D0001	08/11/11	09:15
MLLN7	007	A04MW702DD0001	08/11/11	10:15
MLLN9	008	A03AMW13D0001	08/11/11	12:00
MLLPA	009	A04DMW708DD0001	08/11/11	14:10
MLLPE	010	A04DMW9002	08/11/11	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-001

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	112	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLNJ1A3
		Dilution Factor: 1		Analysis Time...: 17:59		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AD
		Dilution Factor: 1		Analysis Time...: 10:13		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AE
		Dilution Factor: 1		Analysis Time...: 10:13		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AC
		Dilution Factor: 1		Analysis Time...: 10:13		
Barium	26.0 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AF
		Dilution Factor: 1		Analysis Time...: 10:13		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AG
		Dilution Factor: 1		Analysis Time...: 10:13		
Calcium	86100	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AH
		Dilution Factor: 1		Analysis Time...: 10:13		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AJ
		Dilution Factor: 1		Analysis Time...: 10:13		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AK
		Dilution Factor: 1		Analysis Time...: 10:13		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AL
		Dilution Factor: 1		Analysis Time...: 10:13		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AM
		Dilution Factor: 1		Analysis Time...: 10:13		
Iron	57.5 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AN
		Dilution Factor: 1		Analysis Time...: 10:13		
Magnesium	39500	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AP
		Dilution Factor: 1		Analysis Time...: 10:13		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	8.4 J	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AQ
		Dilution Factor: 1		Analysis Time...: 10:13		
Sodium	76300 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLNJ1AR
		Dilution Factor: 5		Analysis Time...: 13:01		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AT
		Dilution Factor: 1		Analysis Time...: 10:13		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AU
		Dilution Factor: 1		Analysis Time...: 10:13		
Antimony	6.3 J	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AV
		Dilution Factor: 1		Analysis Time...: 10:13		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AW
		Dilution Factor: 1		Analysis Time...: 10:13		
Strontium	500 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1AX
		Dilution Factor: 1		Analysis Time...: 10:13		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1A0
		Dilution Factor: 1		Analysis Time...: 10:13		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1A1
		Dilution Factor: 1		Analysis Time...: 10:13		
Zinc	20.5	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNJ1A2
		Dilution Factor: 1		Analysis Time...: 10:13		

NOTE(S) :

J Estimated result, Result is less than RL.

B Method blank contamination, Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-002

Matrix.....: WATER

Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	5.8	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLNT1AE
		Dilution Factor: 1		Analysis Time...: 18:26		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AJ
		Dilution Factor: 1		Analysis Time...: 10:32		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AK
		Dilution Factor: 1		Analysis Time...: 10:32		
Arsenic	2.7 J	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AH
		Dilution Factor: 1		Analysis Time...: 10:32		
Barium	11.4 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AL
		Dilution Factor: 1		Analysis Time...: 10:32		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AM
		Dilution Factor: 1		Analysis Time...: 10:32		
Calcium	473000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AN
		Dilution Factor: 1		Analysis Time...: 10:32		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AP
		Dilution Factor: 1		Analysis Time...: 10:32		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AQ
		Dilution Factor: 1		Analysis Time...: 10:32		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AR
		Dilution Factor: 1		Analysis Time...: 10:32		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AT
		Dilution Factor: 1		Analysis Time...: 10:32		
Iron	ND	100	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AU
		Dilution Factor: 1		Analysis Time...: 10:32		
Magnesium	171000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AV
		Dilution Factor: 1		Analysis Time...: 10:32		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	52.4	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AW
		Dilution Factor: 1		Analysis Time...: 10:32		
Sodium	176000 B	20000	ug/L	SW846 6010C	08/15-08/19/11	MLLNT1AX
		Dilution Factor: 20		Analysis Time...: 13:21		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1A0
		Dilution Factor: 1		Analysis Time...: 10:32		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1A1
		Dilution Factor: 1		Analysis Time...: 10:32		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1A2
		Dilution Factor: 1		Analysis Time...: 10:32		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1A3
		Dilution Factor: 1		Analysis Time...: 10:32		
Strontium	9540 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1A4
		Dilution Factor: 1		Analysis Time...: 10:32		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AA
		Dilution Factor: 1		Analysis Time...: 10:32		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AC
		Dilution Factor: 1		Analysis Time...: 10:32		
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNT1AD
		Dilution Factor: 1		Analysis Time...: 10:32		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc.

Client Sample ID: A03AMW13D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-003

Matrix.....: WATER

Date Sampled...: 08/11/11 12:00 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	80.2	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLNVI1AE
		Dilution Factor: 1		Analysis Time...: 18:39		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AJ
		Dilution Factor: 1		Analysis Time...: 10:45		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AK
		Dilution Factor: 1		Analysis Time...: 10:45		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AH
		Dilution Factor: 1		Analysis Time...: 10:45		
Barium	61.3	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AL
		Dilution Factor: 1		Analysis Time...: 10:45		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AM
		Dilution Factor: 1		Analysis Time...: 10:45		
Calcium	50300	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AN
		Dilution Factor: 1		Analysis Time...: 10:45		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AP
		Dilution Factor: 1		Analysis Time...: 10:45		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AQ
		Dilution Factor: 1		Analysis Time...: 10:45		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AR
		Dilution Factor: 1		Analysis Time...: 10:45		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AT
		Dilution Factor: 1		Analysis Time...: 10:45		
Iron	61.8 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AU
		Dilution Factor: 1		Analysis Time...: 10:45		
Magnesium	17600	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AV
		Dilution Factor: 1		Analysis Time...: 10:45		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03AMW13D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	189	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AW
		Dilution Factor: 1		Analysis Time...: 10:45		
Sodium	208000 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLNVI1AX
		Dilution Factor: 5		Analysis Time...: 13:33		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1A0
		Dilution Factor: 1		Analysis Time...: 10:45		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1A1
		Dilution Factor: 1		Analysis Time...: 10:45		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1A2
		Dilution Factor: 1		Analysis Time...: 10:45		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1A3
		Dilution Factor: 1		Analysis Time...: 10:45		
Strontium	176 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1A4
		Dilution Factor: 1		Analysis Time...: 10:45		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AA
		Dilution Factor: 1		Analysis Time...: 10:45		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AC
		Dilution Factor: 1		Analysis Time...: 10:45		
Zinc	168	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNVI1AD
		Dilution Factor: 1		Analysis Time...: 10:45		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-004

Matrix.....: WATER

Date Sampled...: 08/11/11 14:10 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	23.0	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLNW1AE
		Dilution Factor: 1		Analysis Time...: 18:46		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AJ
		Dilution Factor: 1		Analysis Time...: 10:58		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AK
		Dilution Factor: 1		Analysis Time...: 10:58		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AH
		Dilution Factor: 1		Analysis Time...: 10:58		
Barium	11.6 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AL
		Dilution Factor: 1		Analysis Time...: 10:58		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AM
		Dilution Factor: 1		Analysis Time...: 10:58		
Calcium	182000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AN
		Dilution Factor: 1		Analysis Time...: 10:58		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AP
		Dilution Factor: 1		Analysis Time...: 10:58		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AQ
		Dilution Factor: 1		Analysis Time...: 10:58		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AR
		Dilution Factor: 1		Analysis Time...: 10:58		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AT
		Dilution Factor: 1		Analysis Time...: 10:58		
Iron	144	100	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AU
		Dilution Factor: 1		Analysis Time...: 10:58		
Magnesium	51000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AV
		Dilution Factor: 1		Analysis Time...: 10:58		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	11.0 J	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AW
		Dilution Factor: 1		Analysis Time...: 10:58		
Sodium	114000 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLNW1AX
		Dilution Factor: 5		Analysis Time...: 13:46		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1A0
		Dilution Factor: 1		Analysis Time...: 10:58		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1A1
		Dilution Factor: 1		Analysis Time...: 10:58		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1A2
		Dilution Factor: 1		Analysis Time...: 10:58		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1A3
		Dilution Factor: 1		Analysis Time...: 10:58		
Strontium	1970 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1A4
		Dilution Factor: 1		Analysis Time...: 10:58		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AA
		Dilution Factor: 1		Analysis Time...: 10:58		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AC
		Dilution Factor: 1		Analysis Time...: 10:58		
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLNW1AD
		Dilution Factor: 1		Analysis Time...: 10:58		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-005

Matrix.....: WATER

Date Sampled...: 08/11/11

Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	23.2	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLN1AE
		Dilution Factor: 1		Analysis Time...: 19:06		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AJ
		Dilution Factor: 1		Analysis Time...: 11:17		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AK
		Dilution Factor: 1		Analysis Time...: 11:17		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AH
		Dilution Factor: 1		Analysis Time...: 11:17		
Barium	11.6 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AL
		Dilution Factor: 1		Analysis Time...: 11:17		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AM
		Dilution Factor: 1		Analysis Time...: 11:17		
Calcium	177000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AN
		Dilution Factor: 1		Analysis Time...: 11:17		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AP
		Dilution Factor: 1		Analysis Time...: 11:17		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AQ
		Dilution Factor: 1		Analysis Time...: 11:17		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AR
		Dilution Factor: 1		Analysis Time...: 11:17		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AT
		Dilution Factor: 1		Analysis Time...: 11:17		
Iron	147	100	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AU
		Dilution Factor: 1		Analysis Time...: 11:17		
Magnesium	49400	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AV
		Dilution Factor: 1		Analysis Time...: 11:17		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H120447-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	10.2 J	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AW
		Dilution Factor: 1		Analysis Time...: 11:17		
Sodium	113000 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLN1AX
		Dilution Factor: 5		Analysis Time...: 14:05		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1A0
		Dilution Factor: 1		Analysis Time...: 11:17		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1A1
		Dilution Factor: 1		Analysis Time...: 11:17		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1A2
		Dilution Factor: 1		Analysis Time...: 11:17		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1A3
		Dilution Factor: 1		Analysis Time...: 11:17		
Strontium	1940 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1A4
		Dilution Factor: 1		Analysis Time...: 11:17		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AA
		Dilution Factor: 1		Analysis Time...: 11:17		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AC
		Dilution Factor: 1		Analysis Time...: 11:17		
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN1AD
		Dilution Factor: 1		Analysis Time...: 11:17		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001

GC/MS Volatiles

Lot-Sample #...: F1H120447-006 Work Order #...: ML1N11AC Matrix.....: WATER
 Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 18:38
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.17 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.15 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001

GC/MS Volatiles

Lot-Sample #...: F1H120447-006 Work Order #...: MLLN11AC Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	112	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	108	(70 - 120)
4-Bromofluorobenzene	105	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001

TOTAL Metals

Lot-Sample #...: F1H120447-006

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	113	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLN11A5
		Dilution Factor: 1		Analysis Time...: 19:12		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AF
		Dilution Factor: 1		Analysis Time...: 11:24		
Aluminum	791	200	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AG
		Dilution Factor: 1		Analysis Time...: 11:24		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AE
		Dilution Factor: 1		Analysis Time...: 11:24		
Barium	29.2 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AH
		Dilution Factor: 1		Analysis Time...: 11:24		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AJ
		Dilution Factor: 1		Analysis Time...: 11:24		
Calcium	107000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AK
		Dilution Factor: 1		Analysis Time...: 11:24		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AL
		Dilution Factor: 1		Analysis Time...: 11:24		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AM
		Dilution Factor: 1		Analysis Time...: 11:24		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AN
		Dilution Factor: 1		Analysis Time...: 11:24		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AP
		Dilution Factor: 1		Analysis Time...: 11:24		
Iron	861	100	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AQ
		Dilution Factor: 1		Analysis Time...: 11:24		
Magnesium	46200	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AR
		Dilution Factor: 1		Analysis Time...: 11:24		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001

TOTAL Metals

Lot-Sample #...: F1H120447-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	100	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AT
		Dilution Factor: 1		Analysis Time...: 11:24		
Sodium	79100 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLN11AU
		Dilution Factor: 5		Analysis Time...: 14:12		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AV
		Dilution Factor: 1		Analysis Time...: 11:24		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AW
		Dilution Factor: 1		Analysis Time...: 11:24		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11AX
		Dilution Factor: 1		Analysis Time...: 11:24		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11A0
		Dilution Factor: 1		Analysis Time...: 11:24		
Strontium	504 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11A1
		Dilution Factor: 1		Analysis Time...: 11:24		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11A2
		Dilution Factor: 1		Analysis Time...: 11:24		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11A3
		Dilution Factor: 1		Analysis Time...: 11:24		
Zinc	38.9	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN11A4
		Dilution Factor: 1		Analysis Time...: 11:24		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001

General Chemistry

Lot-Sample #...: F1H120447-006 Work Order #...: MLLN1 Matrix.....: WATER
 Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	87.7	20.0	mg/L	MCAWW 300.0A	08/12/11	1224148
			Dilution Factor: 100	Analysis Time...: 05:18		
Fluoride	2.1	0.10	mg/L	MCAWW 300.0A	08/12/11	1224149
			Dilution Factor: 1	Analysis Time...: 04:34		
Nitrate	0.011 B	0.020	mg/L	MCAWW 300.0A	08/12/11	1224150
			Dilution Factor: 1	Analysis Time...: 04:34		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/12/11	1224151
			Dilution Factor: 5	Analysis Time...: 04:49		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224152
			Dilution Factor: 1	Analysis Time...: 04:34		
Sulfate	122	5.0	mg/L	MCAWW 300.0A	08/12/11	1224153
			Dilution Factor: 10	Analysis Time...: 05:03		
Total Alkalinity	320	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	645	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001

GC/MS Volatiles

Lot-Sample #....: F1H120447-007 Work Order #....: MLLN71AN Matrix.....: WATER
 Date Sampled....: 08/11/11 10:15 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #....: 1231041 Analysis Time...: 06:14
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.20 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.18 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.35 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001

GC/MS Volatiles

Lot-Sample #....: F1H120447-007 Work Order #....: MLLN71AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	107	(85 - 115)
1,2-Dichloroethane-d4	108	(70 - 120)
4-Bromofluorobenzene	104	(75 - 120)

NOTE (S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001

TOTAL Metals

Lot-Sample #...: F1H120447-007

Matrix.....: WATER

Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	4.5	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLN71AG
		Dilution Factor: 1		Analysis Time...: 19:19		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AR
		Dilution Factor: 1		Analysis Time...: 11:30		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AT
		Dilution Factor: 1		Analysis Time...: 11:30		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AQ
		Dilution Factor: 1		Analysis Time...: 11:30		
Barium	10.9 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AU
		Dilution Factor: 1		Analysis Time...: 11:30		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AV
		Dilution Factor: 1		Analysis Time...: 11:30		
Calcium	468000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AW
		Dilution Factor: 1		Analysis Time...: 11:30		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AX
		Dilution Factor: 1		Analysis Time...: 11:30		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A0
		Dilution Factor: 1		Analysis Time...: 11:30		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A1
		Dilution Factor: 1		Analysis Time...: 11:30		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A2
		Dilution Factor: 1		Analysis Time...: 11:30		
Iron	28.4 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A3
		Dilution Factor: 1		Analysis Time...: 11:30		
Magnesium	181000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A4
		Dilution Factor: 1		Analysis Time...: 11:30		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001

TOTAL Metals

Lot-Sample #...: F1H120447-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	54.2	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A5
		Dilution Factor: 1		Analysis Time...: 11:30		
Sodium	204000 B	20000	ug/L	SW846 6010C	08/15-08/19/11	MLLN71A6
		Dilution Factor: 20		Analysis Time...: 14:18		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A7
		Dilution Factor: 1		Analysis Time...: 11:30		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A8
		Dilution Factor: 1		Analysis Time...: 11:30		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71A9
		Dilution Factor: 1		Analysis Time...: 11:30		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AA
		Dilution Factor: 1		Analysis Time...: 11:30		
Strontium	9620 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AC
		Dilution Factor: 1		Analysis Time...: 11:30		
Thallium	4.4 J	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AD
		Dilution Factor: 1		Analysis Time...: 11:30		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AE
		Dilution Factor: 1		Analysis Time...: 11:30		
Zinc	13.1 J	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN71AF
		Dilution Factor: 1		Analysis Time...: 11:30		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001

General Chemistry

Lot-Sample #...: F1H120447-007 Work Order #...: MLLN7 Matrix.....: WATER
 Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	179	20.0	mg/L	MCAWW 300.0A	08/12/11	1224148
			Dilution Factor: 100	Analysis Time...: 08:25		
Fluoride	1.2	1.0	mg/L	MCAWW 300.0A	08/12/11	1224149
			Dilution Factor: 10	Analysis Time...: 08:11		
Nitrate	31.8	2.0	mg/L	MCAWW 300.0A	08/12/11	1224150
			Dilution Factor: 100	Analysis Time...: 08:25		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/12/11	1224151
			Dilution Factor: 10	Analysis Time...: 08:11		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224152
			Dilution Factor: 1	Analysis Time...: 07:56		
Sulfate	1960	50.0	mg/L	MCAWW 300.0A	08/12/11	1224153
			Dilution Factor: 100	Analysis Time...: 08:25		
Total Alkalinity	210	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	3720	50.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 5	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03AMW13D0001

TOTAL Metals

Lot-Sample #...: F1H120447-008

Matrix.....: WATER

Date Sampled...: 08/11/11 12:00 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	79.8	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLN91AG
		Dilution Factor: 1		Analysis Time...: 19:25		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AR
		Dilution Factor: 1		Analysis Time...: 11:37		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AT
		Dilution Factor: 1		Analysis Time...: 11:37		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AQ
		Dilution Factor: 1		Analysis Time...: 11:37		
Barium	61.8	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AU
		Dilution Factor: 1		Analysis Time...: 11:37		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AV
		Dilution Factor: 1		Analysis Time...: 11:37		
Calcium	50400	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AW
		Dilution Factor: 1		Analysis Time...: 11:37		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AX
		Dilution Factor: 1		Analysis Time...: 11:37		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A0
		Dilution Factor: 1		Analysis Time...: 11:37		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A1
		Dilution Factor: 1		Analysis Time...: 11:37		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A2
		Dilution Factor: 1		Analysis Time...: 11:37		
Iron	80.6 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A3
		Dilution Factor: 1		Analysis Time...: 11:37		
Magnesium	17600	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A4
		Dilution Factor: 1		Analysis Time...: 11:37		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03AMW13D0001

TOTAL Metals

Lot-Sample #...: F1H120447-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	183	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A5
		Dilution Factor: 1		Analysis Time...: 11:37		
Sodium	217000 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLN91A6
		Dilution Factor: 5		Analysis Time...: 14:24		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A7
		Dilution Factor: 1		Analysis Time...: 11:37		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A8
		Dilution Factor: 1		Analysis Time...: 11:37		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91A9
		Dilution Factor: 1		Analysis Time...: 11:37		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AA
		Dilution Factor: 1		Analysis Time...: 11:37		
Strontium	177 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AC
		Dilution Factor: 1		Analysis Time...: 11:37		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AD
		Dilution Factor: 1		Analysis Time...: 11:37		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AE
		Dilution Factor: 1		Analysis Time...: 11:37		
Zinc	166	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLN91AF
		Dilution Factor: 1		Analysis Time...: 11:37		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03AMW13D0001

General Chemistry

Lot-Sample #...: F1H120447-008 Work Order #...: MLLN9 Matrix.....: WATER
 Date Sampled...: 08/11/11 12:00 Date Received...: 08/12/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	135	20.0	mg/L	MCAWW 300.0A	08/12/11	1224148
		Dilution Factor: 100		Analysis Time...: 09:23		
Fluoride	3.6	0.50	mg/L	MCAWW 300.0A	08/12/11	1224149
		Dilution Factor: 5		Analysis Time...: 08:54		
Nitrate	0.0084 B	0.020	mg/L	MCAWW 300.0A	08/12/11	1224150
		Dilution Factor: 1		Analysis Time...: 08:39		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 5		Analysis Time...: 08:54		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224152
		Dilution Factor: 1		Analysis Time...: 08:39		
Sulfate	41.3	2.5	mg/L	MCAWW 300.0A	08/12/11	1224153
		Dilution Factor: 5		Analysis Time...: 08:54		
Total Alkalinity	396	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	719	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

GC/MS Volatiles

Lot-Sample #....: F1H120447-009 Work Order #....: MLLPA1CE Matrix.....: WATER
 Date Sampled....: 08/11/11 14:10 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #....: 1231041 Analysis Time...: 08:01
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	2.5	2.0	ug/L
Chloroform	0.34 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	8.7	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	30	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.37 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	3.4	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	105	(70 - 120)
4-Bromofluorobenzene	107	(75 - 120)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

GC/MS Volatiles

Lot-Sample #...: F1H120447-009 Work Order #...: MLLPA1CE Matrix.....: WATER

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

GC/MS Volatiles

Lot-Sample #...: F1H120447-009 Work Order #...: MLLPA2CE Matrix.....: WATER
Date Sampled...: 08/11/11 14:10 Date Received...: 08/12/11
Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
Prep Batch #...: 1231041 Analysis Time...: 06:41
Dilution Factor: 5
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloroethene (total)	83 D	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	111	(85 - 115)
1,2-Dichloroethane-d4	107	(70 - 120)
4-Bromofluorobenzene	101	(75 - 120)

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

TOTAL Metals

Lot-Sample #...: F1H120447-009

Matrix.....: WATER

Date Sampled...: 08/11/11 14:10 Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	22.4	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLPA1AT
		Dilution Factor: 1		Analysis Time...: 19:32		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A3
		Dilution Factor: 1		Analysis Time...: 11:43		
Aluminum	89.5 J	200	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A4
		Dilution Factor: 1		Analysis Time...: 11:43		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A2
		Dilution Factor: 1		Analysis Time...: 11:43		
Barium	12.4 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A5
		Dilution Factor: 1		Analysis Time...: 11:43		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A6
		Dilution Factor: 1		Analysis Time...: 11:43		
Calcium	178000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A7
		Dilution Factor: 1		Analysis Time...: 11:43		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1A8
		Dilution Factor: 1		Analysis Time...: 11:43		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AA
		Dilution Factor: 1		Analysis Time...: 11:43		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AC
		Dilution Factor: 1		Analysis Time...: 11:43		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AD
		Dilution Factor: 1		Analysis Time...: 11:43		
Iron	234	100	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AE
		Dilution Factor: 1		Analysis Time...: 11:43		
Magnesium	52200	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AF
		Dilution Factor: 1		Analysis Time...: 11:43		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

TOTAL Metals

Lot-Sample #...: F1H120447-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	19.4	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AG
		Dilution Factor: 1		Analysis Time...: 11:43		
Sodium	113000 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLPA1AH
		Dilution Factor: 5		Analysis Time...: 14:31		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AJ
		Dilution Factor: 1		Analysis Time...: 11:43		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AK
		Dilution Factor: 1		Analysis Time...: 11:43		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AL
		Dilution Factor: 1		Analysis Time...: 11:43		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AM
		Dilution Factor: 1		Analysis Time...: 11:43		
Strontium	1890 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AN
		Dilution Factor: 1		Analysis Time...: 11:43		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AP
		Dilution Factor: 1		Analysis Time...: 11:43		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AQ
		Dilution Factor: 1		Analysis Time...: 11:43		
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPA1AR
		Dilution Factor: 1		Analysis Time...: 11:43		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

General Chemistry

Lot-Sample #...: F1H120447-009 Work Order #...: MLLPA Matrix.....: WATER
 Date Sampled...: 08/11/11 14:10 Date Received...: 08/12/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	211	20.0	mg/L	MCAWW 300.0A	08/12/11	1224148
		Dilution Factor: 100		Analysis Time...: 10:35		
Fluoride	0.56	0.10	mg/L	MCAWW 300.0A	08/12/11	1224149
		Dilution Factor: 1		Analysis Time...: 09:37		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/12/11	1224150
		Dilution Factor: 1		Analysis Time...: 09:37		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 10		Analysis Time...: 10:20		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224152
		Dilution Factor: 1		Analysis Time...: 09:37		
Sulfate	357	50.0	mg/L	MCAWW 300.0A	08/12/11	1224153
		Dilution Factor: 100		Analysis Time...: 10:35		
Total Alkalinity	231	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1240	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

GC/MS Volatiles

Lot-Sample #....: F1H120447-010 Work Order #....: MLLPE1CE Matrix.....: WATER
 Date Sampled....: 08/11/11 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #....: 1231041 Analysis Time...: 08:27
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	3.5	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	2.6	2.0	ug/L
Chloroform	0.32 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	8.7	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	37	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.38 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.10 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
1,2-Dichloroethane-d4	108	(70 - 120)
4-Bromofluorobenzene	109	(75 - 120)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

GC/MS Volatiles

Lot-Sample #....: F1H120447-010 Work Order #....: MLLPE1CE Matrix.....: WATER

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

GC/MS Volatiles

Lot-Sample #...: F1H120447-010 Work Order #...: MLLPE2CE Matrix.....: WATER
Date Sampled...: 08/11/11 Date Received...: 08/12/11
Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
Prep Batch #...: 1231041 Analysis Time...: 07:08
Dilution Factor: 5
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
1,2-Dichloroethene (total)	79 D	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
1,2-Dichloroethane-d4	105	(70 - 120)
4-Bromofluorobenzene	101	(75 - 120)

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

TOTAL Metals

Lot-Sample #...: F1H120447-010

Matrix.....: WATER

Date Sampled...: 08/11/11

Date Received...: 08/12/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	22.5	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLLPE1A5
		Dilution Factor: 1		Analysis Time...: 19:39		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AE
		Dilution Factor: 1		Analysis Time...: 11:49		
Aluminum	151 J	200	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AF
		Dilution Factor: 1		Analysis Time...: 11:49		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AD
		Dilution Factor: 1		Analysis Time...: 11:49		
Barium	13.3 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AG
		Dilution Factor: 1		Analysis Time...: 11:49		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AH
		Dilution Factor: 1		Analysis Time...: 11:49		
Calcium	187000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AJ
		Dilution Factor: 1		Analysis Time...: 11:49		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AK
		Dilution Factor: 1		Analysis Time...: 11:49		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AM
		Dilution Factor: 1		Analysis Time...: 11:49		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AN
		Dilution Factor: 1		Analysis Time...: 11:49		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AP
		Dilution Factor: 1		Analysis Time...: 11:49		
Iron	268	100	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AQ
		Dilution Factor: 1		Analysis Time...: 11:49		
Magnesium	55600	1000	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AR
		Dilution Factor: 1		Analysis Time...: 11:49		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

TOTAL Metals

Lot-Sample #...: F1H120447-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	21.4	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AT
		Dilution Factor: 1		Analysis Time...: 11:49		
Sodium	115000 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLLPE1AU
		Dilution Factor: 5		Analysis Time...: 14:37		
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AV
		Dilution Factor: 1		Analysis Time...: 11:49		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AW
		Dilution Factor: 1		Analysis Time...: 11:49		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1AX
		Dilution Factor: 1		Analysis Time...: 11:49		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1A0
		Dilution Factor: 1		Analysis Time...: 11:49		
Strontium	1980 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1A1
		Dilution Factor: 1		Analysis Time...: 11:49		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1A2
		Dilution Factor: 1		Analysis Time...: 11:49		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1A3
		Dilution Factor: 1		Analysis Time...: 11:49		
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLLPE1A4
		Dilution Factor: 1		Analysis Time...: 11:49		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

General Chemistry

Lot-Sample #...: F1H120447-010

Work Order #...: MLLPE

Matrix.....: WATER

Date Sampled...: 08/11/11

Date Received...: 08/12/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	207	20.0	mg/L	MCAWW 300.0A	08/12/11	1224148
		Dilution Factor: 100		Analysis Time...: 11:18		
Fluoride	0.60	0.10	mg/L	MCAWW 300.0A	08/12/11	1224149
		Dilution Factor: 1		Analysis Time...: 10:49		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/12/11	1224150
		Dilution Factor: 1		Analysis Time...: 10:49		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 10		Analysis Time...: 11:04		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/12/11	1224152
		Dilution Factor: 1		Analysis Time...: 10:49		
Sulfate	346	50.0	mg/L	MCAWW 300.0A	08/12/11	1224153
		Dilution Factor: 100		Analysis Time...: 11:18		
Total Alkalinity	232	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1220	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H120447
 MB Lot-Sample #: F1H180000-199

Work Order #...: MLTVV1AA

Matrix.....: WATER

Analysis Date...: 08/18/11

Prep Date.....: 08/18/11

Analysis Time...: 11:50

Dilution Factor: 1

Prep Batch #...: 1230199

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	107	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: F1H120447

Work Order #....: MLTVV1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	106	(70 - 120)		
4-Bromofluorobenzene	100	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H120447
 MB Lot-Sample #: F1H190000-041

Work Order #...: MLTXM1AA

Matrix.....: WATER

Analysis Date...: 08/19/11
 Dilution Factor: 1

Prep Date.....: 08/19/11

Analysis Time...: 05:48

Prep Batch #...: 1231041

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	106	(85 - 115)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: F1H120447

Work Order #....: MLTXM1AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
1,2-Dichloroethane-d4	103	(70 - 120)		
4-Bromofluorobenzene	103	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H150000-138 Prep Batch #...: 1227138						
Uranium	ND	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLM771AA
		Dilution Factor: 1				
		Analysis Time...: 17:46				
MB Lot-Sample #: F1H150000-139 Prep Batch #...: 1227139						
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLM781A4
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CK
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A2
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Barium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A5
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Beryllium	0.87 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A6
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A8
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Calcium	ND	1000	ug/L	SW846 6010C	08/15-08/20/11	MLM781A7
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CA
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A9
		Dilution Factor: 1				
		Analysis Time...: 10:00				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CC
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Iron	ND	100	ug/L	SW846 6010C	08/15-08/20/11	MLM781CD
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CJ
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Magnesium	ND	1000	ug/L	SW846 6010C	08/15-08/20/11	MLM781CE
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Manganese	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CF
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CH
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CL
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A3
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Sodium	399 J	1000	ug/L	SW846 6010C	08/15-08/19/11	MLM781CG
		Dilution Factor: 1				
		Analysis Time...: 12:49				
Strontium	0.80 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CM
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CN
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CP
		Dilution Factor: 1				
		Analysis Time...: 10:00				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CQ

Dilution Factor: 1
Analysis Time..: 10:00

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLTCF1AA 0.20	mg/L	MB Lot-Sample #: F1H120000-148 MCAWW 300.0A	08/12/11	1224148
		Dilution Factor: 1 Analysis Time...: 04:20				
Fluoride	ND	Work Order #: MLTCH1AA 0.10	mg/L	MB Lot-Sample #: F1H120000-149 MCAWW 300.0A	08/12/11	1224149
		Dilution Factor: 1 Analysis Time...: 04:20				
Nitrate	ND	Work Order #: MLTCJ1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-150 MCAWW 300.0A	08/12/11	1224150
		Dilution Factor: 1 Analysis Time...: 04:20				
Nitrite	ND	Work Order #: MLTCL1AA 0.020	mg/L	MB Lot-Sample #: F1H120000-151 MCAWW 300.0A	08/12/11	1224151
		Dilution Factor: 1 Analysis Time...: 04:20				
Phosphate as P, Ortho	0.069 B	Work Order #: MLTCM1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-152 MCAWW 300.0A	08/12/11	1224152
		Dilution Factor: 1 Analysis Time...: 04:20				
Sulfate	ND	Work Order #: MLTCN1AA 0.50	mg/L	MB Lot-Sample #: F1H120000-153 MCAWW 300.0A	08/12/11	1224153
		Dilution Factor: 1 Analysis Time...: 04:20				
Total Alkalinity	ND	Work Order #: MLWW41AC 5.0	mg/L	MB Lot-Sample #: F1H220000-085 MCAWW 310.1	08/22/11	1224085
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: MLQ6P1AA 10.0	mg/L	MB Lot-Sample #: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLTVV1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-199
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 10:30
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2-Dichloroethane	97	(70 - 130)	SW846 8260B
Benzene	95	(80 - 120)	SW846 8260B
Trichloroethene	90	(70 - 125)	SW846 8260B
1,2-Dichloropropane	91	(75 - 125)	SW846 8260B
Bromodichloromethane	98	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	98	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	107	(55 - 140)	SW846 8260B
Toluene	103	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	102	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	96	(75 - 125)	SW846 8260B
2-Hexanone	95	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	103	(60 - 135)	SW846 8260B
Chlorobenzene	96	(80 - 120)	SW846 8260B
Bromoform	108	(70 - 130)	SW846 8260B
Ethylbenzene	101	(75 - 125)	SW846 8260B
Styrene	109	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	93	(65 - 130)	SW846 8260B
Tetrachloroethene	101	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	104	(70 - 130)	SW846 8260B
Dibromochloromethane	104	(60 - 135)	SW846 8260B
Vinyl chloride	87	(50 - 145)	SW846 8260B
Bromomethane	99	(30 - 145)	SW846 8260B
Chloroethane	90	(60 - 135)	SW846 8260B
Acetone	93	(40 - 140)	SW846 8260B
1,1-Dichloroethene	95	(70 - 130)	SW846 8260B
Methylene chloride	88	(55 - 140)	SW846 8260B
Carbon disulfide	84	(35 - 160)	SW846 8260B
1,1-Dichloroethane	93	(70 - 135)	SW846 8260B
2-Butanone	88	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	96	(85 - 115)	SW846 8260B
Chloroform	93	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	99	(65 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLTVV1AC Matrix.....: WATER
LCS Lot-Sample#: F1H180000-199

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Carbon tetrachloride	99	(65 - 140)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	105	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	101	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLTXM1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H190000-041
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 04:55
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Styrene	110	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	101	(65 - 130)	SW846 8260B
Tetrachloroethene	101	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	106	(70 - 130)	SW846 8260B
Dibromochloromethane	103	(60 - 135)	SW846 8260B
Vinyl chloride	83	(50 - 145)	SW846 8260B
Bromomethane	101	(30 - 145)	SW846 8260B
Chloroethane	90	(60 - 135)	SW846 8260B
Acetone	93	(40 - 140)	SW846 8260B
1,1-Dichloroethene	99	(70 - 130)	SW846 8260B
Methylene chloride	92	(55 - 140)	SW846 8260B
Carbon disulfide	90	(35 - 160)	SW846 8260B
1,1-Dichloroethane	94	(70 - 135)	SW846 8260B
2-Butanone	101	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	97	(85 - 115)	SW846 8260B
Chloroform	94	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	100	(65 - 130)	SW846 8260B
Carbon tetrachloride	100	(65 - 140)	SW846 8260B
1,2-Dichloroethane	96	(70 - 130)	SW846 8260B
Benzene	95	(80 - 120)	SW846 8260B
Trichloroethene	91	(70 - 125)	SW846 8260B
1,2-Dichloropropane	95	(75 - 125)	SW846 8260B
Bromodichloromethane	100	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	96	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)	SW846 8260B
Toluene	104	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	103	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	99	(75 - 125)	SW846 8260B
2-Hexanone	96	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	108	(60 - 135)	SW846 8260B
Chlorobenzene	95	(80 - 120)	SW846 8260B
Bromoform	109	(70 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLTXM1AC Matrix.....: WATER
LCS Lot-Sample#: F1H190000-041

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Ethylbenzene	102	(75 - 125)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H150000-138 Prep Batch #... : 1227138					
Uranium	105	(80 - 120)	SW846 6020A	08/15-08/17/11	MLM771AC
		Dilution Factor: 1	Analysis Time...	17:52	
LCS Lot-Sample#: F1H150000-139 Prep Batch #... : 1227139					
Arsenic	106	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AA
		Dilution Factor: 1	Analysis Time...	10:06	
Silver	95	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AC
		Dilution Factor: 1	Analysis Time...	10:06	
Aluminum	104	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AD
		Dilution Factor: 1	Analysis Time...	10:06	
Barium	103	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AE
		Dilution Factor: 1	Analysis Time...	10:06	
Beryllium	108	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AF
		Dilution Factor: 1	Analysis Time...	10:06	
Calcium	106	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AG
		Dilution Factor: 1	Analysis Time...	10:06	
Cadmium	107	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AH
		Dilution Factor: 1	Analysis Time...	10:06	
Cobalt	101	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AJ
		Dilution Factor: 1	Analysis Time...	10:06	
Chromium	100	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AK
		Dilution Factor: 1	Analysis Time...	10:06	
Copper	99	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AL
		Dilution Factor: 1	Analysis Time...	10:06	
Iron	104	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AM
		Dilution Factor: 1	Analysis Time...	10:06	
Magnesium	102	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AN
		Dilution Factor: 1	Analysis Time...	10:06	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	103	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AP
		Dilution Factor: 1		Analysis Time...: 10:06	
Sodium	108	(80 - 120)	SW846 6010C	08/15-08/19/11	MLM781AQ
		Dilution Factor: 1		Analysis Time...: 12:55	
Nickel	104	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AR
		Dilution Factor: 1		Analysis Time...: 10:06	
Lead	103	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AT
		Dilution Factor: 1		Analysis Time...: 10:06	
Antimony	105	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AU
		Dilution Factor: 1		Analysis Time...: 10:06	
Selenium	110	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AV
		Dilution Factor: 1		Analysis Time...: 10:06	
Strontium	113	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AW
		Dilution Factor: 1		Analysis Time...: 10:06	
Thallium	101	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AX
		Dilution Factor: 1		Analysis Time...: 10:06	
Vanadium	100	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781A0
		Dilution Factor: 1		Analysis Time...: 10:06	
Zinc	115	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781A1
		Dilution Factor: 1		Analysis Time...: 10:06	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H120447

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	91	(90 - 110)	Work Order #: MLTCF1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-148 08/12/11 Analysis Time...: 04:05	1224148
Fluoride	95	(90 - 110)	Work Order #: MLTCH1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-149 08/12/11 Analysis Time...: 04:05	1224149
Nitrate	99	(90 - 110)	Work Order #: MLTCJ1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-150 08/12/11 Analysis Time...: 04:05	1224150
Nitrite	97	(90 - 110)	Work Order #: MLTCL1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-151 08/12/11 Analysis Time...: 04:05	1224151
Phosphate as P, Ortho	94	(90 - 110)	Work Order #: MLTCM1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-152 08/12/11 Analysis Time...: 04:05	1224152
Sulfate	93	(90 - 110)	Work Order #: MLTCN1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H120000-153 08/12/11 Analysis Time...: 04:05	1224153
Total Alkalinity	93	(90 - 110)	Work Order #: MLWW41AA MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H220000-085 08/22/11 Analysis Time...: 00:00	1234085
Total Alkalinity	94	(90 - 110)	Work Order #: MLWW41AD MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H220000-085 08/22/11 Analysis Time...: 00:00	1234085
Total Dissolved Solids	98	(90 - 113)	Work Order #: MLQ6P1AC MCAWW 160.1 Dilution Factor: 1	LCS Lot-Sample#: F1H170000-114 08/17-08/22/11 Analysis Time...: 00:00	1229114

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLLN11CV-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-006 MLLN11CW-MSD
 Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 19:05
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	86	(70 - 130)			SW846 8260B
	98	(70 - 130)	13	(0-20)	SW846 8260B
Dibromochloromethane	94	(60 - 135)			SW846 8260B
	103	(60 - 135)	8.5	(0-20)	SW846 8260B
Vinyl chloride	78	(50 - 145)			SW846 8260B
	91	(50 - 145)	15	(0-20)	SW846 8260B
Bromomethane	87	(30 - 145)			SW846 8260B
	95	(30 - 145)	9.2	(0-20)	SW846 8260B
Chloroethane	87	(60 - 135)			SW846 8260B
	97	(60 - 135)	11	(0-20)	SW846 8260B
Acetone	94	(40 - 140)			SW846 8260B
	96	(40 - 140)	2.0	(0-20)	SW846 8260B
1,1-Dichloroethene	97	(70 - 130)			SW846 8260B
	105	(70 - 130)	7.2	(0-20)	SW846 8260B
Methylene chloride	88	(55 - 140)			SW846 8260B
	95	(55 - 140)	7.3	(0-20)	SW846 8260B
Carbon disulfide	91	(35 - 160)			SW846 8260B
	96	(35 - 160)	5.6	(0-20)	SW846 8260B
1,1-Dichloroethane	92	(70 - 135)			SW846 8260B
	100	(70 - 135)	8.3	(0-20)	SW846 8260B
2-Butanone	88	(30 - 150)			SW846 8260B
	94	(30 - 150)	7.1	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	91	(85 - 115)			SW846 8260B
	100	(85 - 115)	9.8	(0-20)	SW846 8260B
Chloroform	89	(65 - 135)			SW846 8260B
	97	(65 - 135)	8.4	(0-20)	SW846 8260B
1,1,1-Trichloroethane	95	(65 - 130)			SW846 8260B
	103	(65 - 130)	8.8	(0-20)	SW846 8260B
Carbon tetrachloride	95	(65 - 140)			SW846 8260B
	103	(65 - 140)	8.2	(0-20)	SW846 8260B
1,2-Dichloroethane	89	(70 - 130)			SW846 8260B
	100	(70 - 130)	12	(0-20)	SW846 8260B
Benzene	92	(80 - 120)			SW846 8260B
	100	(80 - 120)	8.3	(0-20)	SW846 8260B
Trichloroethene	89	(70 - 125)			SW846 8260B
	93	(70 - 125)	4.5	(0-20)	SW846 8260B
1,2-Dichloropropane	89	(75 - 125)			SW846 8260B
	96	(75 - 125)	8.4	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLLN11CV-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-006 MLLN11CW-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	94	(75 - 120)			SW846 8260B
	102	(75 - 120)	8.1	(0-20)	SW846 8260B
1,1,2-Trichloroethane	92	(75 - 125)			SW846 8260B
	102	(75 - 125)	11	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	96	(55 - 140)			SW846 8260B
	106	(55 - 140)	9.7	(0-20)	SW846 8260B
Toluene	100	(75 - 120)			SW846 8260B
	103	(75 - 120)	3.2	(0-20)	SW846 8260B
1,3-Dichlorobenzene	98	(75 - 125)			SW846 8260B
	102	(75 - 125)	3.4	(0-20)	SW846 8260B
1,4-Dichlorobenzene	94	(75 - 125)			SW846 8260B
	99	(75 - 125)	4.5	(0-20)	SW846 8260B
2-Hexanone	82	(55 - 130)			SW846 8260B
	98	(55 - 130)	17	(0-20)	SW846 8260B
4-Methyl-2-pentanone	88	(60 - 135)			SW846 8260B
	102	(60 - 135)	15	(0-20)	SW846 8260B
Chlorobenzene	93	(80 - 120)			SW846 8260B
	98	(80 - 120)	5.5	(0-20)	SW846 8260B
Bromoform	100	(70 - 130)			SW846 8260B
	108	(70 - 130)	7.6	(0-20)	SW846 8260B
Ethylbenzene	98	(75 - 125)			SW846 8260B
	104	(75 - 125)	5.7	(0-20)	SW846 8260B
Styrene	106	(65 - 135)			SW846 8260B
	112	(65 - 135)	6.0	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	90	(65 - 130)			SW846 8260B
	99	(65 - 130)	9.1	(0-20)	SW846 8260B
Tetrachloroethene	96	(45 - 150)			SW846 8260B
	101	(45 - 150)	5.7	(0-20)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 120)			SW846 8260B
	100	(70 - 120)	5.3	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(85 - 120)
	105	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
	108	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
	105	(70 - 120)
4-Bromofluorobenzene	97	(75 - 120)
	98	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H120447

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD
 Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 09:20
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	101	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.4	(0-20)	SW846 8260B
Dibromochloromethane	104	(60 - 135)			SW846 8260B
	102	(60 - 135)	1.6	(0-20)	SW846 8260B
Vinyl chloride	93	(50 - 145)			SW846 8260B
	96	(50 - 145)	2.4	(0-20)	SW846 8260B
Bromomethane	107	(30 - 145)			SW846 8260B
	102	(30 - 145)	5.0	(0-20)	SW846 8260B
Chloroethane	100	(60 - 135)			SW846 8260B
	97	(60 - 135)	3.2	(0-20)	SW846 8260B
Acetone	111	(40 - 140)			SW846 8260B
	95	(40 - 140)	15	(0-20)	SW846 8260B
1,1-Dichloroethene	107	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-20)	SW846 8260B
Methylene chloride	133	(55 - 140)			SW846 8260B
	135	(55 - 140)	1.7	(0-20)	SW846 8260B
Carbon disulfide	97	(35 - 160)			SW846 8260B
	86	(35 - 160)	12	(0-20)	SW846 8260B
1,1-Dichloroethane	100	(70 - 135)			SW846 8260B
	95	(70 - 135)	4.6	(0-20)	SW846 8260B
2-Butanone	91	(30 - 150)			SW846 8260B
	97	(30 - 150)	6.4	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	100	(85 - 115)			SW846 8260B
	98	(85 - 115)	2.4	(0-20)	SW846 8260B
Chloroform	99	(65 - 135)			SW846 8260B
	94	(65 - 135)	5.1	(0-20)	SW846 8260B
1,1,1-Trichloroethane	108	(65 - 130)			SW846 8260B
	102	(65 - 130)	5.6	(0-20)	SW846 8260B
Carbon tetrachloride	108	(65 - 140)			SW846 8260B
	102	(65 - 140)	5.4	(0-20)	SW846 8260B
1,2-Dichloroethane	99	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.19	(0-20)	SW846 8260B
Benzene	100	(80 - 120)			SW846 8260B
	98	(80 - 120)	2.2	(0-20)	SW846 8260B
Trichloroethene	93	(70 - 125)			SW846 8260B
	94	(70 - 125)	0.16	(0-20)	SW846 8260B
1,2-Dichloropropane	99	(75 - 125)			SW846 8260B
	98	(75 - 125)	0.89	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H120447 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	103	(75 - 120)			SW846 8260B
	102	(75 - 120)	0.87	(0-20)	SW846 8260B
1,1,2-Trichloroethane	102	(75 - 125)			SW846 8260B
	97	(75 - 125)	5.2	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	107	(55 - 140)			SW846 8260B
	107	(55 - 140)	0.56	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	102	(75 - 120)	3.8	(0-20)	SW846 8260B
1,3-Dichlorobenzene	107	(75 - 125)			SW846 8260B
	105	(75 - 125)	2.2	(0-20)	SW846 8260B
1,4-Dichlorobenzene	100	(75 - 125)			SW846 8260B
	101	(75 - 125)	1.0	(0-20)	SW846 8260B
2-Hexanone	96	(55 - 130)			SW846 8260B
	91	(55 - 130)	5.8	(0-20)	SW846 8260B
4-Methyl-2-pentanone	96	(60 - 135)			SW846 8260B
	98	(60 - 135)	2.8	(0-20)	SW846 8260B
Chlorobenzene	100	(80 - 120)			SW846 8260B
	98	(80 - 120)	1.7	(0-20)	SW846 8260B
Bromoform	107	(70 - 130)			SW846 8260B
	111	(70 - 130)	3.0	(0-20)	SW846 8260B
Ethylbenzene	105	(75 - 125)			SW846 8260B
	104	(75 - 125)	1.2	(0-20)	SW846 8260B
Styrene	114	(65 - 135)			SW846 8260B
	110	(65 - 135)	3.6	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	97	(65 - 130)			SW846 8260B
	96	(65 - 130)	1.5	(0-20)	SW846 8260B
Tetrachloroethene	104	(45 - 150)			SW846 8260B
	101	(45 - 150)	2.3	(0-20)	SW846 8260B
1,2-Dichlorobenzene	104	(70 - 120)			SW846 8260B
	103	(70 - 120)	1.2	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(85 - 120)
	102	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
	102	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H120447

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H120447-001 Prep Batch #...: 1227138						
Uranium	107	(80 - 120)		SW846 6020A	08/15-08/17/11	MLLNJ1A5
	109	(80 - 120)	1.4 (0-20)	SW846 6020A	08/15-08/17/11	MLLNJ1A6
		Dilution Factor: 1				
		Analysis Time...: 18:12				
MS Lot-Sample #: F1H120447-001 Prep Batch #...: 1227139						
Aluminum	103	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CC
	97	(80 - 120)	5.6 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CD
		Dilution Factor: 1				
		Analysis Time...: 10:19				
Antimony	101	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1C9
	96	(80 - 120)	5.5 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DA
		Dilution Factor: 1				
		Analysis Time...: 10:19				
Arsenic	104	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1A7
	98	(80 - 120)	5.8 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1A8
		Dilution Factor: 1				
		Analysis Time...: 10:19				
Barium	101	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CE
	96	(80 - 120)	4.5 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CF
		Dilution Factor: 1				
		Analysis Time...: 10:19				
Beryllium	105	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CG
	101	(80 - 120)	3.9 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CH
		Dilution Factor: 1				
		Analysis Time...: 10:19				
Cadmium	101	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CL
	96	(80 - 120)	5.3 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CM
		Dilution Factor: 1				
		Analysis Time...: 10:19				
Calcium	96	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CJ
	63 N	(80 - 120)	3.5 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CK
		Dilution Factor: 1				
		Analysis Time...: 10:19				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	96	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CQ
	92	(80 - 120)	4.3 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CR
Dilution Factor: 1 Analysis Time...: 10:19						
Cobalt	95	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CN
	90	(80 - 120)	4.9 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CP
Dilution Factor: 1 Analysis Time...: 10:19						
Copper	96	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CT
	92	(80 - 120)	4.5 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CU
Dilution Factor: 1 Analysis Time...: 10:19						
Iron	99	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CV
	94	(80 - 120)	4.6 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CW
Dilution Factor: 1 Analysis Time...: 10:19						
Lead	97	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1C7
	92	(80 - 120)	5.8 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C8
Dilution Factor: 1 Analysis Time...: 10:19						
Magnesium	96	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1CX
	80	(80 - 120)	3.3 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C0
Dilution Factor: 1 Analysis Time...: 10:19						
Manganese	98	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1C1
	94	(80 - 120)	4.0 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C2
Dilution Factor: 1 Analysis Time...: 10:19						
Nickel	97	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1C5
	91	(80 - 120)	5.5 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C6
Dilution Factor: 1 Analysis Time...: 10:19						
Selenium	105	(80 - 120)		SW846 6010C	08/15-08/20/11	MLLNJ1DC
	98	(80 - 120)	7.1 (0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DD
Dilution Factor: 1 Analysis Time...: 10:19						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H120447

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	92	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1A9
	88	(80 - 120)	4.6	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CA
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Sodium	104	(80 - 120)			SW846 6010C	08/15-08/19/11	MLLNJ1C3
	161 N	(80 - 120)	6.3	(0-20)	SW846 6010C	08/15-08/19/11	MLLNJ1C4
		Dilution Factor: 5					
		Analysis Time...: 13:08					
Strontium	109	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DE
	101	(80 - 120)	4.9	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DF
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Thallium	96	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DG
	91	(80 - 120)	5.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DH
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Vanadium	97	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DJ
	93	(80 - 120)	3.8	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DK
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Zinc	110	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DL
	103	(80 - 120)	6.3	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DM
		Dilution Factor: 1					
		Analysis Time...: 10:19					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H120447

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	103	Work Order #...: MLKJL1CV (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H110460-008 08/13/11	1224148
		Dilution Factor: 500		Analysis Time...: 11:47	
Chloride	95	Work Order #...: MLLN11CG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224148
		Dilution Factor: 100		Analysis Time...: 05:18	
Fluoride	110	Work Order #...: MLLN11CJ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224149
		Dilution Factor: 1		Analysis Time...: 04:34	
Nitrate	97	Work Order #...: MLLN11CL (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224150
		Dilution Factor: 1		Analysis Time...: 04:34	
Nitrite	71 N	Work Order #...: MLLN11CN (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224151
		Dilution Factor: 5		Analysis Time...: 04:49	
Phosphate as P, Ortho	71 N	Work Order #...: MLLN11CQ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224152
		Dilution Factor: 1		Analysis Time...: 04:34	
Sulfate	100	Work Order #...: MLLN11CT (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H120447-006 08/12/11	1224153
		Dilution Factor: 10		Analysis Time...: 05:03	
Total Alkalinity	96	Work Order #...: MLKJ51CF (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H110460-009 08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H120447

Work Order #...: MLLN1-SMP
MLLN1-DUP

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: F1H120447-006		
	645	665	mg/L	3.1	(0-0.0)	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1			Analysis Time...: 00:00		
Chloride						SD Lot-Sample #: F1H120447-006		
	87.7	86.1	mg/L	1.9	(0-20)	MCAWW 300.0A	08/12/11	1224148
			Dilution Factor: 100			Analysis Time...: 05:18		
Fluoride						SD Lot-Sample #: F1H120447-006		
	2.1	2.1	mg/L	0.25	(0-20)	MCAWW 300.0A	08/12/11	1224149
			Dilution Factor: 1			Analysis Time...: 04:34		
Nitrate						SD Lot-Sample #: F1H120447-006		
	0.011 B	0.015 B	mg/L	28	(0-20)	MCAWW 300.0A	08/12/11	1224150
			Dilution Factor: 1			Analysis Time...: 04:34		
Nitrite						SD Lot-Sample #: F1H120447-006		
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/12/11	1224151
			Dilution Factor: 5			Analysis Time...: 04:49		
Phosphate as P, Ortho						SD Lot-Sample #: F1H120447-006		
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/12/11	1224152
			Dilution Factor: 1			Analysis Time...: 04:34		
Sulfate						SD Lot-Sample #: F1H120447-006		
	122	121	mg/L	0.87	(0-20)	MCAWW 300.0A	08/12/11	1224153
			Dilution Factor: 10			Analysis Time...: 05:03		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H120447

Work Order #...: MLKJ5-SMP
MLKJ5-DUP

Matrix.....: WATER

Date Sampled...: 08/10/11 09:30 Date Received...: 08/11/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	256	257	mg/L	0.31	(0-20)	SD Lot-Sample #: F1H110460-009 MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1			Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H120447-001
 Work Order: MLLNJ
 Matrix: WATER

Date Collected: 08/11/11 0915
 Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1231165		Yld % 52
Uranium 234	36.9		3.4	0.1	0.06	08/19/11	08/21/11
Uranium 235/236	2.08		0.42	0.10	0.05	08/19/11	08/21/11
Uranium 238	36.8		3.4	0.1	0.06	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H120447-002
 Work Order: MLLNT
 Matrix: WATER

Date Collected: 08/11/11 1015
 Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1231165		Yld % 65
Uranium 234	4.94		0.61	0.10	0.05	08/19/11	08/21/11
Uranium 235/236	0.123		0.081	0.100	0.057	08/19/11	08/21/11
Uranium 238	1.47		0.27	0.10	0.05	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03AMW13D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H120447-003
Work Order: MLLNV
Matrix: WATER

Date Collected: 08/11/11 1200
Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1231165		Yld % 61
Uranium 234	22.6		2.1	0.1	0.03	08/19/11	08/21/11
Uranium 235/236	1.13		0.27	0.10	0.04	08/19/11	08/21/11
Uranium 238	23.6		2.2	0.1	0.03	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H120447-004

Date Collected: 08/11/11 1410

Work Order: MLLNW

Date Received: 08/12/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 79
Uranium 234	7.19		0.77	0.10	0.02	08/19/11	08/21/11
Uranium 235/236	0.30		0.11	0.10	0.03	08/19/11	08/21/11
Uranium 238	6.90		0.75	0.10	0.02	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002 DISSOLVED

Radiochemistry

Lab Sample ID: F1H120447-005
Work Order: MLLNX
Matrix: WATER

Date Collected: 08/11/11 0000
Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 74
Uranium 234	7.51		0.83	0.10	0.05	08/19/11	08/21/11
Uranium 235/236	0.43		0.15	0.10	0.03	08/19/11	08/21/11
Uranium 238	7.06		0.79	0.10	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW602D0001

Radiochemistry

Lab Sample ID: F1H120447-006
Work Order: MLLN1
Matrix: WATER

Date Collected: 08/11/11 0915
Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 46
Uranium 234	36.5		3.4	0.1	0.07	08/19/11	08/21/11
Uranium 235/236	1.84		0.40	0.10	0.05	08/19/11	08/21/11
Uranium 238	36.0		3.4	0.1	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H120447

74 of 92

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04MW702DD0001

Radiochemistry

Lab Sample ID: F1H120447-007

Date Collected: 08/11/11 1015

Work Order: MLLN7

Date Received: 08/12/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 64
Uranium 234	6.65		0.77	0.10	0.03	08/19/11	08/21/11
Uranium 235/236	0.103		0.076	0.100	0.060	08/19/11	08/21/11
Uranium 238	1.84		0.32	0.10	0.03	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03AMW13D0001

Radiochemistry

Lab Sample ID: F1H120447-008
Work Order: MLLN9
Matrix: WATER

Date Collected: 08/11/11 1200
Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1231165		Yld % 57
Uranium 234	23.9		2.3	0.1	0.05	08/19/11	08/21/11
Uranium 235/236	1.13		0.28	0.10	0.04	08/19/11	08/21/11
Uranium 238	24.6		2.3	0.1	0.03	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0001

Radiochemistry

Lab Sample ID: F1H120447-009
Work Order: MLLPA
Matrix: WATER

Date Collected: 08/11/11 1410
Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 67
Uranium 234	7.18		0.81	0.10	0.07	08/19/11	08/21/11
Uranium 235/236	0.31		0.13	0.10	0.08	08/19/11	08/21/11
Uranium 238	7.03		0.79	0.10	0.09	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW9002

Radiochemistry

Lab Sample ID: F1H120447-010
Work Order: MLLPE
Matrix: WATER

Date Collected: 08/11/11 0000
Date Received: 08/12/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 73
Uranium 234	7.03		0.78	0.10	0.06	08/19/11	08/21/11
Uranium 235/236	0.50		0.16	0.10	0.05	08/19/11	08/21/11
Uranium 238	7.39		0.81	0.10	0.06	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H120447

Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Prep	Lab Sample ID
			(2 σ+/-)			Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1231165	Yld % 91	F1H190000-165B
Uranium 234	0.013	U	0.021	0.100	0.034	08/19/11	08/21/11
Uranium 235/236	0.009	U	0.018	0.100	0.025	08/19/11	08/21/11
Uranium 238	-0.0037	U	0.0053	0.100	0.039	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U **F1H120447** Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H120447
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H190000-165C	
Uranium 234	3.26	2.97	0.40	89	91	(76 - 136)	
Spk 2	3.26	3.27	0.43	80	100	(76 - 136)	10 %RPD
Uranium 238	3.39	3.32	0.43	89	98	(76 - 134)	
Spk 2	3.39	3.60	0.46	80	106	(76 - 134)	8 %RPD
Batch #:		1231165	Analysis Date: 08/21/11				

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R262-3

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date:

2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 10

Report Type: B

Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04MW602D0001 DISSOLVED			2011-08-11/ 915	MLLNJ	WATER
SAMPLE COMMENTS:						
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
D MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F1H120447

81 of 92

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R262-3

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date:

2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

D	MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	AS	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	AL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	BA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	TL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	NA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	NI	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	PB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	VX	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	ZN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AS	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	BA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H120447

82 OF 92

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R262-3

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date:

2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A04MW702DD0001 DISSOLVED			2011-08-11 / 1015	MLLNT	WATER

SAMPLE COMMENTS:

SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A03AMW13D0001 DISSOLVED			2011-08-11 / 1200	MLLNV	WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06

F1H120447

83 of 92

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R262-3

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date:

2011-08-19

PO#: 697886

Report to:

Report Due Date:

2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS In LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	1
4	A04DMW708DD0001 DISSOLVED			2011-08-11 / 1410	MLLNW	WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H120447

8410692

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R262-3

Project Manager: LMF
Project: Y40415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guteryl Steel
Report to: [REDACTED]

SDG:

Date Received: 2011-08-12
Analytical Due Date: 2011-08-19
Report Due Date: 2011-08-22

Report Type: B Standard Report
EDD Code: 00

#SMPS in LOT: 10

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A04DMW9002 DISSOLVED			2011-08-11 / 0	MLLNK	WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06

F1H120447

85-0192

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R262-3

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date:

2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
----	----	-----	------------	---------------------------------	----	--	----	-------------------	---------	---------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04MW602D0001			2011-08-11 / 915	MLLN1	WATER

SAMPLE COMMENTS:

FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW W	160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW W	300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW W	300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW W	300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW W	300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW W	300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW W	300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

F1H120447

86 of 92

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R262-3,2-45

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date: 2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
----	----	------	-------	---------------------------------	----	--	----	-------------------	---------	---------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	A04MW702DD0001			2011-08-11/ 1015	MLLN7	WATER

SAMPLE COMMENTS:

SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

F1H120447

87-0692

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R262-3,2-45
 Date Received: 2011-08-12
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 10

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
----	----	--------------	---------------------------------	----	--	----	-------------------	---------	---------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	A03AMW13D0001			2011-08-11 / 1200	MLLN9	WATER

SAMPLE COMMENTS:

PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

F1H120447

88 of 92

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R262-3,2-45
 Date Received: 2011-08-12
 Analytical Due Date: 2011-08-19
 Report Due Date: 2011-08-22
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251

SDG:

Guteryl Steel

Report to: [REDACTED]

#SMPS in LOT: 10

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A04DMW708DD0001			2011-08-11 / 1410	MLLPA	WATER
SAMPLE COMMENTS:						
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H120447

89 of 92

F1H120447

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R262-3,2-45

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-12

Project: Y40415

Guteryl Steel

Analytical Due Date:

2011-08-19

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 10

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	A04DMW9002			2011-08-11 / 0	MLLPE	WATER
SAMPLE COMMENTS:						
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK 06
XX AK	MCAW W 180.1	WATER, 180.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK 06
XX C8	MCAW W 300.0A	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06
XX C9	MCAW W 300.0A	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06
XX CX	MCAW W 300.0A	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06
XX CY	MCAW W 300.0A	WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06
XX DO	MCAW W 300.0A	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06
XX GO	MCAW W 300.0A	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06
XX VC	MCAW W 310.1	WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06

F1H120447

90 of 92

715 Rider Trail North

St. Louis, MO 63045

Phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

TESTAMERICA
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Shaw Environmental & Infrastructure, Inc. 50 Section Avenue Cincinnati, Ohio 45212 3) 782-4700 Phone 3) 782-4807 FAX Project Name: Former Guterl Specialty Steel Corporation FUSRA Location: Lockport, NY ID #		Project Manager: Karl Van Keuren, PG, PMP Tel/Fax: (513) 782-4745 / (513) 782-4807 Analysis Turnaround Time Calendar (C) or Work Days (W) TAT if different from Below _____ <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: Kevin Cronin Lab Contact: Lynn Fussner Date: 08/11/2011 Carrier:		COC No: 007 1 of 1 COCs Job No. 140416.09020100 SDG No. Sample Specific Notes:												
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Isotopic Thorium (α-spec)	Isotopic Uranium (α-spec)	Total Uranium	TAL Metals except Mercury	Anions	Alkalinity	Total Dissolved Solids	Volatile Organic Compounds (VOCs)	TCLP Volatiles	TCLP Semi-volatiles	TCLP Metals except Mercury	Mercury
4MW602D0001	8/11/2011	0915	Grab	GW	10	X	X	X	X	X	X	X	X	X	X	X	X	X
4AMW702DD0001	8/11/2011	1015	Grab	GW	10	X	X	X	X	X	X	X	X	X	X	X	X	X
3AMW13D0001	8/11/2011	1200	Grab	GW	7	X	X	X	X	X	X	X	X	X	X	X	X	X
4DMW708DD0001	8/11/2011	1410	Grab	GW	10	X	X	X	X	X	X	X	X	X	X	X	X	X
4DMW9002	8/11/2011	---	Grab	GW	10	X	X	X	X	X	X	X	X	X	X	X	X	X

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1, 2, and 4

Visible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Company: Shaw E & I. Inc.	Date/Time: 8/11/11 16:35	Company: BFL0	Date/Time: 08-11-11 16:35
Company: BFL0	Date/Time: 08-11-11 17:00	Company: THSTR	Date/Time: 8-12-11 0920
Company:	Date/Time:	Company:	Date/Time:

TestAmerica St. Louis

CONDITION UPON RECEIPT FORM

Client: Shaw

Quote No: 89251

COC/RFA No: 007



Initiated By: SV

Date: 8.12.11

Time: 0920

Shipping Information

Shipper: FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

Y

N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 3734
2. 45
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.
21.
22.
23.
24.
25.
26.
27.
28.
29.
30.
31.
32.
33.
34.
35.
36.
37.
38.
39.
40.
41.
42.
43.
44.
45.
46.
47.
48.
49.
50.
51.
52.
53.
54.
55.
56.
57.
58.
59.
60.
61.
62.
63.
64.
65.
66.
67.
68.
69.
70.
71.
72.
73.
74.
75.
76.
77.
78.
79.
80.
81.
82.
83.
84.
85.
86.
87.
88.
89.
90.
91.
92.
93.
94.
95.
96.
97.
98.
99.
100.
101.
102.
103.
104.
105.
106.
107.
108.
109.
110.
111.
112.
113.
114.
115.
116.
117.
118.
119.
120.
121.
122.
123.
124.
125.
126.
127.
128.
129.
130.
131.
132.
133.
134.
135.
136.
137.
138.
139.
140.
141.
142.
143.
144.
145.
146.
147.
148.
149.
150.
151.
152.
153.
154.
155.
156.
157.
158.
159.
160.
161.
162.
163.
164.
165.
166.
167.
168.
169.
170.
171.
172.
173.
174.
175.
176.
177.
178.
179.
180.
181.
182.
183.
184.
185.
186.
187.
188.
189.
190.
191.
192.
193.
194.
195.
196.
197.
198.
199.
200.
201.
202.
203.
204.
205.
206.
207.
208.
209.
210.
211.
212.
213.
214.
215.
216.
217.
218.
219.
220.
221.
222.
223.
224.
225.
226.
227.
228.
229.
230.
231.
232.
233.
234.
235.
236.
237.
238.
239.
240.
241.
242.
243.
244.
245.
246.
247.
248.
249.
250.
251.
252.
253.
254.
255.
256.
257.
258.
259.
260.
261.
262.
263.
264.
265.
266.
267.
268.
269.
270.
271.
272.
273.
274.
275.
276.
277.
278.
279.
280.
281.
282.
283.
284.
285.
286.
287.
288.
289.
290.
291.
292.
293.
294.
295.
296.
297.
298.
299.
300.
301.
302.
303.
304.
305.
306.
307.
308.
309.
310.
311.
312.
313.
314.
315.
316.
317.
318.
319.
320.
321.
322.
323.
324.
325.
326.
327.
328.
329.
330.
331.
332.
333.
334.
335.
336.
337.
338.
339.
340.
341.
342.
343.
344.
345.
346.
347.
348.
349.
350.
351.
352.
353.
354.
355.
356.
357.
358.
359.
360.
361.
362.
363.
364.
365.
366.
367.
368.
369.
370.
371.
372.
373.
374.
375.
376.
377.
378.
379.
380.
381.
382.
383.
384.
385.
386.
387.
388.
389.
390.
391.
392.
393.
394.
395.
396.
397.
398.
399.
400.
401.
402.
403.
404.
405.
406.
407.
408.
409.
410.
411.
412.
413.
414.
415.
416.
417.
418.
419.
420.
421.
422.
423.
424.
425.
426.
427.
428.
429.
430.
431.
432.
433.
434.
435.
436.
437.
438.
439.
440.
441.
442.
443.
444.
445.
446.
447.
448.
449.
450.
451.
452.
453.
454.
455.
456.
457.
458.
459.
460.
461.
462.
463.
464.
465.
466.
467.
468.
469.
470.
471.
472.
473.
474.
475.
476.
477.
478.
479.
480.
481.
482.
483.
484.
485.
486.
487.
488.
489.
490.
491.
492.
493.
494.
495.
496.
497.
498.
499.
500.
501.
502.
503.
504.
505.
506.
507.
508.
509.
510.
511.
512.
513.
514.
515.
516.
517.
518.
519.
520.
521.
522.
523.
524.
525.
526.
527.
528.
529.
530.
531.
532.
533.
534.
535.
536.
537.
538.
539.
540.
541.
542.
543.
544.
545.
546.
547.
548.
549.
550.
551.
552.
553.
554.
555.
556.
557.
558.
559.
560.
561.
562.
563.
564.
565.
566.
567.
568.
569.
570.
571.
572.
573.
574.
575.
576.
577.
578.
579.
580.
581.
582.
583.
584.
585.
586.
587.
588.
589.
590.
591.
592.
593.
594.
595.
596.
597.
598.
599.
600.
601.
602.
603.
604.
605.
606.
607.
608.
609.
610.
611.
612.
613.
614.
615.
616.
617.
618.
619.
620.
621.
622.
623.
624.
625.
626.
627.
628.
629.
630.
631.
632.
633.
634.
635.
636.
637.
638.
639.
640.
641.
642.
643.
644.
645.
646.
647.
648.
649.
650.
651.
652.
653.
654.
655.
656.
657.
658.
659.
660.
661.
662.
663.
664.
665.
666.
667.
668.
669.
670.
671.
672.
673.
674.
675.
676.
677.
678.
679.
680.
681.
682.
683.
684.
685.
686.
687.
688.
689.
690.
691.
692.
693.
694.
695.
696.
697.
698.
699.
700.
701.
702.
703.
704.
705.
706.
707.
708.
709.
710.
711.
712.
713.
714.
715.
716.
717.
718.
719.
720.
721.
722.
723.
724.
725.
726.
727.
728.
729.
730.
731.
732.
733.
734.
735.
736.
737.
738.
739.
740.
741.
742.
743.
744.
745.
746.
747.
748.
749.
750.
751.
752.
753.
754.
755.
756.
757.
758.
759.
760.
761.
762.
763.
764.
765.
766.
767.
768.
769.
770.
771.
772.
773.
774.
775.
776.
777.
778.
779.
780.
781.
782.
783.
784.
785.
786.
787.
788.
789.
790.
791.
792.
793.
794.
795.
796.
797.
798.
799.
800.
801.
802.
803.
804.
805.
806.
807.
808.
809.
810.
811.
812.
813.
814.
815.
816.
817.
818.
819.
820.
821.
822.
823.
824.
825.
826.
827.
828.
829.
830.
831.
832.
833.
834.
835.
836.
837.
838.
839.
840.
841.
842.
843.
844.
845.
846.
847.
848.
849.
850.
851.
852.
853.
854.
855.
856.
857.
858.
859.
860.
861.
862.
863.
864.
865.
866.
867.
868.
869.
870.
871.
872.
873.
874.
875.
876.
877.
878.
879.
880.
881.
882.
883.
884.
885.
886.
887.
888.
889.
890.
891.
892.
893.
894.
895.
896.
897.
898.
899.
900.
901.
902.
903.
904.
905.
906.
907.
908.
909.
910.
911.
912.
913.
914.
915.
916.
917.
918.
919.
920.
921.
922.
923.
924.
925.
926.
927.
928.
929.
930.
931.
932.
933.
934.
935.
936.
937.
938.
939.
940.
941.
942.
943.
944.
945.
946.
947.
948.
949.
950.
951.
952.
953.
954.
955.
956.
957.
958.
959.
960.
961.
962.
963.
964.
965.
966.
967.
968.
969.
970.
971.
972.
973.
974.
975.
976.
977.
978.
979.
980.
981.
982.
983.
984.
985.
986.
987.
988.
989.
990.
991.
992.
993.
994.
995.
996.
997.
998.
999.
1000.
1001.
1002.
1003.
1004.
1005.
1006.
1007.
1008.
1009.
1010.
1011.
1012.
1013.
1014.
1015.
1016.
1017.
1018.
1019.
1020.
1021.
1022.
1023.
1024.
1025.
1026.
1027.
1028.
1029.
1030.
1031.
1032.
1033.
1034.
1035.
1036.
1037.
1038.
1039.
1040.
1041.
1042.
1043.
1044.
1045.
1046.
1047.
1048.
1049.
1050.
1051.
1052.
1053.
1054.
1055.
1056.
1057.
1058.
1059.
1060.
1061.
1062.
1063.
1064.
1065.
1066.
1067.
1068.
1069.
1070.
1071.
1072.
1073.
1074.
1075.
1076.
1077.
1078.
1079.
1080.
1081.
1082.
1083.
1084.
1085.
1086.
1087.
1088.
1089.
1090.
1091.
1092.
1093.
1094.
1095.
1096.
1097.
1098.
1099.
1100.
1101.
1102.
1103.
1104.
1105.
1106.
1107.
1108.
1109.
1110.
1111.
1112.
1113.
1114.
1115.
1116.
1117.
1118.
1119.
1120.
1121.
1122.
1123.
1124.
1125.
1126.
1127.
1128.
1129.
1130.
1131.
1132.
1133.
1134.
1135.
1136.
1137.
1138.
1139.
1140.
1141.
1142.
1143.
1144.
1145.
1146.
1147.
1148.
1149.
1150.
1151.
1152.
1153.
1154.
1155.
1156.
1157.
1158.
1159.
1160.
1161.
1162.
1163.
1164.
1165.
1166.
1167.
1168.
1169.
1170.
1171.
1172.
1173.
1174.
1175.
1176.
1177.
1178.
1179.
1180.
1181.
1182.
1183.
1184.
1185.
1186.
1187.
1188.
1189.
1190.
1191.
1192.
1193.
1194.
1195.
1196.
1197.
1198.
1199.
1200.
1201.
1202.
1203.
1204.
1205.
1206.
1207.
1208.
1209.
1210.
1211.
1212.
1213.
1214.
1215.
1216.
1217.
1218.
1219.
1220.
1221.
1222.
1223.
1224.
1225.
1226.
1227.
1228.
1229.
1230.
1231.
1232.
1233.
1234.
1235.
1236.
1237.
1238.
1239.
1240.
1241.
1242.
1243.
1244.
1245.
1246.
1247.
1248.
1249.
1250.
1251.
1252.
1253.
1254.
1255.
1256.
1257.
1258.
1259.
1260.
1261.
1262.
1263.
1264.
1265.
1266.
1267.
1268.
1269.
1270.
1271.
1272.
1273.
1274.
1275.
1276.
1277.
1278.
1279.
1280.
1281.
1282.
1283.
1284.
1285.
1286.
1287.
1288.
1289.
1290.
1291.
1292.
1293.
1294.
1295.
1296.
1297.
1298.
1299.
1300.
1301.
1302.
1303.
1304.
1305.
1306.
1307.
1308.
1309.
1310.
1311.
1312.
1313.
1314.
1315.
1316.
1317.
1318.
1319.
1320.
1321.
1322.
1323.
1324.
1325.
1326.
1327.
1328.
1329.
1330.
1331.
1332.
1333.
1334.
1335.
1336.
1337.
1338.
1339.
1340.
1341.
1342.
1343.
1344.
1345.
1346.
1347.
1348.
1349.
1350.
1351.
1352.
1353.
1354.
1355.
1356.
1357.
1358.
1359.
1360.
1361.
1362.
1363.
1364.
1365.
1366.
1367.
1368.
1369.
1370.
1371.
1372.
1373.
1374.
1375.
1376.
1377.
1378.
1379.
1380.
1381.
1382.
1383.
1384.
1385.
1386.
1387.
1388.
1389.
1390.
1391.
1392.
1393.
1394.
1395.
1396.
1397.
1398.
1399.
1400.
1401.
1402.
1403.
1404.
1405.
1406.
1407.
1408.
1409.
1410.
1411.
1412.
1413.
1414.
1415.
1416.
1417.
1418.
1419.
1420.
1421.
1422.
1423.
1424.
1425.
1426.
1427.
1428.
1429.
1430.
1431.
1432.
1433.
1434.
1435.
1436.
1437.
1438.
1439.
1440.
1441.
1442.
1443.
1444.
1445.
1446.
1447.
1448.
1449.
1450.
1451.
1452.
1453.
1454.
1455.
1456.
1457.
1458.
1459.
1460.
1461.
1462.
1463.
1464.
1465.
1466.
1467.
1468.
1469.
1470.
1471.
1472.
1473.
1474.
1475.
1476.
1477.
1478.
1479.
1480.
1481.
1482.
1483.
1484.
1485.
1486.
1487.
1488.
1489.
1490.
1491.
1492.
1493.
1494.
1495.
1496.
1497.
1498.
1499.
1500.
1501.
1502.
1503.
1504.
1505.
1506.
1507.
1508.
1509.
1510.
1511.
1512.
1513.
1514.
1515.
1516.
1517.
1518.
1519.
1520.
1521.
1522.
1523.
1524.
1525.
1526.
1527.
1528.
1529.
1530.
1531.
1532.
1533.
1534.
1535.
1536.
1537.
1538.
1539.
1540.
1541.
1542.
1543.
1544. <




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

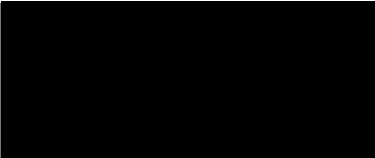
PROJECT NO. Y40415

Guteryl Steel

Lot #: F1H130407


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

August 25, 2011

F1H130407

1 of 84

Case Narrative
LOT NUMBER: F1H130407

This report contains the analytical results for the 10 samples received under chain of custody by TestAmerica in St. Louis on August 13, 2011. These samples are associated with your Guteryl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1230199**

Tetrahydrofuran was removed from the initial calibration lowest point due to poor response. Isobutanol, n-Butanol, 2-Chloroethylvinyl ether, 4-Methyl-2-pentanone and 2-Hexanone were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration. The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

There was insufficient sample volume to perform MS/MSD analysis. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

The sample surrogate recovery is outside established QC limits. This excursion is attributed to a matrix interference which is physically evident in the sample. These samples foamed at the 1X and at a 5X dilution. The samples are reported at 5X as the lowest RL. The samples were also analyzed at a 50X dilution for analytes with high concentrations. The original analysis had similar surrogate failures.

Affected Samples:

F1H130407 (1): A04BMW250001

F1H130407 (5): A04BMW9003

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1227139**

The MS (MSD) recovery for calcium and sodium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery. No further action is required.

Strontium was observed in the CCB above the reporting limit. Associated samples which exhibit concentrations greater than ten (10) times the concentrations observed in the CCB, do not require re-analysis. Original results are reported.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H130407 (1): A04BMW250001

F1H130407 (2): A02MW060001

F1H130407 (3): A02MW100001

F1H130407 (4): A02MW070001

F1H130407 (5): A04BMW9003

F1H130407 (6): A04BMW250001 DISSOLVED

F1H130407 (7): A02MW060001 DISSOLVED

F1H130407 (8): A02MW100001 DISSOLVED

F1H130407 (9): A02MW070001 DISSOLVED

F1H130407 (10): A04BMW9003 DISSOLVED

Nitrite as N (MCAWW 300.0A)**Batch: 1227060**

The following samples were reported ND at dilution for Nitrite, due to interference with Chloride in the undiluted runs. The reporting limit has been adjusted only for those targets reported from the dilution run.

The samples were received in hold on 8/13/11 for IC analysis, but were re-run out of 48 hour hold for Nitrite in batch 1227060 on 8/15/11, due to a failed bracketing CCV in the 8/13/11 in-hold run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H130407 (1): A04BMW250001

F1H130407 (2): A02MW060001

F1H130407 (3): A02MW100001

F1H130407 (4): A02MW070001

F1H130407 (5): A04BMW9003

Chloride (MCAWW 300.0A)**Batch: 1227179**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for chloride are attributed to matrix interference.

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H130407 (1): A04BMW250001

F1H130407 (2): A02MW060001

F1H130407 (3): A02MW100001

F1H130407 (4): A02MW070001

F1H130407 (5): A04BMW9003

Fluoride (MCAWW 300.0A)**Batch: 1225019**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H130407 (1): A04BMW250001

F1H130407 (2): A02MW060001

F1H130407 (5): A04BMW9003

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1225022**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H130407 (1): A04BMW250001
 F1H130407 (3): A02MW100001
 F1H130407 (5): A04BMW9003

F1H130407 (2): A02MW060001
 F1H130407 (4): A02MW070001

Sulfate (MCAWW 300.0A)**Batch: 1230226**

The samples was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H130407 (1): A04BMW250001
 F1H130407 (3): A02MW100001
 F1H130407 (5): A04BMW9003

F1H130407 (2): A02MW060001
 F1H130407 (4): A02MW070001

Total Dissolvee Solids (MCAWW 160.1)

The samples were analyzed at a dilution based on high concentrations of target analytes. The reporting limit has been adjusted accordingly.

Affected Samples:

F1H130407 (1): A04BMW250001
 F1H130407 (5): A04BMW9003

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample provided to perform the sample duplicate, an LCS duplicate was used instead.

Affected Samples:

F1H130407 (1): A04BMW250001	F1H130407 (2): A02MW060001
F1H130407 (3): A02MW100001	F1H130407 (4): A02MW070001
F1H130407 (5): A04BMW9003	F1H130407 (6): A04BMW250001 DISSOLVED
F1H130407 (7): A02MW060001 DISSOLVED	F1H130407 (8): A02MW100001 DISSOLVED
F1H130407 (9): A02MW070001 DISSOLVED	F1H130407 (10): A04BMW9003 DISSOLVED

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H130407

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL," HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H130407

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLL89	001	A04BMW250001	08/12/11	08:45
MLL9A	002	A02MW060001	08/12/11	10:00
MLL9C	003	A02MW100001	08/12/11	10:55
MLL9D	004	A02MW070001	08/12/11	11:35
MLL9E	005	A04BMW9003	08/12/11	
MLL9F	006	A04BMW250001 DISSOLVED	08/12/11	08:45
MLL9G	007	A02MW060001 DISSOLVED	08/12/11	10:00
MLL9H	008	A02MW100001 DISSOLVED	08/12/11	10:55
MLL9J	009	A02MW070001 DISSOLVED	08/12/11	11:35
MLL9K	010	A04BMW9003 DISSOLVED	08/12/11	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

GC/MS Volatiles

Lot-Sample #....: F1H130407-001 Work Order #....: MLL893AC Matrix.....: WATER
 Date Sampled....: 08/12/11 08:45 Date Received...: 08/13/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #....: 1230199 Analysis Time...: 14:14
 Dilution Factor: 5
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	25	ug/L
Acetone	ND	10	ug/L
Benzene	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Carbon disulfide	ND	10	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	10	ug/L
Dibromochloromethane	ND	5.0	ug/L
Chloroethane	17 D	10	ug/L
Chloroform	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
1,1-Dichloroethane	190 D	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
1,1-Dichloroethene	44 D	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
2-Hexanone	ND	25	ug/L
Methylene chloride	ND D	5.0	ug/L
4-Methyl-2-pentanone	ND	25	ug/L
Styrene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	3.4 J,D	5.0	ug/L
Toluene	1.3 J,D	5.0	ug/L
1,1,2-Trichloroethane	1.3 J,D	5.0	ug/L
Trichloroethene	150 D	5.0	ug/L
Xylenes (total)	ND	25	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(85 - 120)
Dibromofluoromethane	117 *	(85 - 115)
1,2-Dichloroethane-d4	105	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

GC/MS Volatiles

Lot-Sample #...: F1H130407-001 Work Order #...: MLL893AC Matrix.....: WATER

NOTE(S) :

- * Surrogate recovery is outside stated control limits.
- D Result was obtained from the analysis of a dilution.
- J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

GC/MS Volatiles

Lot-Sample #...: F1H130407-001 Work Order #...: MLL894AC Matrix.....: WATER
 Date Sampled...: 08/12/11 08:45 Date Received...: 08/13/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 07:34
 Dilution Factor: 50
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1-Dichloroethane	190 D	50	ug/L
1,2-Dichloroethene (total)	1600 D	100	ug/L
Vinyl chloride	770 D	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

TOTAL Metals

Lot-Sample #...: F1H130407-001

Matrix.....: WATER

Date Sampled...: 08/12/11 08:45 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	175	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL891A5
		Dilution Factor: 1		Analysis Time...: 19:45		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AF
		Dilution Factor: 1		Analysis Time...: 11:56		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL891AG
		Dilution Factor: 1		Analysis Time...: 11:56		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AE
		Dilution Factor: 1		Analysis Time...: 11:56		
Barium	109	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AH
		Dilution Factor: 1		Analysis Time...: 11:56		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AJ
		Dilution Factor: 1		Analysis Time...: 11:56		
Calcium	146000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL891AK
		Dilution Factor: 1		Analysis Time...: 11:56		
Cadmium	1.7 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AL
		Dilution Factor: 1		Analysis Time...: 11:56		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AM
		Dilution Factor: 1		Analysis Time...: 11:56		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AN
		Dilution Factor: 1		Analysis Time...: 11:56		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AP
		Dilution Factor: 1		Analysis Time...: 11:56		
Iron	61.6 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLL891AQ
		Dilution Factor: 1		Analysis Time...: 11:56		
Magnesium	47800	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL891AR
		Dilution Factor: 1		Analysis Time...: 11:56		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

TOTAL Metals

Lot-Sample #...: F1H130407-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	863	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AT
		Dilution Factor: 1		Analysis Time...: 11:56		
Sodium	888000 B	20000	ug/L	SW846 6010C	08/15-08/19/11	MLL891AU
		Dilution Factor: 20		Analysis Time...: 14:44		
Nickel	103	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AV
		Dilution Factor: 1		Analysis Time...: 11:56		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AW
		Dilution Factor: 1		Analysis Time...: 11:56		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891AX
		Dilution Factor: 1		Analysis Time...: 11:56		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891A0
		Dilution Factor: 1		Analysis Time...: 11:56		
Strontium	892 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891A1
		Dilution Factor: 1		Analysis Time...: 11:56		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891A2
		Dilution Factor: 1		Analysis Time...: 11:56		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891A3
		Dilution Factor: 1		Analysis Time...: 11:56		
Zinc	192	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL891A4
		Dilution Factor: 1		Analysis Time...: 11:56		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

General Chemistry

Lot-Sample #...: F1H130407-001 Work Order #...: MLL89 Matrix.....: WATER
 Date Sampled...: 08/12/11 08:45 Date Received...: 08/13/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	1490	100	mg/L	MCAWW 300.0A	08/13/11	1225018
			Dilution Factor: 500	Analysis Time...: 04:03		
Fluoride	2.1	1.0	mg/L	MCAWW 300.0A	08/13/11	1225019
			Dilution Factor: 10	Analysis Time...: 03:34		
Nitrate	0.090	0.020	mg/L	MCAWW 300.0A	08/13/11	1225020
			Dilution Factor: 1	Analysis Time...: 03:19		
Nitrite	ND	1.0	mg/L	MCAWW 300.0A	08/15/11	1227060
			Dilution Factor: 50	Analysis Time...: 05:50		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/13/11	1225022
			Dilution Factor: 1	Analysis Time...: 03:19		
Sulfate	82.9	5.0	mg/L	MCAWW 300.0A	08/18/11	1230226
			Dilution Factor: 10	Analysis Time...: 07:53		
Total Alkalinity	255	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	3170	100	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 10	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001

TOTAL Metals

Lot-Sample #...: F1H130407-002

Matrix.....: WATER

Date Sampled...: 08/12/11 10:00 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	3.6	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9A1A4
		Dilution Factor: 1		Analysis Time...: 19:52		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AE
		Dilution Factor: 1		Analysis Time...: 12:02		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AF
		Dilution Factor: 1		Analysis Time...: 12:02		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AD
		Dilution Factor: 1		Analysis Time...: 12:02		
Barium	23.3 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AG
		Dilution Factor: 1		Analysis Time...: 12:02		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AH
		Dilution Factor: 1		Analysis Time...: 12:02		
Calcium	116000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AJ
		Dilution Factor: 1		Analysis Time...: 12:02		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AK
		Dilution Factor: 1		Analysis Time...: 12:02		
Cobalt	4.4 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AL
		Dilution Factor: 1		Analysis Time...: 12:02		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AM
		Dilution Factor: 1		Analysis Time...: 12:02		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AN
		Dilution Factor: 1		Analysis Time...: 12:02		
Iron	53.6 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AP
		Dilution Factor: 1		Analysis Time...: 12:02		
Magnesium	47200	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AQ
		Dilution Factor: 1		Analysis Time...: 12:02		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001

TOTAL Metals

Lot-Sample #...: FLH130407-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	673	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AR
		Dilution Factor: 1		Analysis Time...: 12:02		
Sodium	16900 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLL9A1AT
		Dilution Factor: 5		Analysis Time...: 14:50		
Nickel	259	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AU
		Dilution Factor: 1		Analysis Time...: 12:02		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AV
		Dilution Factor: 1		Analysis Time...: 12:02		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AW
		Dilution Factor: 1		Analysis Time...: 12:02		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1AX
		Dilution Factor: 1		Analysis Time...: 12:02		
Strontium	347 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1A0
		Dilution Factor: 1		Analysis Time...: 12:02		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1A1
		Dilution Factor: 1		Analysis Time...: 12:02		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1A2
		Dilution Factor: 1		Analysis Time...: 12:02		
Zinc	425	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9A1A3
		Dilution Factor: 1		Analysis Time...: 12:02		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001

General Chemistry

Lot-Sample #...: F1H130407-002 Work Order #...: MLL9A Matrix.....: WATER
 Date Sampled...: 08/12/11 10:00 Date Received...: 08/13/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	31.2	2.0	mg/L	MCAWW 300.0A	08/13/11	1225018
			Dilution Factor: 10	Analysis Time...: 07:10		
Fluoride	2.9	0.50	mg/L	MCAWW 300.0A	08/13/11	1225019
			Dilution Factor: 5	Analysis Time...: 06:56		
Nitrate	0.056	0.020	mg/L	MCAWW 300.0A	08/13/11	1225020
			Dilution Factor: 1	Analysis Time...: 06:41		
Nitrite	ND	0.040	mg/L	MCAWW 300.0A	08/15/11	1227060
			Dilution Factor: 2	Analysis Time...: 06:30		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/13/11	1225022
			Dilution Factor: 1	Analysis Time...: 06:41		
Sulfate	115	5.0	mg/L	MCAWW 300.0A	08/18/11	1230226
			Dilution Factor: 10	Analysis Time...: 08:33		
Total Alkalinity	358	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	641	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001

TOTAL Metals

Lot-Sample #...: F1H130407-003

Matrix.....: WATER

Date Sampled...: 08/12/11 10:55 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Prep Batch #...: 1227138						
Uranium	1.6	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9C1A4
		Dilution Factor: 1		Analysis Time...: 19:59		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AE
		Dilution Factor: 1		Analysis Time...: 12:09		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AF
		Dilution Factor: 1		Analysis Time...: 12:09		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AD
		Dilution Factor: 1		Analysis Time...: 12:09		
Barium	52.0	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AG
		Dilution Factor: 1		Analysis Time...: 12:09		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AH
		Dilution Factor: 1		Analysis Time...: 12:09		
Calcium	124000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AJ
		Dilution Factor: 1		Analysis Time...: 12:09		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AK
		Dilution Factor: 1		Analysis Time...: 12:09		
Cobalt	13.9 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AL
		Dilution Factor: 1		Analysis Time...: 12:09		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AM
		Dilution Factor: 1		Analysis Time...: 12:09		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AN
		Dilution Factor: 1		Analysis Time...: 12:09		
Iron	3710	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AP
		Dilution Factor: 1		Analysis Time...: 12:09		
Magnesium	25800	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AQ
		Dilution Factor: 1		Analysis Time...: 12:09		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001

TOTAL Metals

Lot-Sample #...: F1H130407-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	955	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AR
		Dilution Factor: 1		Analysis Time...: 12:09		
Sodium	7070 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLL9C1AT
		Dilution Factor: 5		Analysis Time...: 14:56		
Nickel	566	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AU
		Dilution Factor: 1		Analysis Time...: 12:09		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AV
		Dilution Factor: 1		Analysis Time...: 12:09		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AW
		Dilution Factor: 1		Analysis Time...: 12:09		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1AX
		Dilution Factor: 1		Analysis Time...: 12:09		
Strontium	475 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1A0
		Dilution Factor: 1		Analysis Time...: 12:09		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1A1
		Dilution Factor: 1		Analysis Time...: 12:09		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1A2
		Dilution Factor: 1		Analysis Time...: 12:09		
Zinc	207	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9C1A3
		Dilution Factor: 1		Analysis Time...: 12:09		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001

General Chemistry

Lot-Sample #...: F1H130407-003 Work Order #...: MLL9C Matrix.....: WATER

Date Sampled...: 08/12/11 10:55 Date Received...: 08/13/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	25.6	2.0	mg/L	MCAWW 300.0A	08/13/11	1225018
				Dilution Factor: 10	Analysis Time...: 08:08	
Fluoride	1.4	0.10	mg/L	MCAWW 300.0A	08/13/11	1225019
				Dilution Factor: 1	Analysis Time...: 07:39	
Nitrate	0.030	0.020	mg/L	MCAWW 300.0A	08/13/11	1225020
				Dilution Factor: 1	Analysis Time...: 07:39	
Nitrite	ND	0.040	mg/L	MCAWW 300.0A	08/15/11	1227060
				Dilution Factor: 2	Analysis Time...: 06:44	
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/13/11	1225022
				Dilution Factor: 1	Analysis Time...: 07:39	
Sulfate	90.2	2.5	mg/L	MCAWW 300.0A	08/18/11	1230226
				Dilution Factor: 5	Analysis Time...: 08:47	
Total Alkalinity	316	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
				Dilution Factor: 1	Analysis Time...: 00:00	
Total Dissolved Solids	529	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
				Dilution Factor: 1	Analysis Time...: 00:00	

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001

TOTAL Metals

Lot-Sample #...: F1H130407-004

Matrix.....: WATER

Date Sampled...: 08/12/11 11:35 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	33.4	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9D1AF
		Dilution Factor: 1		Analysis Time...: 20:05		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AQ
		Dilution Factor: 1		Analysis Time...: 12:15		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AR
		Dilution Factor: 1		Analysis Time...: 12:15		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AP
		Dilution Factor: 1		Analysis Time...: 12:15		
Barium	97.3	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AT
		Dilution Factor: 1		Analysis Time...: 12:15		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AU
		Dilution Factor: 1		Analysis Time...: 12:15		
Calcium	92000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AV
		Dilution Factor: 1		Analysis Time...: 12:15		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AW
		Dilution Factor: 1		Analysis Time...: 12:15		
Cobalt	7.0 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AX
		Dilution Factor: 1		Analysis Time...: 12:15		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A0
		Dilution Factor: 1		Analysis Time...: 12:15		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A1
		Dilution Factor: 1		Analysis Time...: 12:15		
Iron	2880	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A2
		Dilution Factor: 1		Analysis Time...: 12:15		
Magnesium	27300	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A3
		Dilution Factor: 1		Analysis Time...: 12:15		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001

TOTAL Metals

Lot-Sample #...: F1H130407-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	387	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A4
		Dilution Factor: 1		Analysis Time...: 12:15		
Sodium	49400 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLL9D1A5
		Dilution Factor: 5		Analysis Time...: 15:03		
Nickel	237	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A6
		Dilution Factor: 1		Analysis Time...: 12:15		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A7
		Dilution Factor: 1		Analysis Time...: 12:15		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A8
		Dilution Factor: 1		Analysis Time...: 12:15		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1A9
		Dilution Factor: 1		Analysis Time...: 12:15		
Strontium	325 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AA
		Dilution Factor: 1		Analysis Time...: 12:15		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AC
		Dilution Factor: 1		Analysis Time...: 12:15		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AD
		Dilution Factor: 1		Analysis Time...: 12:15		
Zinc	35.3	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9D1AE
		Dilution Factor: 1		Analysis Time...: 12:15		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001

General Chemistry

Lot-Sample #...: F1H130407-004 Work Order #...: MLL9D Matrix.....: WATER

Date Sampled...: 08/12/11 11:35 Date Received...: 08/13/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	45.8	20.0	mg/L	MCAWW 300.0A	08/13/11	1225018
			Dilution Factor: 100	Analysis Time...: 09:49		
Fluoride	2.3	0.10	mg/L	MCAWW 300.0A	08/13/11	1225019
			Dilution Factor: 1	Analysis Time...: 09:05		
Nitrate	0.013 B	0.020	mg/L	MCAWW 300.0A	08/13/11	1225020
			Dilution Factor: 1	Analysis Time...: 09:05		
Nitrite	ND	0.040	mg/L	MCAWW 300.0A	08/15/11	1227060
			Dilution Factor: 2	Analysis Time...: 06:57		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/13/11	1225022
			Dilution Factor: 1	Analysis Time...: 09:05		
Sulfate	82.2	2.5	mg/L	MCAWW 300.0A	08/18/11	1230226
			Dilution Factor: 5	Analysis Time...: 09:00		
Total Alkalinity	301	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	495	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

GC/MS Volatiles

Lot-Sample #...: F1H130407-005 Work Order #...: MLL9E3AN Matrix.....: WATER
 Date Sampled...: 08/12/11 Date Received...: 08/13/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 14:41
 Dilution Factor: 5
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	25	ug/L
Acetone	ND	10	ug/L
Benzene	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Carbon disulfide	ND	10	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	10	ug/L
Dibromochloromethane	ND	5.0	ug/L
Chloroethane	17 D	10	ug/L
Chloroform	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
1,1-Dichloroethane	190 D	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
1,1-Dichloroethene	40 D	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
2-Hexanone	ND	25	ug/L
Methylene chloride	2.4 J,D	5.0	ug/L
4-Methyl-2-pentanone	ND	25	ug/L
Styrene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	3.4 J,D	5.0	ug/L
Toluene	1.6 J,D	5.0	ug/L
1,1,2-Trichloroethane	1.6 J,D	5.0	ug/L
Trichloroethene	160 D	5.0	ug/L
Xylenes (total)	ND	25	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	117 *	(85 - 115)
1,2-Dichloroethane-d4	110	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

GC/MS Volatiles

Lot-Sample #...: F1H130407-005 Work Order #...: MLL9E3AN Matrix.....: WATER

NOTE(S) :

- * Surrogate recovery is outside stated control limits.
- D Result was obtained from the analysis of a dilution.
- J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

GC/MS Volatiles

Lot-Sample #...: F1H130407-005 Work Order #...: MLL9E4AN Matrix.....: WATER
 Date Sampled...: 08/12/11 Date Received...: 08/13/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 15:07
 Dilution Factor: 50

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloroethene (total)	1600 D	100	ug/L
1,1,1-Trichloroethane	600 D	50	ug/L
Vinyl chloride	680 D	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)

NOTE (S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

TOTAL Metals

Lot-Sample #...: F1H130407-005

Matrix.....: WATER

Date Sampled...: 08/12/11

Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	176	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9E1AG
		Dilution Factor: 1		Analysis Time...: 20:25		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AR
		Dilution Factor: 1		Analysis Time...: 12:35		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AT
		Dilution Factor: 1		Analysis Time...: 12:35		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AQ
		Dilution Factor: 1		Analysis Time...: 12:35		
Barium	110	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AU
		Dilution Factor: 1		Analysis Time...: 12:35		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AV
		Dilution Factor: 1		Analysis Time...: 12:35		
Calcium	145000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AW
		Dilution Factor: 1		Analysis Time...: 12:35		
Cadmium	1.6 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AX
		Dilution Factor: 1		Analysis Time...: 12:35		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A0
		Dilution Factor: 1		Analysis Time...: 12:35		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A1
		Dilution Factor: 1		Analysis Time...: 12:35		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A2
		Dilution Factor: 1		Analysis Time...: 12:35		
Iron	54.3 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A3
		Dilution Factor: 1		Analysis Time...: 12:35		
Magnesium	47100	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A4
		Dilution Factor: 1		Analysis Time...: 12:35		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

TOTAL Metals

Lot-Sample #...: F1H130407-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	856	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A5
		Dilution Factor: 1		Analysis Time...: 12:35		
Sodium	885000 B	20000	ug/L	SW846 6010C	08/15-08/19/11	MLL9E1A6
		Dilution Factor: 20		Analysis Time...: 15:22		
Nickel	103	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A7
		Dilution Factor: 1		Analysis Time...: 12:35		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A8
		Dilution Factor: 1		Analysis Time...: 12:35		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1A9
		Dilution Factor: 1		Analysis Time...: 12:35		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AA
		Dilution Factor: 1		Analysis Time...: 12:35		
Strontium	892 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AC
		Dilution Factor: 1		Analysis Time...: 12:35		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AD
		Dilution Factor: 1		Analysis Time...: 12:35		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AE
		Dilution Factor: 1		Analysis Time...: 12:35		
Zinc	193	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9E1AF
		Dilution Factor: 1		Analysis Time...: 12:35		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

General Chemistry

Lot-Sample #...: F1H130407-005 Work Order #...: MLL9E Matrix.....: WATER

Date Sampled...: 08/12/11 Date Received...: 08/13/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	1490	100	mg/L	MCAWW 300.0A	08/13/11	1225018
			Dilution Factor: 500	Analysis Time...: 10:46		
Fluoride	2.0	1.0	mg/L	MCAWW 300.0A	08/13/11	1225019
			Dilution Factor: 10	Analysis Time...: 10:18		
Nitrate	0.087	0.020	mg/L	MCAWW 300.0A	08/13/11	1225020
			Dilution Factor: 1	Analysis Time...: 10:03		
Nitrite	ND	1.0	mg/L	MCAWW 300.0A	08/15/11	1227060
			Dilution Factor: 50	Analysis Time...: 07:11		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/13/11	1225022
			Dilution Factor: 1	Analysis Time...: 10:03		
Sulfate	83.6	5.0	mg/L	MCAWW 300.0A	08/18/11	1230226
			Dilution Factor: 10	Analysis Time...: 09:13		
Total Alkalinity	254	5.0	mg/L	MCAWW 310.1	08/22/11	1234085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	3020	100	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 10	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-006

Matrix.....: WATER

Date Sampled...: 08/12/11 08:45 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	171	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9F1A2
		Dilution Factor: 1		Analysis Time...: 20:32		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AC
		Dilution Factor: 1		Analysis Time...: 12:41		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AD
		Dilution Factor: 1		Analysis Time...: 12:41		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AA
		Dilution Factor: 1		Analysis Time...: 12:41		
Barium	108	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AE
		Dilution Factor: 1		Analysis Time...: 12:41		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AF
		Dilution Factor: 1		Analysis Time...: 12:41		
Calcium	146000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AG
		Dilution Factor: 1		Analysis Time...: 12:41		
Cadmium	1.5 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AH
		Dilution Factor: 1		Analysis Time...: 12:41		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AJ
		Dilution Factor: 1		Analysis Time...: 12:41		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AK
		Dilution Factor: 1		Analysis Time...: 12:41		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AL
		Dilution Factor: 1		Analysis Time...: 12:41		
Iron	72.9 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AM
		Dilution Factor: 1		Analysis Time...: 12:41		
Magnesium	48300	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AN
		Dilution Factor: 1		Analysis Time...: 12:41		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	865	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AP
		Dilution Factor: 1		Analysis Time...: 12:41		
Sodium	836000 B	20000	ug/L	SW846 6010C	08/15-08/19/11	MLL9F1AQ
		Dilution Factor: 20		Analysis Time...: 15:28		
Nickel	103	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AR
		Dilution Factor: 1		Analysis Time...: 12:41		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AT
		Dilution Factor: 1		Analysis Time...: 12:41		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AU
		Dilution Factor: 1		Analysis Time...: 12:41		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AV
		Dilution Factor: 1		Analysis Time...: 12:41		
Strontium	868 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AW
		Dilution Factor: 1		Analysis Time...: 12:41		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1AX
		Dilution Factor: 1		Analysis Time...: 12:41		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1A0
		Dilution Factor: 1		Analysis Time...: 12:41		
Zinc	196	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9F1A1
		Dilution Factor: 1		Analysis Time...: 12:41		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001 DISSOLVED

TOTAL Metals

Lot-Sample #....: F1H130407-007

Matrix.....: WATER

Date Sampled....: 08/12/11 10:00 Date Received...: 08/13/11

		REPORTING			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #...: 1227138						
Uranium	3.6	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9G1AD
		Dilution Factor: 1		Analysis Time...: 20:39		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AG
		Dilution Factor: 1		Analysis Time...: 12:47		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AH
		Dilution Factor: 1		Analysis Time...: 12:47		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AF
		Dilution Factor: 1		Analysis Time...: 12:47		
Barium	19.2 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AJ
		Dilution Factor: 1		Analysis Time...: 12:47		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AK
		Dilution Factor: 1		Analysis Time...: 12:47		
Calcium	114000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AL
		Dilution Factor: 1		Analysis Time...: 12:47		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AM
		Dilution Factor: 1		Analysis Time...: 12:47		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AN
		Dilution Factor: 1		Analysis Time...: 12:47		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AP
		Dilution Factor: 1		Analysis Time...: 12:47		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AQ
		Dilution Factor: 1		Analysis Time...: 12:47		
Iron	ND	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AR
		Dilution Factor: 1		Analysis Time...: 12:47		
Magnesium	46500	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AT
		Dilution Factor: 1		Analysis Time...: 12:47		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001 DISSOLVED

TOTAL Metals

Lot-Sample #....: F1H130407-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	305	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AU
		Dilution Factor: 1		Analysis Time...: 12:47		
Sodium	17400 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLL9G1AV
		Dilution Factor: 5		Analysis Time...: 15:35		
Nickel	223	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AW
		Dilution Factor: 1		Analysis Time...: 12:47		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AX
		Dilution Factor: 1		Analysis Time...: 12:47		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1A0
		Dilution Factor: 1		Analysis Time...: 12:47		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1A1
		Dilution Factor: 1		Analysis Time...: 12:47		
Strontium	338 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1A2
		Dilution Factor: 1		Analysis Time...: 12:47		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1A3
		Dilution Factor: 1		Analysis Time...: 12:47		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AA
		Dilution Factor: 1		Analysis Time...: 12:47		
Zinc	382	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9G1AC
		Dilution Factor: 1		Analysis Time...: 12:47		

NOTE(S) :

J Estimated result, Result is less than RL.

B Method blank contamination, Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-008

Matrix.....: WATER

Date Sampled...: 08/12/11 10:55 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	1.5	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9H1AH
		Dilution Factor: 1		Analysis Time...: 20:45		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AL
		Dilution Factor: 1		Analysis Time...: 12:54		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AM
		Dilution Factor: 1		Analysis Time...: 12:54		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AK
		Dilution Factor: 1		Analysis Time...: 12:54		
Barium	54.6	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AN
		Dilution Factor: 1		Analysis Time...: 12:54		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AP
		Dilution Factor: 1		Analysis Time...: 12:54		
Calcium	128000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AQ
		Dilution Factor: 1		Analysis Time...: 12:54		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AR
		Dilution Factor: 1		Analysis Time...: 12:54		
Cobalt	14.6 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AT
		Dilution Factor: 1		Analysis Time...: 12:54		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AU
		Dilution Factor: 1		Analysis Time...: 12:54		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AV
		Dilution Factor: 1		Analysis Time...: 12:54		
Iron	3600	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AW
		Dilution Factor: 1		Analysis Time...: 12:54		
Magnesium	27200	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AX
		Dilution Factor: 1		Analysis Time...: 12:54		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	998	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1A0
		Dilution Factor: 1		Analysis Time...: 12:54		
Sodium	7270 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLL9H1A1
		Dilution Factor: 5		Analysis Time...: 15:41		
Nickel	577	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1A2
		Dilution Factor: 1		Analysis Time...: 12:54		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1A3
		Dilution Factor: 1		Analysis Time...: 12:54		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AA
		Dilution Factor: 1		Analysis Time...: 12:54		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AC
		Dilution Factor: 1		Analysis Time...: 12:54		
Strontium	479 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AD
		Dilution Factor: 1		Analysis Time...: 12:54		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AE
		Dilution Factor: 1		Analysis Time...: 12:54		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AF
		Dilution Factor: 1		Analysis Time...: 12:54		
Zinc	208	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9H1AG
		Dilution Factor: 1		Analysis Time...: 12:54		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-009

Matrix.....: WATER

Date Sampled...: 08/12/11 11:35 Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	32.4	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9J1AM
		Dilution Factor: 1		Analysis Time...: 20:52		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AQ
		Dilution Factor: 1		Analysis Time...: 13:00		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AR
		Dilution Factor: 1		Analysis Time...: 13:00		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AP
		Dilution Factor: 1		Analysis Time...: 13:00		
Barium	100	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AT
		Dilution Factor: 1		Analysis Time...: 13:00		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AU
		Dilution Factor: 1		Analysis Time...: 13:00		
Calcium	96300	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AV
		Dilution Factor: 1		Analysis Time...: 13:00		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AW
		Dilution Factor: 1		Analysis Time...: 13:00		
Cobalt	7.1 J	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AX
		Dilution Factor: 1		Analysis Time...: 13:00		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1A0
		Dilution Factor: 1		Analysis Time...: 13:00		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1A1
		Dilution Factor: 1		Analysis Time...: 13:00		
Iron	1080	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1A2
		Dilution Factor: 1		Analysis Time...: 13:00		
Magnesium	28600	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1A3
		Dilution Factor: 1		Analysis Time...: 13:00		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	379	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AA
		Dilution Factor: 1		Analysis Time...: 13:00		
Sodium	49700 B	5000	ug/L	SW846 6010C	08/15-08/19/11	MLL9J1AC
		Dilution Factor: 5		Analysis Time...: 15:48		
Nickel	238	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AD
		Dilution Factor: 1		Analysis Time...: 13:00		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AE
		Dilution Factor: 1		Analysis Time...: 13:00		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AF
		Dilution Factor: 1		Analysis Time...: 13:00		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AG
		Dilution Factor: 1		Analysis Time...: 13:00		
Strontium	340 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AH
		Dilution Factor: 1		Analysis Time...: 13:00		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AJ
		Dilution Factor: 1		Analysis Time...: 13:00		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AK
		Dilution Factor: 1		Analysis Time...: 13:00		
Zinc	22.0	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9J1AL
		Dilution Factor: 1		Analysis Time...: 13:00		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-010

Matrix.....: WATER

Date Sampled...: 08/12/11

Date Received...: 08/13/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1227138						
Uranium	174	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLL9K1AM
		Dilution Factor: 1		Analysis Time...: 20:59		
Prep Batch #...: 1227139						
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AQ
		Dilution Factor: 1		Analysis Time...: 13:07		
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AR
		Dilution Factor: 1		Analysis Time...: 13:07		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AP
		Dilution Factor: 1		Analysis Time...: 13:07		
Barium	105	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AT
		Dilution Factor: 1		Analysis Time...: 13:07		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AU
		Dilution Factor: 1		Analysis Time...: 13:07		
Calcium	143000	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AV
		Dilution Factor: 1		Analysis Time...: 13:07		
Cadmium	1.5 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AW
		Dilution Factor: 1		Analysis Time...: 13:07		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AX
		Dilution Factor: 1		Analysis Time...: 13:07		
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1A0
		Dilution Factor: 1		Analysis Time...: 13:07		
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1A1
		Dilution Factor: 1		Analysis Time...: 13:07		
Iron	58.6 J	100	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1A2
		Dilution Factor: 1		Analysis Time...: 13:07		
Magnesium	47300	1000	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1A3
		Dilution Factor: 1		Analysis Time...: 13:07		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H130407-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	846	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AA
		Dilution Factor: 1		Analysis Time...: 13:07		
Sodium	854000 B	20000	ug/L	SW846 6010C	08/15-08/19/11	MLL9K1AC
		Dilution Factor: 20		Analysis Time...: 15:54		
Nickel	101	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AD
		Dilution Factor: 1		Analysis Time...: 13:07		
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AE
		Dilution Factor: 1		Analysis Time...: 13:07		
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AF
		Dilution Factor: 1		Analysis Time...: 13:07		
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AG
		Dilution Factor: 1		Analysis Time...: 13:07		
Strontium	841 B	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AH
		Dilution Factor: 1		Analysis Time...: 13:07		
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AJ
		Dilution Factor: 1		Analysis Time...: 13:07		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AK
		Dilution Factor: 1		Analysis Time...: 13:07		
Zinc	190	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLL9K1AL
		Dilution Factor: 1		Analysis Time...: 13:07		

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. Analyte detected at a reportable level in blank.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H130407
 MB Lot-Sample #: F1H180000-199

Work Order #...: MLTVV1AA

Matrix.....: WATER

Analysis Date...: 08/18/11
 Dilution Factor: 1

Prep Date.....: 08/18/11

Analysis Time...: 11:50

Prep Batch #...: 1230199

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	107	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H130407

Work Order #...: MLTVV1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2-Dichloroethane-d4	106	(70 - 120)		
4-Bromofluorobenzene	100	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H130407 Work Order #...: MLTXM1AA Matrix.....: WATER
MB Lot-Sample #: F1H190000-041
Analysis Date...: 08/19/11 Prep Date.....: 08/19/11 Analysis Time...: 05:48
Dilution Factor: 1 Prep Batch #...: 1231041

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H150000-138 Prep Batch #...: 1227138						
Uranium	ND	1.0	ug/L	SW846 6020A	08/15-08/17/11	MLM771AA
		Dilution Factor: 1				
		Analysis Time...: 17:46				
MB Lot-Sample #: F1H150000-139 Prep Batch #...: 1227139						
Aluminum	ND	200	ug/L	SW846 6010C	08/15-08/20/11	MLM781A4
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Antimony	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CK
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A2
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Barium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A5
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Beryllium	0.87 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A6
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A8
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Calcium	ND	1000	ug/L	SW846 6010C	08/15-08/20/11	MLM781A7
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Chromium	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CA
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A9
		Dilution Factor: 1				
		Analysis Time...: 10:00				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CC
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Iron	ND	100	ug/L	SW846 6010C	08/15-08/20/11	MLM781CD
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Lead	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CJ
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Magnesium	ND	1000	ug/L	SW846 6010C	08/15-08/20/11	MLM781CE
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Manganese	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CF
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Nickel	ND	40.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CH
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Selenium	ND	15.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CL
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Silver	ND	10.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781A3
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Sodium	399 J	1000	ug/L	SW846 6010C	08/15-08/19/11	MLM781CG
		Dilution Factor: 1				
		Analysis Time...: 12:49				
Strontium	0.80 J	5.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CM
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Thallium	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CN
		Dilution Factor: 1				
		Analysis Time...: 10:00				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CP
		Dilution Factor: 1				
		Analysis Time...: 10:00				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/15-08/20/11	MLM781CQ

Dilution Factor: 1
Analysis Time...: 10:00

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLTJ01AA 0.20 Dilution Factor: 1 Analysis Time...: 03:05	mg/L	MB Lot-Sample #: F1H130000-018 MCAWW 300.0A	08/13/11	1225018
Fluoride	ND	Work Order #: MLTJ11AA 0.10 Dilution Factor: 1 Analysis Time...: 03:05	mg/L	MB Lot-Sample #: F1H130000-019 MCAWW 300.0A	08/13/11	1225019
Nitrate	ND	Work Order #: MLTJ21AA 0.020 Dilution Factor: 1 Analysis Time...: 03:05	mg/L	MB Lot-Sample #: F1H130000-020 MCAWW 300.0A	08/13/11	1225020
Nitrite	ND	Work Order #: MLQD41AA 0.020 Dilution Factor: 1 Analysis Time...: 05:37	mg/L	MB Lot-Sample #: F1H150000-060 MCAWW 300.0A	08/15/11	1227060
Phosphate as P, Ortho	ND	Work Order #: MLTJ41AA 0.50 Dilution Factor: 1 Analysis Time...: 03:05	mg/L	MB Lot-Sample #: F1H130000-022 MCAWW 300.0A	08/13/11	1225022
Sulfate	ND	Work Order #: MLVDK1AA 0.50 Dilution Factor: 1 Analysis Time...: 04:45	mg/L	MB Lot-Sample #: F1H180000-226 MCAWW 300.0A	08/18/11	1230226
Total Alkalinity	ND	Work Order #: MLWW41AC 5.0 Dilution Factor: 1 Analysis Time...: 00:00	mg/L	MB Lot-Sample #: F1H220000-085 MCAWW 310.1	08/22/11	1234085
Total Dissolved Solids	ND	Work Order #: MLQ6P1AA 10.0 Dilution Factor: 1 Analysis Time...: 00:00	mg/L	MB Lot-Sample #: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H130407 Work Order #...: MLTVV1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H180000-199
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 10:30
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2-Dichloroethane	97	(70 - 130)	SW846 8260B
Benzene	95	(80 - 120)	SW846 8260B
Trichloroethene	90	(70 - 125)	SW846 8260B
1,2-Dichloropropane	91	(75 - 125)	SW846 8260B
Bromodichloromethane	98	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	98	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	107	(55 - 140)	SW846 8260B
Toluene	103	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	102	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	96	(75 - 125)	SW846 8260B
2-Hexanone	95	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	103	(60 - 135)	SW846 8260B
Chlorobenzene	96	(80 - 120)	SW846 8260B
Bromoform	108	(70 - 130)	SW846 8260B
Ethylbenzene	101	(75 - 125)	SW846 8260B
Styrene	109	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	93	(65 - 130)	SW846 8260B
Tetrachloroethene	101	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	104	(70 - 130)	SW846 8260B
Dibromochloromethane	104	(60 - 135)	SW846 8260B
Vinyl chloride	87	(50 - 145)	SW846 8260B
Bromomethane	99	(30 - 145)	SW846 8260B
Chloroethane	90	(60 - 135)	SW846 8260B
Acetone	93	(40 - 140)	SW846 8260B
1,1-Dichloroethene	95	(70 - 130)	SW846 8260B
Methylene chloride	88	(55 - 140)	SW846 8260B
Carbon disulfide	84	(35 - 160)	SW846 8260B
1,1-Dichloroethane	93	(70 - 135)	SW846 8260B
2-Butanone	88	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	96	(85 - 115)	SW846 8260B
Chloroform	93	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	99	(65 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H130407 Work Order #...: MLTVV1AC Matrix.....: WATER
LCS Lot-Sample#: F1H180000-199

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Carbon tetrachloride	99	(65 - 140)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	105	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	101	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H130407 Work Order #...: MLTXM1AC Matrix.....: WATER
LCS Lot-Sample#: F1H190000-041
Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
Prep Batch #...: 1231041 Analysis Time...: 04:55
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Vinyl chloride	83	(50 - 145)	SW846 8260B
1,1-Dichloroethane	94	(70 - 135)	SW846 8260B
1,2-Dichloroethene (total)	97	(85 - 115)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H150000-138 Prep Batch #...: 1227138					
Uranium	105	(80 - 120)	SW846 6020A	08/15-08/17/11	MLM771AC
		Dilution Factor: 1		Analysis Time...: 17:52	
LCS Lot-Sample#: F1H150000-139 Prep Batch #...: 1227139					
Arsenic	106	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AA
		Dilution Factor: 1		Analysis Time...: 10:06	
Silver	95	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AC
		Dilution Factor: 1		Analysis Time...: 10:06	
Aluminum	104	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AD
		Dilution Factor: 1		Analysis Time...: 10:06	
Barium	103	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AE
		Dilution Factor: 1		Analysis Time...: 10:06	
Beryllium	108	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AF
		Dilution Factor: 1		Analysis Time...: 10:06	
Calcium	106	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AG
		Dilution Factor: 1		Analysis Time...: 10:06	
Cadmium	107	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AH
		Dilution Factor: 1		Analysis Time...: 10:06	
Cobalt	101	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AJ
		Dilution Factor: 1		Analysis Time...: 10:06	
Chromium	100	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AK
		Dilution Factor: 1		Analysis Time...: 10:06	
Copper	99	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AL
		Dilution Factor: 1		Analysis Time...: 10:06	
Iron	104	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AM
		Dilution Factor: 1		Analysis Time...: 10:06	
Magnesium	102	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AN
		Dilution Factor: 1		Analysis Time...: 10:06	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	103	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AP
		Dilution Factor: 1		Analysis Time...: 10:06	
Sodium	108	(80 - 120)	SW846 6010C	08/15-08/19/11	MLM781AQ
		Dilution Factor: 1		Analysis Time...: 12:55	
Nickel	104	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AR
		Dilution Factor: 1		Analysis Time...: 10:06	
Lead	103	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AT
		Dilution Factor: 1		Analysis Time...: 10:06	
Antimony	105	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AU
		Dilution Factor: 1		Analysis Time...: 10:06	
Selenium	110	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AV
		Dilution Factor: 1		Analysis Time...: 10:06	
Strontium	113	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AW
		Dilution Factor: 1		Analysis Time...: 10:06	
Thallium	101	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781AX
		Dilution Factor: 1		Analysis Time...: 10:06	
Vanadium	100	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781A0
		Dilution Factor: 1		Analysis Time...: 10:06	
Zinc	115	(80 - 120)	SW846 6010C	08/15-08/20/11	MLM781A1
		Dilution Factor: 1		Analysis Time...: 10:06	

NOTE(S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H130407

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	92	Work Order #: MLTJ01AC (90 - 110)	LCS Lot-Sample#: F1H130000-018 MCAWW 300.0A	08/13/11	1225018
		Dilution Factor: 1	Analysis Time...: 02:51		
Fluoride	96	Work Order #: MLTJ11AC (90 - 110)	LCS Lot-Sample#: F1H130000-019 MCAWW 300.0A	08/13/11	1225019
		Dilution Factor: 1	Analysis Time...: 02:51		
Nitrate	94	Work Order #: MLTJ21AC (90 - 110)	LCS Lot-Sample#: F1H130000-020 MCAWW 300.0A	08/13/11	1225020
		Dilution Factor: 1	Analysis Time...: 02:51		
Nitrite	96	Work Order #: MLQD41AC (90 - 110)	LCS Lot-Sample#: F1H150000-060 MCAWW 300.0A	08/15/11	1227060
		Dilution Factor: 1	Analysis Time...: 05:23		
Phosphate as P, Ortho	96	Work Order #: MLTJ41AC (90 - 110)	LCS Lot-Sample#: F1H130000-022 MCAWW 300.0A	08/13/11	1225022
		Dilution Factor: 1	Analysis Time...: 02:51		
Sulfate	99	Work Order #: MLVDK1AC (90 - 110)	LCS Lot-Sample#: F1H180000-226 MCAWW 300.0A	08/18/11	1230226
		Dilution Factor: 1	Analysis Time...: 04:32		
Total Alkalinity	93	Work Order #: MLWW41AA (90 - 110)	LCS Lot-Sample#: F1H220000-085 MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: MLWW41AD (90 - 110)	LCS Lot-Sample#: F1H220000-085 MCAWW 310.1	08/22/11	1234085
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	98	Work Order #: MLQ6P1AC (90 - 113)	LCS Lot-Sample#: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H130407 Work Order #...: MLLN11CV-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-006 MLLN11CW-MSD
 Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11
 Prep Date.....: 08/18/11 Analysis Date...: 08/18/11
 Prep Batch #...: 1230199 Analysis Time...: 19:05
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	86	(70 - 130)			SW846 8260B
	98	(70 - 130)	13	(0-20)	SW846 8260B
Dibromochloromethane	94	(60 - 135)			SW846 8260B
	103	(60 - 135)	8.5	(0-20)	SW846 8260B
Vinyl chloride	78	(50 - 145)			SW846 8260B
	91	(50 - 145)	15	(0-20)	SW846 8260B
Bromomethane	87	(30 - 145)			SW846 8260B
	95	(30 - 145)	9.2	(0-20)	SW846 8260B
Chloroethane	87	(60 - 135)			SW846 8260B
	97	(60 - 135)	11	(0-20)	SW846 8260B
Acetone	94	(40 - 140)			SW846 8260B
	96	(40 - 140)	2.0	(0-20)	SW846 8260B
1,1-Dichloroethene	97	(70 - 130)			SW846 8260B
	105	(70 - 130)	7.2	(0-20)	SW846 8260B
Methylene chloride	88	(55 - 140)			SW846 8260B
	95	(55 - 140)	7.3	(0-20)	SW846 8260B
Carbon disulfide	91	(35 - 160)			SW846 8260B
	96	(35 - 160)	5.6	(0-20)	SW846 8260B
1,1-Dichloroethane	92	(70 - 135)			SW846 8260B
	100	(70 - 135)	8.3	(0-20)	SW846 8260B
2-Butanone	88	(30 - 150)			SW846 8260B
	94	(30 - 150)	7.1	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	91	(85 - 115)			SW846 8260B
	100	(85 - 115)	9.8	(0-20)	SW846 8260B
Chloroform	89	(65 - 135)			SW846 8260B
	97	(65 - 135)	8.4	(0-20)	SW846 8260B
1,1,1-Trichloroethane	95	(65 - 130)			SW846 8260B
	103	(65 - 130)	8.8	(0-20)	SW846 8260B
Carbon tetrachloride	95	(65 - 140)			SW846 8260B
	103	(65 - 140)	8.2	(0-20)	SW846 8260B
1,2-Dichloroethane	89	(70 - 130)			SW846 8260B
	100	(70 - 130)	12	(0-20)	SW846 8260B
Benzene	92	(80 - 120)			SW846 8260B
	100	(80 - 120)	8.3	(0-20)	SW846 8260B
Trichloroethene	89	(70 - 125)			SW846 8260B
	93	(70 - 125)	4.5	(0-20)	SW846 8260B
1,2-Dichloropropane	89	(75 - 125)			SW846 8260B
	96	(75 - 125)	8.4	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H130407
MS Lot-Sample #: F1H120447-006

Work Order #...: MLLN11CV-MS
MLLN11CW-MSD

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	94	(75 - 120)			SW846 8260B
	102	(75 - 120)	8.1	(0-20)	SW846 8260B
1,1,2-Trichloroethane	92	(75 - 125)			SW846 8260B
	102	(75 - 125)	11	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	96	(55 - 140)			SW846 8260B
	106	(55 - 140)	9.7	(0-20)	SW846 8260B
Toluene	100	(75 - 120)			SW846 8260B
	103	(75 - 120)	3.2	(0-20)	SW846 8260B
1,3-Dichlorobenzene	98	(75 - 125)			SW846 8260B
	102	(75 - 125)	3.4	(0-20)	SW846 8260B
1,4-Dichlorobenzene	94	(75 - 125)			SW846 8260B
	99	(75 - 125)	4.5	(0-20)	SW846 8260B
2-Hexanone	82	(55 - 130)			SW846 8260B
	98	(55 - 130)	17	(0-20)	SW846 8260B
4-Methyl-2-pentanone	88	(60 - 135)			SW846 8260B
	102	(60 - 135)	15	(0-20)	SW846 8260B
Chlorobenzene	93	(80 - 120)			SW846 8260B
	98	(80 - 120)	5.5	(0-20)	SW846 8260B
Bromoform	100	(70 - 130)			SW846 8260B
	108	(70 - 130)	7.6	(0-20)	SW846 8260B
Ethylbenzene	98	(75 - 125)			SW846 8260B
	104	(75 - 125)	5.7	(0-20)	SW846 8260B
Styrene	106	(65 - 135)			SW846 8260B
	112	(65 - 135)	6.0	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	90	(65 - 130)			SW846 8260B
	99	(65 - 130)	9.1	(0-20)	SW846 8260B
Tetrachloroethene	96	(45 - 150)			SW846 8260B
	101	(45 - 150)	5.7	(0-20)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 120)			SW846 8260B
	100	(70 - 120)	5.3	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(85 - 120)
	105	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
	108	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
	105	(70 - 120)
4-Bromofluorobenzene	97	(75 - 120)
	98	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print F1H130407 parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H130407 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD
 Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 09:20
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Vinyl chloride	93	(50 - 145)			SW846 8260B
	96	(50 - 145)	2.4	(0-20)	SW846 8260B
1,1-Dichloroethane	100	(70 - 135)			SW846 8260B
	95	(70 - 135)	4.6	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	100	(85 - 115)			SW846 8260B
	98	(85 - 115)	2.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(85 - 120)
	102	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
	102	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H120447-001 Prep Batch #...: 1227138							
Uranium	107	(80 - 120)			SW846 6020A	08/15-08/17/11	MLLNJ1A5
	109	(80 - 120)	1.4	(0-20)	SW846 6020A	08/15-08/17/11	MLLNJ1A6
Dilution Factor: 1							
Analysis Time...: 18:12							
MS Lot-Sample #: F1H120447-001 Prep Batch #...: 1227139							
Aluminum	103	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CC
	97	(80 - 120)	5.6	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CD
Dilution Factor: 1							
Analysis Time...: 10:19							
Antimony	101	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1C9
	96	(80 - 120)	5.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DA
Dilution Factor: 1							
Analysis Time...: 10:19							
Arsenic	104	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1A7
	98	(80 - 120)	5.8	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1A8
Dilution Factor: 1							
Analysis Time...: 10:19							
Barium	101	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CE
	96	(80 - 120)	4.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CF
Dilution Factor: 1							
Analysis Time...: 10:19							
Beryllium	105	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CG
	101	(80 - 120)	3.9	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CH
Dilution Factor: 1							
Analysis Time...: 10:19							
Cadmium	101	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CL
	96	(80 - 120)	5.3	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CM
Dilution Factor: 1							
Analysis Time...: 10:19							
Calcium	96	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CJ
	63 N	(80 - 120)	3.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CK
Dilution Factor: 1							
Analysis Time...: 10:19							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	96	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CQ
	92	(80 - 120)	4.3	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CR
Dilution Factor: 1 Analysis Time...: 10:19							
Cobalt	95	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CN
	90	(80 - 120)	4.9	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CP
Dilution Factor: 1 Analysis Time...: 10:19							
Copper	96	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CT
	92	(80 - 120)	4.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CU
Dilution Factor: 1 Analysis Time...: 10:19							
Iron	99	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CV
	94	(80 - 120)	4.6	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CW
Dilution Factor: 1 Analysis Time...: 10:19							
Lead	97	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1C7
	92	(80 - 120)	5.8	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C8
Dilution Factor: 1 Analysis Time...: 10:19							
Magnesium	96	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1CX
	80	(80 - 120)	3.3	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C0
Dilution Factor: 1 Analysis Time...: 10:19							
Manganese	98	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1C1
	94	(80 - 120)	4.0	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C2
Dilution Factor: 1 Analysis Time...: 10:19							
Nickel	97	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1C5
	91	(80 - 120)	5.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1C6
Dilution Factor: 1 Analysis Time...: 10:19							
Selenium	105	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DC
	98	(80 - 120)	7.1	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DD
Dilution Factor: 1 Analysis Time...: 10:19							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H130407

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	92	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1A9
	88	(80 - 120)	4.6	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1CA
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Sodium	104	(80 - 120)			SW846 6010C	08/15-08/19/11	MLLNJ1C3
	161 N	(80 - 120)	6.3	(0-20)	SW846 6010C	08/15-08/19/11	MLLNJ1C4
		Dilution Factor: 5					
		Analysis Time...: 13:08					
Strontium	109	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DE
	101	(80 - 120)	4.9	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DF
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Thallium	96	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DG
	91	(80 - 120)	5.5	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DH
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Vanadium	97	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DJ
	93	(80 - 120)	3.8	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DK
		Dilution Factor: 1					
		Analysis Time...: 10:19					
Zinc	110	(80 - 120)			SW846 6010C	08/15-08/20/11	MLLNJ1DL
	103	(80 - 120)	6.3	(0-20)	SW846 6010C	08/15-08/20/11	MLLNJ1DM
		Dilution Factor: 1					
		Analysis Time...: 10:19					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H130407

Matrix.....: WATER

Date Sampled...: 08/12/11 08:45 Date Received...: 08/13/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	105	Work Order #...: MLL891CH (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H130407-001 08/13/11	1225018
		Dilution Factor: 500		Analysis Time...: 04:03	
Fluoride	100	Work Order #...: MLL891CK (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H130407-001 08/13/11	1225019
		Dilution Factor: 10		Analysis Time...: 03:34	
Nitrate	97	Work Order #...: MLL891CM (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H130407-001 08/13/11	1225020
		Dilution Factor: 1		Analysis Time...: 03:19	
Nitrite	53 N	Work Order #...: MLL891CF (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H130407-001 08/15/11	1227060
		Dilution Factor: 50		Analysis Time...: 05:50	
Phosphate as P, Ortho	54 N	Work Order #...: MLL891CR (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H130407-001 08/13/11	1225022
		Dilution Factor: 1		Analysis Time...: 03:19	
Sulfate	102	Work Order #...: MLL891CW (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H130407-001 08/18/11	1230226
		Dilution Factor: 10		Analysis Time...: 07:53	
Total Alkalinity	96	Work Order #...: MLKJ51CF (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H110460-009 08/22/11	1234085
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H130407

Work Order #...: MLL89-SMP
MLL89-DUP

Matrix.....: WATER

Date Sampled...: 08/12/11 08:45 Date Received...: 08/13/11

PARAM	DUPLICATE		RPD	RPD		PREPARATION-		PREP
	RESULT	UNITS		LIMIT	METHOD	ANALYSIS DATE	BATCH #	
Chloride						SD Lot-Sample #:	F1H130407-001	
1490	1460	mg/L	2.0	(0-20)	MCAWW 300.0A	08/13/11	1225018	
		Dilution Factor: 500		Analysis Time...: 04:03				
Fluoride						SD Lot-Sample #:	F1H130407-001	
2.1	1.9	mg/L	7.2	(0-20)	MCAWW 300.0A	08/13/11	1225019	
		Dilution Factor: 10		Analysis Time...: 03:34				
Nitrate						SD Lot-Sample #:	F1H130407-001	
0.090	0.088	mg/L	2.3	(0-20)	MCAWW 300.0A	08/13/11	1225020	
		Dilution Factor: 1		Analysis Time...: 03:19				
Nitrite						SD Lot-Sample #:	F1H130407-001	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/15/11	1227060	
		Dilution Factor: 50		Analysis Time...: 05:50				
Phosphate as P, Ortho						SD Lot-Sample #:	F1H130407-001	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/13/11	1225022	
		Dilution Factor: 1		Analysis Time...: 03:19				
Sulfate						SD Lot-Sample #:	F1H130407-001	
82.9	81.8	mg/L	1.3	(0-20)	MCAWW 300.0A	08/18/11	1230226	
		Dilution Factor: 10		Analysis Time...: 07:53				

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H130407

Work Order #...: MLLN1-SMP
MLLN1-DUP

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15

Date Received...: 08/12/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved						SD Lot-Sample #: F1H120447-006		
Solids	645	665	mg/L	3.1	(0-0.0)	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1			Analysis Time...: 00:00		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H130407 Work Order #...: MLKJ5-SMP Matrix.....: WATER
MLKJ5-DUP
Date Sampled...: 08/10/11 09:30 Date Received...: 08/11/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	256	257	mg/L	0.31	(0-20)	MCAWW 310.1	08/22/11	1234085

SD Lot-Sample #: F1H110460-009
Dilution Factor: 1 Analysis Time..: 00:00

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW250001

Radiochemistry

Lab Sample ID: F1H130407-001
Work Order: MLL89
Matrix: WATER

Date Collected: 08/12/11 0845
Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 39
Uranium 234	55.7		5.1	0.1	0.1	08/19/11	08/21/11
Uranium 235/236	3.22		0.60	0.10	0.06	08/19/11	08/21/11
Uranium 238	56.4		5.2	0.1	0.08	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001

Radiochemistry

Lab Sample ID: F1H130407-002
Work Order: MLL9A
Matrix: WATER

Date Collected: 08/12/11 1000
Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 75
Uranium 234	1.77		0.29	0.10	0.02	08/19/11	08/21/11
Uranium 235/236	0.034		0.039	0.100	0.031	08/19/11	08/21/11
Uranium 238	1.16		0.23	0.10	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001

Radiochemistry

Lab Sample ID: F1H130407-003

Date Collected: 08/12/11 1055

Work Order: MLL9C

Date Received: 08/13/11 0910

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 89
Uranium 234	0.58		0.14	0.10	0.04	08/19/11	08/21/11
Uranium 235/236	0.029		0.034	0.100	0.026	08/19/11	08/21/11
Uranium 238	0.41		0.12	0.10	0.02	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001

Radiochemistry

Lab Sample ID: F1H130407-004
Work Order: MLL9D
Matrix: WATER

Date Collected: 08/12/11 1135
Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 60
Uranium 234	11.8		1.2	0.1	0.03	08/19/11	08/21/11
Uranium 235/236	0.67		0.20	0.10	0.04	08/19/11	08/21/11
Uranium 238	12.1		1.3	0.1	0.03	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003

Radiochemistry

Lab Sample ID: F1H130407-005

Date Collected: 08/12/11 0000

Work Order: MLL9E

Date Received: 08/13/11 0910

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 44
Uranium 234	49.9		4.5	0.1	0.04	08/19/11	08/21/11
Uranium 235/236	2.69		0.51	0.10	0.05	08/19/11	08/21/11
Uranium 238	50.5		4.6	0.1	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

66 of 84

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW250001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H130407-006
Work Order: MLL9F
Matrix: WATER

Date Collected: 08/12/11 0845
Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 37
Uranium 234	58.5		5.3	0.1	0.1	08/19/11	08/21/11
Uranium 235/236	3.28		0.61	0.10	0.06	08/19/11	08/21/11
Uranium 238	60.5		5.5	0.1	0.05	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW060001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H130407-007
Work Order: MLL9G
Matrix: WATER

Date Collected: 08/12/11 1000
Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 71
Uranium 234	1.57		0.28	0.10	0.04	08/19/11	08/21/11
Uranium 235/236	0.107		0.074	0.100	0.056	08/19/11	08/21/11
Uranium 238	1.04		0.22	0.10	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW100001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H130407-008
Work Order: MLL9H
Matrix: WATER

Date Collected: 08/12/11 1055
Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 79
Uranium 234	0.65		0.16	0.10	0.02	08/19/11	08/21/11
Uranium 235/236	0.011	U	0.021	0.100	0.028	08/19/11	08/21/11
Uranium 238	0.53		0.14	0.10	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1H130407** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW070001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H130407-009

Date Collected: 08/12/11 1135

Work Order: MLL9J

Date Received: 08/13/11 0910

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 74
Uranium 234	10.5		1.1	0.1	0.03	08/19/11	08/21/11
Uranium 235/236	0.54		0.17	0.10	0.05	08/19/11	08/21/11
Uranium 238	10.6		1.1	0.1	0.04	08/19/11	08/21/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9003 DISSOLVED

Radiochemistry

Lab Sample ID: F1H130407-010

Work Order: MLL9K

Matrix: WATER

Date Collected: 08/12/11 0000

Date Received: 08/13/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1231165	Yld % 41
Uranium 234	55.2		5.0	0.1	0.09	08/19/11	08/21/11
Uranium 235/236	2.96		0.56	0.10	0.06	08/19/11	08/21/11
Uranium 238	56.6		5.1	0.1	0.05	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H130407

71 of 84

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H130407
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC	Lab Sample ID	
						Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1231165	Yld %	91 F1H190000-165B
Uranium 234	0.013	U	0.021	0.100	0.034	08/19/11	08/21/11
Uranium 235/236	0.009	U	0.018	0.100	0.025	08/19/11	08/21/11
Uranium 238	-0.0037	U	0.0053	0.100	0.039	08/19/11	08/21/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H130407

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD		F1H190000-165C	
Uranium 234	3.26	2.97	0.40	89	91	(76 - 136)	
Spk 2	3.26	3.27	0.43	80	100	(76 - 136)	10 %RPD
Uranium 238	3.39	3.32	0.43	89	98	(76 - 134)	
Spk 2	3.39	3.60	0.46	80	106	(76 - 134)	8 %RPD
Batch #:		1231165	Analysis Date: 08/21/11				

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R268,2-50,V13
 Date Received: 2011-08-13
 Analytical Due Date: 2011-08-22
 Report Due Date: 2011-08-25
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	
1	A04BMW250001			2011-08-12 / 845	MLL89	WATER
SAMPLE COMMENTS:						
FE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4 X	PROT: A	WRK LOC 06
CU 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX 1\$	SW846 6020A	WATER, 6020 Total	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4 X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP.- 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H130407

74 of 84

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268,2-50,METS

Project Manager: LMF Quote #: 89251 SDG:
 Project: Y40415 Guteryl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-13
 Analytical Due Date: 2011-08-22
 Report Due Date: 2011-08-25

Report Type: B Standard Report
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
2	A02MW060001			2011-08-12 / 1000	MLL9A	WATER
SAMPLE COMMENTS:						
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK 06 LOC
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK 06 LOC
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK 06 LOC

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
----------	------------------	---------	---------------	-------------------	-----------	---

TestAmerica - St. Louis

F1H130407

Logged in by:

BRUNSONA

2011-08-13

9:29:09

printed on: Saturday, August 13, 2011 10:40 A

75 of 84

Page 2 of 9

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268,2-50,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-13

Project: Y40415

Guteryl Steel

Analytical Due Date: 2011-08-22

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-25

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

3 A02MW100001

2011-08-12 / 1055

MLL9C

WATER

SAMPLE COMMENTS:

BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4 X	PROT: A	WRK LOC	06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MQD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
----------	------------------	---------	---------------	-------------------	-----------	---

F1H130407

TestAmerica - St. Louis

Logged In by:

BRUNSONA

2011-08-13

9:29:09

printed on: Saturday, August 13, 2011 10:40 A

76 of 84

Page 3 of 9

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268,2-50,METS

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 Guteryl Steel
 Report to: [REDACTED]

#SMPS in LOT: 0

Date Received: 2011-08-13
 Analytical Due Date: 2011-08-22
 Report Due Date: 2011-08-25
 Report Type: B Standard Report
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

4 A02MW070001

2011-08-12 / 1135

MLL9D WATER

SAMPLE COMMENTS:

CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
VX	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
TL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
SR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
PB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
NI	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
NA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
ZN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
AL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
AS	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
BA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
UX	IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PRQT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PRQT: C	WRK LOC	06
XX	AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PRQT: A	WRK LOC	06
XX	C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06
XX	C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06
XX	CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06
XX	DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06
XX	GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06
XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PRQT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
----------	------------------	---------	---------------	-------------------	-----------	---

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268,2-50,METS

Project Manager: LMF
Project: Y40415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guteryl Steel
Report to: [REDACTED]

Date Received: 2011-08-13
Analytical Due Date: 2011-08-22
Report Due Date: 2011-08-25

Report Type: B Standard Report
EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

5 A04BMW9003

2011-08-12 / 0

MLL9E

WATER

SAMPLE COMMENTS:

MG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
----------	------------------	---------	---------------	-------------------	-----------	---

TestAmerica - St. Louis

Logged in by: BRUNSONA 2011-08-13 9:29:09

printed on: Saturday, August 13, 2011 10:40 A

78 of 84

Page 5 of 9

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-13

Project: Y40415

Guteryl Steel

Analytical Due Date: 2011-08-22

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-25

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 8020 for total uranium instead of 200.0

6 A04BMW250001 DISSOLVED

2011-08-12 / 845

MLL9F WATER

SAMPLE COMMENTS:

MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID

Site ID

Client Matrix

DATE/TIME SAMPLED

WORKORDER 1

7 A02MW060001 DISSOLVED

2011-08-12 / 1000

MLL9G WATER

SAMPLE COMMENTS:

TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268, METS

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 Guteryl Steel
 Report to: [REDACTED]

SDG:

Date Received: 2011-08-13
 Analytical Due Date: 2011-08-22
 Report Due Date: 2011-08-25

Report Type: B Standard Report
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

VX	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
8	A02MW100001 DISSOLVED			2011-08-12 / 1055	MLL9H	WATER
SAMPLE COMMENTS:						
VX	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
ZN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
TL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
SR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
PB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
NI	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
NA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X
BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268, METS
Date Received: 2011-08-13
Analytical Due Date: 2011-08-22
Report Due Date: 2011-08-25
Report Type: B Standard Report
EDD Code: 00

Project Manager: LMF
Project: Y40415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
SDG:
Guteryl Steel
Report to: [REDACTED]

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A02MW070001 DISSOLVED			2011-08-12 / 1135	MLL9J	WATER

SAMPLE COMMENTS:

MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	A04BMW9003 DISSOLVED			2011-08-12 / 0	MLL9K	WATER

SAMPLE COMMENTS:

MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
--------	-------------	---------------------	----	------------------------	----	--------------	---------	---------	----

F1H130407

F1H130407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R268, METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-13

Project: Y40415

Guteryl Steel

Analytical Due Date: 2011-08-22

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-25

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

15 Rider Trail North

h City, MO 63045

ne 314.298.8566 fax 314.298.8757

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]

Estadística Pl. 1901

nquis		Company: Shaw E & I. Inc.	Date/Time: 8/12/11 16:35		Company:	Date/Time: 8/12/2011 @ 16:35
nquis		Company: TAZ	Date/Time: 8/12/2011 17:02		Company: TA STL	Date/Time: 8/13/11 0910
nquis		Company:	Date/Time:		Company:	Date/Time:

CONDITION UPON RECEIPT FORM

Client: SHAW

Quote No: 89251

COC/RFA No: 008

Initiated By: NVD

Date: 8/13/11

Time: 0910



Shipping Information

Shipper: ☒ FedEx ☐ UPS ☐ DHL ☐ Courier ☐ Client ☐ Other: _____

Multiple Packages: ☒ Y ☐ N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 3870
2. 4485 0258 3859
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 4
2. Ambient
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (if not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

- ☐ Client Contact Name: _____
- ☐ Sample(s) processed "as is" _____
- ☐ Sample(s) on hold until _____

Informed by: _____

If released, notify: _____

Date: 8/15/11

Project Management Review _____

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON MUST BE INITIALED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. Y40415

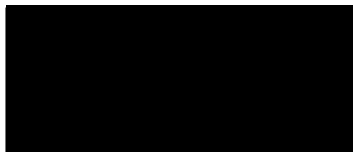
Guterl Steel

Lot #: F1H160430



Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.



Project Manager

August 26, 2011

F1H160430

1 of 58

Case Narrative
LOT NUMBER: F1H160430

This report contains the analytical results for the six samples received under chain of custody by TestAmerica St. Louis on August 16, 2011. These samples are associated with your Guterl Steel project.

All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. **TestAmerica St. Louis' Florida certification number is E87689.** The case narrative is an integral part of this report.

This report shall not be reproduced, except in full, without the written approval of the laboratory.

This report is incomplete without the case narrative. All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1231041**

Tertahydrofuran was removed from the initial calibration lowest point due to poor response. Isobutanol, n-Butanol, 2-Chloroethylvinyl ether, 4-Methyl-2-pentanone and 2-Hexanone were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration. The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

Affected Samples:

F1H160430 (3): A04BMW706D0001
 F1H160430 (4): A04DMW710D0001
 F1H160430 (5): A04CMW711DD0001
 F1H160430 (6): TRIP BLANK #1

The internal standard recoveries are within QC limits as compared to the IS limits set by the CCV for this 12 hour clock. However, the client requirement for DOD4.1 has the IS limits set to the mid-point of the ICAL as requested. The internal standard(s) recovery is outside the lower QC limit, indicating a potential positive bias. There were no target analytes associated with this internal standard observed above the reporting limit in the sample; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H160430 (3): A04BMW706D0001
 F1H160430 (4): A04DMW710D0001
 F1H160430 (6): TRIP BLANK #1

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1229104**

Strontium was observed in the CCB above the acceptable QC limit (>3X MDL). Associated samples which are either non-detect for the contaminant or exhibit concentrations greater than ten (10) times the concentrations observed in the CCB, do not require re-analysis.

Affected Samples:

F1H160430 (1): A04BMW706D0001 DISSOLVED
 F1H160430 (3): A04BMW706D0001

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

The MS (MSD) recovery for calcium, magnesium and sodium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1H160430 (1): A04BMW706D0001 DISSOLVED
F1H160430 (2): A04DMW710D0001 DISSOLVED
F1H160430 (3): A04BMW706D0001
F1H160430 (4): A04DMW710D0001

Chloride (MCAWW 300.0A)**Batch: 1228144**

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H160430 (3): A04BMW706D0001
F1H160430 (4): A04DMW710D0001
F1H160430 (5): A04CMW711DD0001

Fluoride (MCAWW 300.0A)**Batch: 1228145**

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H160430 (3): A04BMW706D0001

The sample was reported ND at dilution, due to high concentrations of other analytes, which masked the retention times for these anions in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H160430 (5): A04CMW711DD0001

Sulfate (MCAWW 300.0A)**Batch: 1228149**

The sample was analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H160430 (3): A04BMW706D0001
F1H160430 (4): A04DMW710D0001
F1H160430 (5): A04CMW711DD0001

Nitrite as N (MCAWW 300.0A)**Batch: 1228147**

The sample was reported ND at dilution, due to high concentrations of other analytes, which masked the retention times for these anions in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H160430 (3): A04BMW706D0001
F1H160430 (4): A04DMW710D0001
F1H160430 (5): A04CMW711DD0001

Phosphate as P, Ortho (MCAWW 300.0A)**Batch: 1228148**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H160430 (3): A04BMW706D0001
F1H160430 (4): A04DMW710D0001
F1H160430 (5): A04CMW711DD0001

The samples were reported ND at dilution, due to high concentrations of other analytes, which masked the retention times for these anions in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H160430 (3): A04BMW706D0001
F1H160430 (5): A04CMW711DD0001

Total Dissolved Solids (MCAWW 160.1)

The samples were analyzed at a dilution based on high concentrations of target analytes. The reporting limit has been adjusted accordingly.

Affected Samples:

F1H160430 (3): A04BMW706D0001
F1H160430 (5): A04CMW711DD0001

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample provided to perform the sample duplicate, an LCS duplicate was used instead.

Affected Samples:

F1H160430 (1): A04BMW706D0001 DISSOLVED
F1H160430 (2): A04DMW710D0001 DISSOLVED
F1H160430 (3): A04BMW706D0001
F1H160430 (4): A04DMW710D0001

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F1H160430

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H160430

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
MLPER	001	A04BMW706D0001	DISSOLVED	08/15/11	08:40
MLPE0	002	A04DMW710D0001	DISSOLVED	08/15/11	09:55
MLPE4	003	A04BMW706D0001		08/15/11	08:40
MLPE8	004	A04DMW710D0001		08/15/11	09:55
MLPE9	005	A04CMW711DD0001		08/15/11	12:00
MLPHA	006	TRIP BLANK #1		08/15/11	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H160430-001

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	1.7	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLPER1A4
		Dilution Factor: 1		Analysis Time...: 08:26		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AE
		Dilution Factor: 1		Analysis Time...: 18:57		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AF
		Dilution Factor: 1		Analysis Time...: 18:57		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLPER1AD
		Dilution Factor: 1		Analysis Time...: 12:51		
Barium	15.4 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AG
		Dilution Factor: 1		Analysis Time...: 18:57		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AH
		Dilution Factor: 1		Analysis Time...: 18:57		
Calcium	560000	20000	ug/L	SW846 6010C	08/17-08/23/11	MLPER1AJ
		Dilution Factor: 20		Analysis Time...: 13:24		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AK
		Dilution Factor: 1		Analysis Time...: 18:57		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AL
		Dilution Factor: 1		Analysis Time...: 18:57		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AM
		Dilution Factor: 1		Analysis Time...: 18:57		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AN
		Dilution Factor: 1		Analysis Time...: 18:57		
Iron	340	100	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AP
		Dilution Factor: 1		Analysis Time...: 18:57		
Magnesium	127000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AQ
		Dilution Factor: 5		Analysis Time...: 09:29		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H160430-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	102	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AR
		Dilution Factor: 1		Analysis Time...: 18:57		
Sodium	170000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AT
		Dilution Factor: 5		Analysis Time...: 09:29		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AU
		Dilution Factor: 1		Analysis Time...: 18:57		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AV
		Dilution Factor: 1		Analysis Time...: 18:57		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1AW
		Dilution Factor: 1		Analysis Time...: 18:57		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLPER1AX
		Dilution Factor: 1		Analysis Time...: 12:51		
Strontium	7700	100	ug/L	SW846 6010C	08/17-08/23/11	MLPER1A0
		Dilution Factor: 20		Analysis Time...: 13:24		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1A1
		Dilution Factor: 1		Analysis Time...: 18:57		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPER1A2
		Dilution Factor: 1		Analysis Time...: 18:57		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLPER1A3
		Dilution Factor: 1		Analysis Time...: 12:51		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H160430-002

Matrix.....: WATER

Date Sampled...: 08/15/11 09:55 Date Received...: 08/16/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	66.1	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLPE01AF
		Dilution Factor: 1		Analysis Time...: 08:52		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AL
		Dilution Factor: 1		Analysis Time...: 19:16		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AM
		Dilution Factor: 1		Analysis Time...: 19:16		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE01AK
		Dilution Factor: 1		Analysis Time...: 13:11		
Barium	47.6 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AN
		Dilution Factor: 1		Analysis Time...: 19:16		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AP
		Dilution Factor: 1		Analysis Time...: 19:16		
Calcium	113000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AQ
		Dilution Factor: 5		Analysis Time...: 09:48		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AR
		Dilution Factor: 1		Analysis Time...: 19:16		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AT
		Dilution Factor: 1		Analysis Time...: 19:16		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AU
		Dilution Factor: 1		Analysis Time...: 19:16		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AV
		Dilution Factor: 1		Analysis Time...: 19:16		
Iron	150	100	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AW
		Dilution Factor: 1		Analysis Time...: 19:16		
Magnesium	31400	1000	ug/L	SW846 6010C	08/17-08/23/11	MLPE01AX
		Dilution Factor: 1		Analysis Time...: 12:39		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H160430-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	26.4	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01A0
		Dilution Factor: 1		Analysis Time...: 19:16		
Sodium	205000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPE01A1
		Dilution Factor: 5		Analysis Time...: 09:48		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01A2
		Dilution Factor: 1		Analysis Time...: 19:16		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01A3
		Dilution Factor: 1		Analysis Time...: 19:16		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01A4
		Dilution Factor: 1		Analysis Time...: 19:16		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE01A5
		Dilution Factor: 1		Analysis Time...: 13:11		
Strontium	584	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AA
		Dilution Factor: 5		Analysis Time...: 09:48		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AC
		Dilution Factor: 1		Analysis Time...: 19:16		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE01AD
		Dilution Factor: 1		Analysis Time...: 19:16		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE01AE
		Dilution Factor: 1		Analysis Time...: 13:11		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001

GC/MS Volatiles

Lot-Sample #...: F1H160430-003 Work Order #...: MLPE41AC Matrix.....: WATER
 Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 11:31
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,1-Dichloroethane	0.38 J	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.55 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.12 J	1.0	ug/L
1,1,1-Trichloroethane	0.12 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.32 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001

GC/MS Volatiles

Lot-Sample #...: F1H160430-003 Work Order #...: MLPE41AC Matrix.....: WATER

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001

TOTAL Metals

Lot-Sample #...: F1H160430-003

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	1.8	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLPE41A6
		Dilution Factor: 1		Analysis Time...: 09:06		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AG
		Dilution Factor: 1		Analysis Time...: 19:29		
Aluminum	126 J	200	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AH
		Dilution Factor: 1		Analysis Time...: 19:29		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE41AF
		Dilution Factor: 1		Analysis Time...: 13:24		
Barium	16.0 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AJ
		Dilution Factor: 1		Analysis Time...: 19:29		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AK
		Dilution Factor: 1		Analysis Time...: 19:29		
Calcium	520000	20000	ug/L	SW846 6010C	08/17-08/23/11	MLPE41AL
		Dilution Factor: 20		Analysis Time...: 13:56		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AM
		Dilution Factor: 1		Analysis Time...: 19:29		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AN
		Dilution Factor: 1		Analysis Time...: 19:29		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AP
		Dilution Factor: 1		Analysis Time...: 19:29		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AQ
		Dilution Factor: 1		Analysis Time...: 19:29		
Iron	393	100	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AR
		Dilution Factor: 1		Analysis Time...: 19:29		
Magnesium	112000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AT
		Dilution Factor: 5		Analysis Time...: 10:01		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001

TOTAL Metals

Lot-Sample #...: F1H160430-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	105	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AU
		Dilution Factor: 1		Analysis Time...: 19:29		
Sodium	166000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AV
		Dilution Factor: 5		Analysis Time...: 10:01		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AW
		Dilution Factor: 1		Analysis Time...: 19:29		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41AX
		Dilution Factor: 1		Analysis Time...: 19:29		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41A0
		Dilution Factor: 1		Analysis Time...: 19:29		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE41A1
		Dilution Factor: 1		Analysis Time...: 13:24		
Strontium	7350	100	ug/L	SW846 6010C	08/17-08/23/11	MLPE41A2
		Dilution Factor: 20		Analysis Time...: 13:56		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41A3
		Dilution Factor: 1		Analysis Time...: 19:29		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE41A4
		Dilution Factor: 1		Analysis Time...: 19:29		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE41A5
		Dilution Factor: 1		Analysis Time...: 13:24		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001

General Chemistry

Lot-Sample #...: F1H160430-003 Work Order #...: MLPE4 Matrix.....: WATER
 Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	247	40.0	mg/L	MCAWW 300.0A	08/16/11	1228144
		Dilution Factor: 200		Analysis Time...: 06:31		
Fluoride	0.72	0.50	mg/L	MCAWW 300.0A	08/16/11	1228145
		Dilution Factor: 5		Analysis Time...: 06:04		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/16/11	1228146
		Dilution Factor: 1		Analysis Time...: 05:51		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/16/11	1228147
		Dilution Factor: 10		Analysis Time...: 06:18		
Phosphate as P, Ortho	ND	5.0	mg/L	MCAWW 300.0A	08/16/11	1228148
		Dilution Factor: 10		Analysis Time...: 06:18		
Sulfate	1200	100	mg/L	MCAWW 300.0A	08/16/11	1228149
		Dilution Factor: 200		Analysis Time...: 06:31		
Total Alkalinity	234	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	2660	50.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 5		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001

GC/MS Volatiles

Lot-Sample #...: F1H160430-004 Work Order #...: MLPE81AN Matrix.....: WATER
 Date Sampled...: 08/15/11 09:55 Date Received...: 08/16/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 15:33
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,1-Dichloroethane	23	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	9.8	1.0	ug/L
1,2-Dichloroethene	20	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.51 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	0.21 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	10	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	12	1.0	ug/L
Vinyl chloride	0.86 J	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	1.1 J	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001

GC/MS Volatiles

Lot-Sample #...: F1H160430-004 Work Order #...: MLPE81AN Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	104	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001

TOTAL Metals

Lot-Sample #...: F1H160430-004

Matrix.....: WATER

Date Sampled...: 08/15/11 09:55 Date Received...: 08/16/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	67.5	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLPE81AH
		Dilution Factor: 1		Analysis Time...: 09:12		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AT
		Dilution Factor: 1		Analysis Time...: 19:42		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AU
		Dilution Factor: 1		Analysis Time...: 19:42		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE81AR
		Dilution Factor: 1		Analysis Time...: 13:49		
Barium	30.6 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AV
		Dilution Factor: 1		Analysis Time...: 19:42		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AW
		Dilution Factor: 1		Analysis Time...: 19:42		
Calcium	117000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AX
		Dilution Factor: 5		Analysis Time...: 10:14		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A0
		Dilution Factor: 1		Analysis Time...: 19:42		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A1
		Dilution Factor: 1		Analysis Time...: 19:42		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A2
		Dilution Factor: 1		Analysis Time...: 19:42		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A3
		Dilution Factor: 1		Analysis Time...: 19:42		
Iron	94.0 J	100	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A4
		Dilution Factor: 1		Analysis Time...: 19:42		
Magnesium	32100	1000	ug/L	SW846 6010C	08/17-08/23/11	MLPE81A5
		Dilution Factor: 1		Analysis Time...: 12:52		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001

TOTAL Metals

Lot-Sample #...: F1H160430-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	25.2	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A6
		Dilution Factor: 1		Analysis Time...: 19:42		
Sodium	214000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A7
		Dilution Factor: 5		Analysis Time...: 10:14		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A8
		Dilution Factor: 1		Analysis Time...: 19:42		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81A9
		Dilution Factor: 1		Analysis Time...: 19:42		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AA
		Dilution Factor: 1		Analysis Time...: 19:42		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE81AC
		Dilution Factor: 1		Analysis Time...: 13:49		
Strontium	615	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AD
		Dilution Factor: 5		Analysis Time...: 10:14		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AE
		Dilution Factor: 1		Analysis Time...: 19:42		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLPE81AF
		Dilution Factor: 1		Analysis Time...: 19:42		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLPE81AG
		Dilution Factor: 1		Analysis Time...: 13:49		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001

General Chemistry

Lot-Sample #...: F1H160430-004 Work Order #...: MLPE8 Matrix.....: WATER
 Date Sampled...: 08/15/11 09:55 Date Received...: 08/16/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	314	20.0	mg/L	MCAWW 300.0A	08/16/11	1228144
		Dilution Factor: 100		Analysis Time...: 02:03		
Fluoride	1.0	0.10	mg/L	MCAWW 300.0A	08/16/11	1228145
		Dilution Factor: 1		Analysis Time...: 01:23		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/16/11	1228146
		Dilution Factor: 1		Analysis Time...: 01:23		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/16/11	1228147
		Dilution Factor: 10		Analysis Time...: 01:49		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/16/11	1228148
		Dilution Factor: 1		Analysis Time...: 01:23		
Sulfate	73.4	2.5	mg/L	MCAWW 300.0A	08/16/11	1228149
		Dilution Factor: 5		Analysis Time...: 01:36		
Total Alkalinity	272	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	960	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001

GC/MS Volatiles

Lot-Sample #....: F1H160430-005 Work Order #....: MLPE91AA Matrix.....: WATER
 Date Sampled....: 08/15/11 12:00 Date Received...: 08/16/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #....: 1231041 Analysis Time...: 14:40
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	5.4	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.64 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.33 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.50 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.16 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001

GC/MS Volatiles

Lot-Sample #...: F1H160430-005 Work Order #...: MLPE91AA Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	110	(85 - 115)
1,2-Dichloroethane-d4	111	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001

General Chemistry

Lot-Sample #...: F1H160430-005 Work Order #...: MLPE9 Matrix.....: WATER
 Date Sampled...: 08/15/11 12:00 Date Received...: 08/16/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	806	100	mg/L	MCAWW 300.0A	08/16/11	1228144
		Dilution Factor: 500		Analysis Time...: 05:11		
Fluoride	0.64 B	1.0	mg/L	MCAWW 300.0A	08/16/11	1228145
		Dilution Factor: 10		Analysis Time...: 04:44		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/16/11	1228146
		Dilution Factor: 1		Analysis Time...: 04:31		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/16/11	1228147
		Dilution Factor: 10		Analysis Time...: 04:44		
Phosphate as P, Ortho	ND	5.0	mg/L	MCAWW 300.0A	08/16/11	1228148
		Dilution Factor: 10		Analysis Time...: 04:44		
Sulfate	2170	250	mg/L	MCAWW 300.0A	08/16/11	1228149
		Dilution Factor: 500		Analysis Time...: 05:11		
Total Alkalinity	34.4	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	5030	100	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 10		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #1

GC/MS Volatiles

Lot-Sample #....: F1H160430-006 Work Order #....: MLPHA1AA Matrix.....: WATER
 Date Sampled....: 08/15/11 Date Received...: 08/16/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #....: 1231041 Analysis Time...: 10:39
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	2.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	4.8	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #1

GC/MS Volatiles

Lot-Sample #...: F1H160430-006 Work Order #...: MLPHA1AA Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	101	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H160430
 MB Lot-Sample #: F1H190000-041

Work Order #...: MLTXM1AA

Matrix.....: WATER

Analysis Date...: 08/19/11
 Dilution Factor: 1

Prep Date.....: 08/19/11

Analysis Time...: 05:48

Prep Batch #...: 1231041

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	106	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H160430

Work Order #...: MLTXM1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	103	(70 - 120)		
4-Bromofluorobenzene	103	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H170000-103 Prep Batch #...: 1229103						
Uranium	ND	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQNA1AA
		Dilution Factor: 1				
		Analysis Time...: 08:13				
MB Lot-Sample #: F1H170000-104 Prep Batch #...: 1229104						
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AD
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AU
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQNE1AA
		Dilution Factor: 1				
		Analysis Time...: 12:39				
Barium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AE
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AF
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AH
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Calcium	ND	1000	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AG
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AK
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AJ
		Dilution Factor: 1				
		Analysis Time...: 18:44				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AL
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Iron	ND	100	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AM
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AT
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Magnesium	ND	1000	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AN
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Manganese	ND	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AP
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AR
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQNE1AV
		Dilution Factor: 1				
		Analysis Time...: 12:39				
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AC
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Sodium	ND	1000	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AQ
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Strontium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AW
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AX
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AO
		Dilution Factor: 1				
		Analysis Time...: 18:44				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQNE1A1

Dilution Factor: 1
Analysis Time...: 12:39

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLXXH1AA 0.20	mg/L	MB Lot-Sample #: F1H160000-144 MCAWW 300.0A	08/16/11	1228144
		Dilution Factor: 1 Analysis Time...: 01:09				
Fluoride	ND	Work Order #: MLXXM1AA 0.10	mg/L	MB Lot-Sample #: F1H160000-145 MCAWW 300.0A	08/16/11	1228145
		Dilution Factor: 1 Analysis Time...: 01:09				
Nitrate	ND	Work Order #: MLXXQ1AA 0.020	mg/L	MB Lot-Sample #: F1H160000-146 MCAWW 300.0A	08/16/11	1228146
		Dilution Factor: 1 Analysis Time...: 01:09				
Nitrite	ND	Work Order #: MLXXV1AA 0.020	mg/L	MB Lot-Sample #: F1H160000-147 MCAWW 300.0A	08/16/11	1228147
		Dilution Factor: 1 Analysis Time...: 01:09				
Phosphate as P, Ortho	ND	Work Order #: MLXX01AA 0.50	mg/L	MB Lot-Sample #: F1H160000-148 MCAWW 300.0A	08/16/11	1228148
		Dilution Factor: 1 Analysis Time...: 01:09				
Sulfate	ND	Work Order #: MLXX31AA 0.50	mg/L	MB Lot-Sample #: F1H160000-149 MCAWW 300.0A	08/16/11	1228149
		Dilution Factor: 1 Analysis Time...: 01:09				
Total Alkalinity	ND	Work Order #: MLX1P1AA 5.0	mg/L	MB Lot-Sample #: F1H230000-125 MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: MLQ6P1AA 10.0	mg/L	MB Lot-Sample #: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H160430 Work Order #...: MLTXM1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H190000-041
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 04:55
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Styrene	110	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	101	(65 - 130)	SW846 8260B
Tetrachloroethene	101	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	106	(70 - 130)	SW846 8260B
Dibromochloromethane	103	(60 - 135)	SW846 8260B
Vinyl chloride	83	(50 - 145)	SW846 8260B
Bromomethane	101	(30 - 145)	SW846 8260B
Chloroethane	90	(60 - 135)	SW846 8260B
Acetone	93	(40 - 140)	SW846 8260B
1,1-Dichloroethene	99	(70 - 130)	SW846 8260B
Methylene chloride	92	(55 - 140)	SW846 8260B
Carbon disulfide	90	(35 - 160)	SW846 8260B
1,1-Dichloroethane	94	(70 - 135)	SW846 8260B
2-Butanone	101	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	97	(85 - 115)	SW846 8260B
Chloroform	94	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	100	(65 - 130)	SW846 8260B
Carbon tetrachloride	100	(65 - 140)	SW846 8260B
1,2-Dichloroethane	96	(70 - 130)	SW846 8260B
Benzene	95	(80 - 120)	SW846 8260B
Trichloroethene	91	(70 - 125)	SW846 8260B
1,2-Dichloropropane	95	(75 - 125)	SW846 8260B
Bromodichloromethane	100	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	96	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)	SW846 8260B
Toluene	104	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	103	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	99	(75 - 125)	SW846 8260B
2-Hexanone	96	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	108	(60 - 135)	SW846 8260B
Chlorobenzene	95	(80 - 120)	SW846 8260B
Bromoform	109	(70 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H160430 Work Order #...: MLTXM1AC Matrix.....: WATER
LCS Lot-Sample#: F1H190000-041

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Ethylbenzene	102	(75 - 125)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H170000-103 Prep Batch #... : 1229103					
Uranium	109	(80 - 120)	SW846 6020A	08/17-08/19/11	MLQNA1AC
		Dilution Factor: 1		Analysis Time...: 08:19	
LCS Lot-Sample#: F1H170000-104 Prep Batch #... : 1229104					
Arsenic	105	(80 - 120)	SW846 6010C	08/17-08/24/11	MLQNE1A2
		Dilution Factor: 1		Analysis Time...: 12:45	
Silver	93	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A3
		Dilution Factor: 1		Analysis Time...: 18:50	
Aluminum	106	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A4
		Dilution Factor: 1		Analysis Time...: 18:50	
Barium	104	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A5
		Dilution Factor: 1		Analysis Time...: 18:50	
Beryllium	112	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A6
		Dilution Factor: 1		Analysis Time...: 18:50	
Calcium	110	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A7
		Dilution Factor: 1		Analysis Time...: 09:23	
Cadmium	106	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A8
		Dilution Factor: 1		Analysis Time...: 18:50	
Cobalt	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A9
		Dilution Factor: 1		Analysis Time...: 18:50	
Chromium	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CA
		Dilution Factor: 1		Analysis Time...: 18:50	
Copper	100	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CC
		Dilution Factor: 1		Analysis Time...: 18:50	
Iron	106	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CD
		Dilution Factor: 1		Analysis Time...: 18:50	
Magnesium	101	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CE
		Dilution Factor: 1		Analysis Time...: 09:23	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	105	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CF
		Dilution Factor: 1		Analysis Time...: 18:50	
Sodium	104	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CG
		Dilution Factor: 1		Analysis Time...: 09:23	
Nickel	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CH
		Dilution Factor: 1		Analysis Time...: 18:50	
Lead	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CJ
		Dilution Factor: 1		Analysis Time...: 18:50	
Antimony	103	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CK
		Dilution Factor: 1		Analysis Time...: 18:50	
Selenium	105	(80 - 120)	SW846 6010C	08/17-08/24/11	MLQNE1CL
		Dilution Factor: 1		Analysis Time...: 12:45	
Strontium	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CM
		Dilution Factor: 1		Analysis Time...: 09:23	
Thallium	100	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CN
		Dilution Factor: 1		Analysis Time...: 18:50	
Vanadium	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CP
		Dilution Factor: 1		Analysis Time...: 18:50	
Zinc	112	(80 - 120)	SW846 6010C	08/17-08/24/11	MLQNE1CQ
		Dilution Factor: 1		Analysis Time...: 12:45	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H160430

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	92	Work Order #: MLXXH1AC (90 - 110)	LCS Lot-Sample#: F1H160000-144 MCAWW 300.0A	08/16/11	1228144
		Dilution Factor: 1	Analysis Time...: 12:56		
Fluoride	96	Work Order #: MLXXM1AC (90 - 110)	LCS Lot-Sample#: F1H160000-145 MCAWW 300.0A	08/16/11	1228145
		Dilution Factor: 1	Analysis Time...: 12:56		
Nitrate	97	Work Order #: MLXXQ1AC (90 - 110)	LCS Lot-Sample#: F1H160000-146 MCAWW 300.0A	08/16/11	1228146
		Dilution Factor: 1	Analysis Time...: 12:56		
Nitrite	95	Work Order #: MLXXV1AC (90 - 110)	LCS Lot-Sample#: F1H160000-147 MCAWW 300.0A	08/16/11	1228147
		Dilution Factor: 1	Analysis Time...: 12:56		
Phosphate as P, Ortho	99	Work Order #: MLXX01AC (90 - 110)	LCS Lot-Sample#: F1H160000-148 MCAWW 300.0A	08/16/11	1228148
		Dilution Factor: 1	Analysis Time...: 12:56		
Sulfate	95	Work Order #: MLXX31AC (90 - 110)	LCS Lot-Sample#: F1H160000-149 MCAWW 300.0A	08/16/11	1228149
		Dilution Factor: 1	Analysis Time...: 12:56		
Total Alkalinity	94	Work Order #: MLX1P1AC (90 - 110)	LCS Lot-Sample#: F1H230000-125 MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: MLX1P1AD (90 - 110)	LCS Lot-Sample#: F1H230000-125 MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	98	Work Order #: MLQ6P1AC (90 - 113)	LCS Lot-Sample#: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H160430 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD
 Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 09:20
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	101	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.4	(0-20)	SW846 8260B
Dibromochloromethane	104	(60 - 135)			SW846 8260B
	102	(60 - 135)	1.6	(0-20)	SW846 8260B
Vinyl chloride	93	(50 - 145)			SW846 8260B
	96	(50 - 145)	2.4	(0-20)	SW846 8260B
Bromomethane	107	(30 - 145)			SW846 8260B
	102	(30 - 145)	5.0	(0-20)	SW846 8260B
Chloroethane	100	(60 - 135)			SW846 8260B
	97	(60 - 135)	3.2	(0-20)	SW846 8260B
Acetone	111	(40 - 140)			SW846 8260B
	95	(40 - 140)	15	(0-20)	SW846 8260B
1,1-Dichloroethene	107	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-20)	SW846 8260B
Methylene chloride	133	(55 - 140)			SW846 8260B
	135	(55 - 140)	1.7	(0-20)	SW846 8260B
Carbon disulfide	97	(35 - 160)			SW846 8260B
	86	(35 - 160)	12	(0-20)	SW846 8260B
1,1-Dichloroethane	100	(70 - 135)			SW846 8260B
	95	(70 - 135)	4.6	(0-20)	SW846 8260B
2-Butanone	91	(30 - 150)			SW846 8260B
	97	(30 - 150)	6.4	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	100	(85 - 115)			SW846 8260B
	98	(85 - 115)	2.4	(0-20)	SW846 8260B
Chloroform	99	(65 - 135)			SW846 8260B
	94	(65 - 135)	5.1	(0-20)	SW846 8260B
1,1,1-Trichloroethane	108	(65 - 130)			SW846 8260B
	102	(65 - 130)	5.6	(0-20)	SW846 8260B
Carbon tetrachloride	108	(65 - 140)			SW846 8260B
	102	(65 - 140)	5.4	(0-20)	SW846 8260B
1,2-Dichloroethane	99	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.19	(0-20)	SW846 8260B
Benzene	100	(80 - 120)			SW846 8260B
	98	(80 - 120)	2.2	(0-20)	SW846 8260B
Trichloroethene	93	(70 - 125)			SW846 8260B
	94	(70 - 125)	0.16	(0-20)	SW846 8260B
1,2-Dichloropropane	99	(75 - 125)			SW846 8260B
	98	(75 - 125)	0.89	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H160430 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	103	(75 - 120)			SW846 8260B
	102	(75 - 120)	0.87	(0-20)	SW846 8260B
1,1,2-Trichloroethane	102	(75 - 125)			SW846 8260B
	97	(75 - 125)	5.2	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	107	(55 - 140)			SW846 8260B
	107	(55 - 140)	0.56	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	102	(75 - 120)	3.8	(0-20)	SW846 8260B
1,3-Dichlorobenzene	107	(75 - 125)			SW846 8260B
	105	(75 - 125)	2.2	(0-20)	SW846 8260B
1,4-Dichlorobenzene	100	(75 - 125)			SW846 8260B
	101	(75 - 125)	1.0	(0-20)	SW846 8260B
2-Hexanone	96	(55 - 130)			SW846 8260B
	91	(55 - 130)	5.8	(0-20)	SW846 8260B
4-Methyl-2-pentanone	96	(60 - 135)			SW846 8260B
	98	(60 - 135)	2.8	(0-20)	SW846 8260B
Chlorobenzene	100	(80 - 120)			SW846 8260B
	98	(80 - 120)	1.7	(0-20)	SW846 8260B
Bromoform	107	(70 - 130)			SW846 8260B
	111	(70 - 130)	3.0	(0-20)	SW846 8260B
Ethylbenzene	105	(75 - 125)			SW846 8260B
	104	(75 - 125)	1.2	(0-20)	SW846 8260B
Styrene	114	(65 - 135)			SW846 8260B
	110	(65 - 135)	3.6	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	97	(65 - 130)			SW846 8260B
	96	(65 - 130)	1.5	(0-20)	SW846 8260B
Tetrachloroethene	104	(45 - 150)			SW846 8260B
	101	(45 - 150)	2.3	(0-20)	SW846 8260B
1,2-Dichlorobenzene	104	(70 - 120)			SW846 8260B
	103	(70 - 120)	1.2	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(85 - 120)
	102	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
	102	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print parameters

F1H160430

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H160430-001 Prep Batch #...: 1229103							
Uranium	112	(80 - 120)			SW846 6020A	08/17-08/19/11	MLPER1A6
	112	(80 - 120)	0.11	(0-20)	SW846 6020A	08/17-08/19/11	MLPER1A7
			Dilution Factor: 1				
			Analysis Time...: 08:39				
MS Lot-Sample #: F1H160430-001 Prep Batch #...: 1229104							
Aluminum	108	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CD
	104	(80 - 120)	3.7	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CE
			Dilution Factor: 1				
			Analysis Time...: 19:03				
Antimony	104	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1DA
	101	(80 - 120)	3.1	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1DC
			Dilution Factor: 1				
			Analysis Time...: 19:03				
Arsenic	108	(80 - 120)			SW846 6010C	08/17-08/24/11	MLPER1A8
	105	(80 - 120)	2.7	(0-20)	SW846 6010C	08/17-08/24/11	MLPER1A9
			Dilution Factor: 1				
			Analysis Time...: 12:58				
Barium	104	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CF
	101	(80 - 120)	3.0	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CG
			Dilution Factor: 1				
			Analysis Time...: 19:03				
Beryllium	108	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CH
	105	(80 - 120)	2.3	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CJ
			Dilution Factor: 1				
			Analysis Time...: 19:03				
Cadmium	98	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CM
	95	(80 - 120)	2.3	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CN
			Dilution Factor: 1				
			Analysis Time...: 19:03				
Calcium	180 N	(80 - 120)			SW846 6010C	08/17-08/23/11	MLPER1CK
	188 N	(80 - 120)	0.13	(0-20)	SW846 6010C	08/17-08/23/11	MLPER1CL
			Dilution Factor: 20				
			Analysis Time...: 13:30				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	97	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CR
	94	(80 - 120)	2.4	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CT
Dilution Factor: 1							
Analysis Time...: 19:03							
Cobalt	95	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CP
	92	(80 - 120)	2.5	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CQ
Dilution Factor: 1							
Analysis Time...: 19:03							
Copper	101	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CU
	98	(80 - 120)	3.6	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CV
Dilution Factor: 1							
Analysis Time...: 19:03							
Iron	100	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CW
	97	(80 - 120)	2.3	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CX
Dilution Factor: 1							
Analysis Time...: 19:03							
Lead	93	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1C8
	92	(80 - 120)	2.1	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1C9
Dilution Factor: 1							
Analysis Time...: 19:03							
Magnesium	122 N	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1C0
	105	(80 - 120)	1.2	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1C1
Dilution Factor: 5							
Analysis Time...: 09:35							
Manganese	100	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1C2
	98	(80 - 120)	2.6	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1C3
Dilution Factor: 1							
Analysis Time...: 19:03							
Nickel	94	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1C6
	92	(80 - 120)	2.3	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1C7
Dilution Factor: 1							
Analysis Time...: 19:03							
Selenium	109	(80 - 120)			SW846 6010C	08/17-08/24/11	MLPER1DD
	106	(80 - 120)	2.9	(0-20)	SW846 6010C	08/17-08/24/11	MLPER1DE
Dilution Factor: 1							
Analysis Time...: 12:58							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H160430

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	95	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1CA
	92	(80 - 120)	2.6	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1CC
		Dilution Factor: 1					
		Analysis Time...: 19:03					
Sodium	130 N	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1C4
	113	(80 - 120)	0.94	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1C5
		Dilution Factor: 5					
		Analysis Time...: 09:35					
Strontium	109	(80 - 120)			SW846 6010C	08/17-08/23/11	MLPER1DF
	109	(80 - 120)	0.0	(0-20)	SW846 6010C	08/17-08/23/11	MLPER1DG
		Dilution Factor: 20					
		Analysis Time...: 13:30					
Thallium	92	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1DH
	89	(80 - 120)	2.8	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1DJ
		Dilution Factor: 1					
		Analysis Time...: 19:03					
Vanadium	99	(80 - 120)			SW846 6010C	08/17-08/22/11	MLPER1DK
	97	(80 - 120)	2.6	(0-20)	SW846 6010C	08/17-08/22/11	MLPER1DL
		Dilution Factor: 1					
		Analysis Time...: 19:03					
Zinc	113	(80 - 120)			SW846 6010C	08/17-08/24/11	MLPER1DM
	110	(80 - 120)	2.4	(0-20)	SW846 6010C	08/17-08/24/11	MLPER1DN
		Dilution Factor: 1					
		Analysis Time...: 12:58					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H160430

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	115 N	Work Order #...: MLPE81CG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H160430-004 08/16/11	1228144
		Dilution Factor: 100		Analysis Time...: 02:03	
Fluoride	97	Work Order #...: MLPE81CJ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H160430-004 08/16/11	1228145
		Dilution Factor: 1		Analysis Time...: 01:23	
Nitrate	92	Work Order #...: MLPE81CL (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H160430-004 08/16/11	1228146
		Dilution Factor: 1		Analysis Time...: 01:23	
Nitrite	51 N	Work Order #...: MLPE81CN (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H160430-004 08/16/11	1228147
		Dilution Factor: 10		Analysis Time...: 01:49	
Phosphate as P, Ortho	104	Work Order #...: MLPE81CQ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H160430-004 08/16/11	1228148
		Dilution Factor: 1		Analysis Time...: 01:23	
Sulfate	106	Work Order #...: MLPE81CT (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H160430-004 08/16/11	1228149
		Dilution Factor: 5		Analysis Time...: 01:36	
Total Alkalinity	110	Work Order #...: MLPE41CG (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H160430-003 08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H160430

Work Order #...: MLPE8-SMP
MLPE8-DUP

Matrix.....: WATER

Date Sampled...: 08/15/11 09:55 Date Received...: 08/16/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #: F1H160430-004		
314	314	mg/L	0.011	(0-20)	MCAWW 300.0A	08/16/11	1228144	
		Dilution Factor: 100		Analysis Time...: 02:03				
Fluoride						SD Lot-Sample #: F1H160430-004		
1.0	1.0	mg/L	0.59	(0-20)	MCAWW 300.0A	08/16/11	1228145	
		Dilution Factor: 1		Analysis Time...: 01:23				
Nitrate						SD Lot-Sample #: F1H160430-004		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/16/11	1228146	
		Dilution Factor: 1		Analysis Time...: 01:23				
Nitrite						SD Lot-Sample #: F1H160430-004		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/16/11	1228147	
		Dilution Factor: 10		Analysis Time...: 01:49				
Phosphate as P, Ortho						SD Lot-Sample #: F1H160430-004		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/16/11	1228148	
		Dilution Factor: 1		Analysis Time...: 01:23				
Sulfate						SD Lot-Sample #: F1H160430-004		
73.4	72.6	mg/L	1.2	(0-20)	MCAWW 300.0A	08/16/11	1228149	
		Dilution Factor: 5		Analysis Time...: 01:36				

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H160430

Work Order #...: MLLN1-SMP
MLLN1-DUP

Matrix.....: WATER

Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved						SD Lot-Sample #:	F1H120447-006	
Solids	645	665	mg/L	3.1	(0-0.0)	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1			Analysis Time..: 00:00		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H160430

Work Order #...: MLPE4-SMP
MLPE4-DUP

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	234	236	mg/L	0.68	(0-20)	SD Lot-Sample #: F1H160430-003 MCAWW 310.1	08/23/11	1235125
				Dilution Factor: 1	Analysis Time...: 00:00			

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H160430-001
 Work Order: MLPER
 Matrix: WATER

Date Collected: 08/15/11 0840
 Date Received: 08/16/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 73
Uranium 234	0.95		0.20	0.10	0.06	08/22/11	08/23/11
Uranium 235/236	0.012	U	0.023	0.100	0.031	08/22/11	08/23/11
Uranium 238	0.42		0.13	0.10	0.03	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1H160430** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H160430-002
Work Order: MLPE0
Matrix: WATER

Date Collected: 08/15/11 0955
Date Received: 08/16/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 49
Uranium 234	24.0		2.3	0.1	0.06	08/22/11	08/23/11
Uranium 235/236	1.20		0.31	0.10	0.08	08/22/11	08/23/11
Uranium 238	23.8		2.3	0.1	0.06	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H160430

48 of 58

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW706D0001

Radiochemistry

Lab Sample ID: F1H160430-003
 Work Order: MLPE4
 Matrix: WATER

Date Collected: 08/15/11 0840
 Date Received: 08/16/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 58
Uranium 234	0.98		0.23	0.10	0.03	08/22/11	08/23/11
Uranium 235/236	0.029	U	0.041	0.100	0.039	08/22/11	08/23/11
Uranium 238	0.48		0.16	0.10	0.06	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

F1H160430

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0001

Radiochemistry

Lab Sample ID: F1H160430-004
Work Order: MLPE8
Matrix: WATER

Date Collected: 08/15/11 0955
Date Received: 08/16/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 57
Uranium 234	19.1		1.9	0.1	0.03	08/22/11	08/23/11
Uranium 235/236	1.02		0.26	0.10	0.07	08/22/11	08/23/11
Uranium 238	19.9		1.9	0.1	0.06	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H160430

50 of 58

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H160430
Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Prep Date	Lab Sample ID
			(2 σ+/-)				Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1234168	Yld %	93 F1H220000-168B
Uranium 234	0.019	U	0.027	0.100	0.041	08/22/11	08/23/11
Uranium 235/236	-0.0024	U	0.0048	0.100	0.043	08/22/11	08/23/11
Uranium 238	-0.0019	U	0.0038	0.100	0.035	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H160430

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H220000-168C	
Uranium 234	3.26	3.09	0.40	91	95	(76 - 136)	
Spk 2	3.27	3.11	0.41	86	95	(76 - 136)	0.8 %RPD
Uranium 238	3.39	3.39	0.43	91	100	(76 - 134)	
Spk 2	3.39	3.23	0.42	86	95	(76 - 134)	5 %RPD
Batch #:		1234168		Analysis Date: 08/23/11			

F1H160430

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R274

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-16

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-24

PO#: 697886

Report to:

Report Due Date:

2011-08-26

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04BMW706D0001 DISSOLVED			2011-08-15 / 840	MLPER	WATER
SAMPLE COMMENTS:						
SE IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AG IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
ZN IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
VX IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SR IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SB IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
PB IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NI IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NA IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MN IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MG IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AS IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CU IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CR IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CO IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CD IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CA IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AL IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BE IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
TL IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BA IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
FE IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
UX IS	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK 06 LOC
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK 06 LOC

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A04DMW710D0001 DISSOLVED			2011-08-15 / 955	MLPE0	WATER
SAMPLE COMMENTS:						
MN IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CD IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
ZN IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
VX IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
TL IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SR IS	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC

F1H160430

CLIENT ANALYSIS SUMMARY

Storage Loc:

R274

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-16

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-24

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-26

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04BMW706D0001			2011-08-15 / 840	MLPE4	WATER
SAMPLE COMMENTS:						
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06

F1H160430

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

2-56,R274

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-16

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-24

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-26

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 8020 for total uranium instead of 200.8

SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV			WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER
4	A04DMW710D0001			2011-08-15 / 955	MLPE8 WATER

SAMPLE COMMENTS:

MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H160430

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

2-56,R274

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-16

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-24

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-26

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 6

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I\$	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV			RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A04CMW711DD0001			2011-08-15 / 1200	MLPE9	WATER
SAMPLE COMMENTS:						
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	TRIP BLANK #1			2011-08-15 / 0	MLPHA	WATER
SAMPLE COMMENTS:						
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)

715 Rider Trail North

th City, MO 63045

one 314.298.8566 fax 314.298.8757

78

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Environmental & Infrastructure, Inc. 50 Section Avenue Cincinnati, Ohio 45212 (513) 782-4700 Phone (513) 782-4807 FAX Project Name: Former Guterl Specialty Steel Corporation FUSRA Location: Lockport, NY ID #		Project Manager: Karl Van Keuren, PG, PMP Tel/Fax: (513) 782-4745 / (513) 782-4807 Analysis Turnaround Time Calendar (C) or Work Days (W) <input checked="" type="checkbox"/> PAT if different from Below _____ <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: Kevin Cronin Lab Contact: Lynn Fussner Date: 08/15/2011 Carrier: _____ 1 of 1 COCs Job No. 140416.09020100 SDG No. _____ Sample Specific Notes: _____																
Sample Identification T F 4BMW706D0001 2XLP, 250P 2XLP, 250P 4DMW710D0001 4CMW711DD0001 RIN BLANK #1 706DD label 5th label 8-16-11		Sample Date 8/15/2011 8/15/2011 8/15/2011 8/15/11	Sample Time 0840 0955 1200 -	Sample Type Grab Grab Grab	Matrix GW GW GW	# of Cont. 10 10 4 1	Filtered Sample <input checked="" type="checkbox"/>	Isotopic Thorium (α-spec) <input checked="" type="checkbox"/>	Isotopic Uranium (α-spec) <input checked="" type="checkbox"/>	Total Uranium <input checked="" type="checkbox"/>	TAL Metals except Mercury <input checked="" type="checkbox"/>	Anions <input checked="" type="checkbox"/>	Alkalinity <input checked="" type="checkbox"/>	Total Dissolved Solids <input checked="" type="checkbox"/>	Volatile Organic Compounds (VOCs) <input checked="" type="checkbox"/>	TCLP Volatiles <input checked="" type="checkbox"/>	TCLP Semi-volatiles <input checked="" type="checkbox"/>	TCLP Metals except Mercury <input checked="" type="checkbox"/>	Mercury <input checked="" type="checkbox"/>	Other <input checked="" type="checkbox"/>
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other 1, 2, and 4 Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																		
Special Instructions/OC Requirements & Comments:																				

	Company: Shaw E & I. Inc.	Date/Time: 8/15/11		Company: BFLO	Date/Time: 08-15-11 16:30
	Company: BFLO	Date/Time: 08-15-11 17:00		Company: TASZ	Date/Time: 8-16-11 0915
	Company:	Date/Time:		Company:	Date/Time:

les America St. Louis

Lot #(s): F1H160430

TestAmerica St. Louis

CUR Form #: 0 7 8

CONDITION UPON RECEIPT FORM

Client: Shaw

Quote No: 89251

COC/RFA No: 009

Initiated By: SW

Date: 8.16.11

Time: 8915

Shipping Information

Shipper: FedEx

UPS

DHL

Courier

Client

Other: _____

Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 4101

6. _____

1. 5

6. _____

2. _____

7. _____

2. _____

7. _____

3. _____

8. _____

3. _____

8. _____

4. _____

9. _____

4. _____

9. _____

5. _____

10. _____

5. _____

10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. Y <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (if not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y <u>N</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

☐ Client Contact Name: _____

Informed by: _____

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until: _____

If released, notify: _____

Project Management Review: _____

Date: 8/17/11

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

F1H160430

ADMIN-0004 rev13, REVISED 05/27/11 \\Slsrv01\QA\FORMS\ST-LOUIS\ADMIN\Admin-0004 CUR Form 58 of 58



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. Y40415

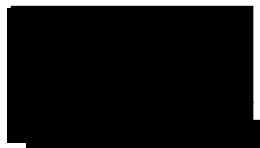
Guterl Steel

Lot #: F1H170425



Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.



August 30, 2011

F1H170425

1 of 90

Case Narrative
LOT NUMBER: F1H170425

This report contains the analytical results for the 13 samples received under chain of custody by TestAmerica in St. Louis on August 17, 2011. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1231041**

Tertahydrofuran was removed from the initial calibration lowest point due to poor response. Isobutanol, n-Butanol, 2-Chloroethylvinyl ether, 4-Methyl-2-pentanone and 2-Hexanone were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration. The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

The internal standard recoveries are within QC limits as compared to the IS limits set by the CCV for this 12 hour clock. However, the client requirement for DOD4.1 has the IS limits set to the mid-point of the ICAL as requested. The internal standard(s) recovery is outside the lower QC limit, indicating a potential positive bias. There were no target analytes associated with this internal standard observed above the reporting limit in the sample; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H170425 (7): A03MW606D0001

F1H170425 (13): TRIP BLANK #2

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1229104**

Strontium was observed in the CCB above the acceptable QC limit (>3X MDL). Associated samples which are either non-detect for the contaminant or exhibit concentrations greater than ten (10) times the concentrations observed in the CCB, do not require re-analysis.

Affected Samples:

F1H170425 (12): A04CMW711DD0001

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

The MS (MSD) recovery for calcium, magnesium, and sodium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1H170425 (1): A03MW606D0001 DISSOLVED
 F1H170425 (2): A03MW14D0001 DISSOLVED
 F1H170425 (3): A03MW606DR0001 DISSOLVED
 F1H170425 (4): A03MW15D0001 DISSOLVED
 F1H170425 (5): A03MW17D0001 DISSOLVED
 F1H170425 (6): A04CMW711DD0001 DISSOLVED
 F1H170425 (7): A03MW606D0001
 F1H170425 (8): A03MW14D0001
 F1H170425 (9): A03MW606DR0001
 F1H170425 (10): A03MW15D0001
 F1H170425 (11): A03MW17D0001
 F1H170425 (12): A04CMW711DD0001

Chloride (MCAWW 300.0A)**Batch: 1229091**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H170425 (7): A03MW606D0001
 F1H170425 (8): A03MW14D0001
 F1H170425 (9): A03MW606DR0001
 F1H170425 (10): A03MW15D0001
 F1H170425 (11): A03MW17D0001

Fluoride (MCAWW 300.0A)**Batch: 1329092**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H170425 (7): A03MW606D0001
 F1H170425 (8): A03MW14D0001
 F1H170425 (9): A03MW606DR0001
 F1H170425 (10): A03MW15D0001

Nitrite (MCAWW 300.0A)**Batch: 1229094**

The following samples were reported ND at dilution for Nitrite, due to a matrix interference with Chloride, which masked the Nitrite retention time in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for are attributed to matrix interference.

Affected Samples:

F1H170425 (7): A03MW606D0001
 F1H170425 (8): A03MW14D0001
 F1H170425 (9): A03MW606DR0001
 F1H170425 (10): A03MW15D0001
 F1H170425 (11): A03MW17D0001

Orthophosphate as P (MCAWW 300.0A)**Batch: 1229095**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Ortho Phos are attributed to matrix interference.

Affected Samples:

F1H170425 (7): A03MW606D0001
 F1H170425 (8): A03MW14D0001
 F1H170425 (9): A03MW606DR0001
 F1H170425 (10): A03MW15D0001
 F1H170425 (11): A03MW17D0001

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample provided to perform the sample duplicate, an LCS duplicate was used instead.

Affected Samples:

F1H170425 (1): A03MW606D0001 DISSOLVED
 F1H170425 (2): A03MW14D0001 DISSOLVED
 F1H170425 (3): A03MW606DR0001 DISSOLVED
 F1H170425 (4): A03MW15D0001 DISSOLVED
 F1H170425 (5): A03MW17D0001 DISSOLVED
 F1H170425 (6): A04CMW711DD0001 DISSOLVED
 F1H170425 (7): A03MW606D0001
 F1H170425 (8): A03MW14D0001
 F1H170425 (9): A03MW606DR0001
 F1H170425 (10): A03MW15D0001
 F1H170425 (11): A03MW17D0001
 F1H170425 (12): A04CMW711DD0001

The Uranium samples have tracer recoveries below the 30% QC limit. The samples were re-extracted. The re-extracted samples results will be reported with this narrative.

Affected Samples:

F1H170425 (2): A03MW14D0001 DISSOLVED
 F1H170425 (6): A04CMW711DD0001 DISSOLVED
 F1H170425 (11): A03MW17D0001

The reporting limit for Uranium was not met due to reduced tracer recovery. The tracer recovery is within acceptance criteria. Analytical results are reported.

Affected Samples:

F1H170425 (3): A03MW606DR0001 DISSOLVED

F1H170425 (12): A04CMW711DD0001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H170425

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F1H170425**

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLQGL	001	A03MW606D0001 DISSOLVED	08/16/11	08:45
MLQG0	002	A03MW14D0001 DISSOLVED	08/16/11	09:15
MLQG2	003	A03MW606DR0001 DISSOLVED	08/15/11	09:55
MLQG8	004	A03MW15D0001 DISSOLVED	08/16/11	10:35
MLQG9	005	A03MW17D0001 DISSOLVED	08/16/11	13:00
MLQHA	006	A04CMW711DD0001 DISSOLVED	08/15/11	12:00
MLQHH	007	A03MW606D0001	08/16/11	08:45
MLQJK	008	A03MW14D0001	08/16/11	09:15
MLQJL	009	A03MW606DR0001	08/15/11	09:55
MLQJP	010	A03MW15D0001	08/16/11	10:35
MLQJQ	011	A03MW17D0001	08/16/11	13:00
MLQJR	012	A04CMW711DD0001	08/15/11	12:00
MLQJ3	013	TRIP BLANK #2	08/16/11	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-001

Matrix.....: WATER

Date Sampled...: 08/16/11 08:45 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	7.4	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQGL1A3
		Dilution Factor: 1		Analysis Time...: 09:33		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AD
		Dilution Factor: 1		Analysis Time...: 20:01		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AE
		Dilution Factor: 1		Analysis Time...: 20:01		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQGL1AC
		Dilution Factor: 1		Analysis Time...: 13:56		
Barium	155	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AF
		Dilution Factor: 1		Analysis Time...: 20:01		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AG
		Dilution Factor: 1		Analysis Time...: 20:01		
Calcium	44300	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AH
		Dilution Factor: 5		Analysis Time...: 10:33		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AJ
		Dilution Factor: 1		Analysis Time...: 20:01		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AK
		Dilution Factor: 1		Analysis Time...: 20:01		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AL
		Dilution Factor: 1		Analysis Time...: 20:01		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AM
		Dilution Factor: 1		Analysis Time...: 20:01		
Iron	1420	100	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AN
		Dilution Factor: 1		Analysis Time...: 20:01		
Magnesium	135000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AP
		Dilution Factor: 5		Analysis Time...: 10:33		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	176	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AQ
		Dilution Factor: 1		Analysis Time...: 20:01		
Sodium	109000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AR
		Dilution Factor: 5		Analysis Time...: 10:33		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AT
		Dilution Factor: 1		Analysis Time...: 20:01		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AU
		Dilution Factor: 1		Analysis Time...: 20:01		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AV
		Dilution Factor: 1		Analysis Time...: 20:01		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQGL1AW
		Dilution Factor: 1		Analysis Time...: 13:56		
Strontium	213	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1AX
		Dilution Factor: 5		Analysis Time...: 10:33		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1A0
		Dilution Factor: 1		Analysis Time...: 20:01		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQGL1A1
		Dilution Factor: 1		Analysis Time...: 20:01		
Zinc	184	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQGL1A2
		Dilution Factor: 1		Analysis Time...: 13:56		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-002

Matrix.....: WATER

Date Sampled...: 08/16/11 09:15 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	8.0	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQG01AE
		Dilution Factor: 1		Analysis Time...: 09:39		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AJ
		Dilution Factor: 1		Analysis Time...: 20:07		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AK
		Dilution Factor: 1		Analysis Time...: 20:07		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG01AH
		Dilution Factor: 1		Analysis Time...: 14:02		
Barium	151	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AL
		Dilution Factor: 1		Analysis Time...: 20:07		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AM
		Dilution Factor: 1		Analysis Time...: 20:07		
Calcium	41900	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AN
		Dilution Factor: 5		Analysis Time...: 10:39		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AP
		Dilution Factor: 1		Analysis Time...: 20:07		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AQ
		Dilution Factor: 1		Analysis Time...: 20:07		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AR
		Dilution Factor: 1		Analysis Time...: 20:07		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AT
		Dilution Factor: 1		Analysis Time...: 20:07		
Iron	1260	100	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AU
		Dilution Factor: 1		Analysis Time...: 20:07		
Magnesium	144000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AV
		Dilution Factor: 5		Analysis Time...: 10:39		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	223	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AW
		Dilution Factor: 1		Analysis Time...: 20:07		
Sodium	105000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AX
		Dilution Factor: 5		Analysis Time...: 10:39		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01A0
		Dilution Factor: 1		Analysis Time...: 20:07		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01A1
		Dilution Factor: 1		Analysis Time...: 20:07		
Antimony	4.0 J	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01A2
		Dilution Factor: 1		Analysis Time...: 20:07		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG01A3
		Dilution Factor: 1		Analysis Time...: 14:02		
Strontium	193	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01A4
		Dilution Factor: 5		Analysis Time...: 10:39		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AA
		Dilution Factor: 1		Analysis Time...: 20:07		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG01AC
		Dilution Factor: 1		Analysis Time...: 20:07		
Zinc	264	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG01AD
		Dilution Factor: 1		Analysis Time...: 14:02		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606DR0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-003

Matrix.....: WATER

Date Sampled...: 08/15/11 09:55 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	12.4	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQG21AE
		Dilution Factor: 1		Analysis Time...: 09:46		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AJ
		Dilution Factor: 1		Analysis Time...: 20:14		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AK
		Dilution Factor: 1		Analysis Time...: 20:14		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG21AH
		Dilution Factor: 1		Analysis Time...: 14:09		
Barium	75.4	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AL
		Dilution Factor: 1		Analysis Time...: 20:14		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AM
		Dilution Factor: 1		Analysis Time...: 20:14		
Calcium	138000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AN
		Dilution Factor: 5		Analysis Time...: 10:45		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AP
		Dilution Factor: 1		Analysis Time...: 20:14		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AQ
		Dilution Factor: 1		Analysis Time...: 20:14		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AR
		Dilution Factor: 1		Analysis Time...: 20:14		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AT
		Dilution Factor: 1		Analysis Time...: 20:14		
Iron	584	100	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AU
		Dilution Factor: 1		Analysis Time...: 20:14		
Magnesium	84300	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AV
		Dilution Factor: 5		Analysis Time...: 10:45		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606DR0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	163	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AW
		Dilution Factor: 1		Analysis Time...: 20:14		
Sodium	200000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AX
		Dilution Factor: 5		Analysis Time...: 10:45		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21A0
		Dilution Factor: 1		Analysis Time...: 20:14		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21A1
		Dilution Factor: 1		Analysis Time...: 20:14		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21A2
		Dilution Factor: 1		Analysis Time...: 20:14		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG21A3
		Dilution Factor: 1		Analysis Time...: 14:09		
Strontium	1830	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21A4
		Dilution Factor: 5		Analysis Time...: 10:45		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AA
		Dilution Factor: 1		Analysis Time...: 20:14		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG21AC
		Dilution Factor: 1		Analysis Time...: 20:14		
Zinc	13.3 J	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG21AD
		Dilution Factor: 1		Analysis Time...: 14:09		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW15D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-004

Matrix.....: WATER

Date Sampled...: 08/16/11 10:35 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	1.5	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQG81AE
		Dilution Factor: 1		Analysis Time...: 09:53		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AJ
		Dilution Factor: 1		Analysis Time...: 20:20		
Aluminum	121 J	200	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AK
		Dilution Factor: 1		Analysis Time...: 20:20		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG81AH
		Dilution Factor: 1		Analysis Time...: 14:15		
Barium	23.0 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AL
		Dilution Factor: 1		Analysis Time...: 20:20		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AM
		Dilution Factor: 1		Analysis Time...: 20:20		
Calcium	6410	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AN
		Dilution Factor: 5		Analysis Time...: 10:52		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AP
		Dilution Factor: 1		Analysis Time...: 20:20		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AQ
		Dilution Factor: 1		Analysis Time...: 20:20		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AR
		Dilution Factor: 1		Analysis Time...: 20:20		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AT
		Dilution Factor: 1		Analysis Time...: 20:20		
Iron	36.3 J	100	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AU
		Dilution Factor: 1		Analysis Time...: 20:20		
Magnesium	1290	1000	ug/L	SW846 6010C	08/17-08/23/11	MLQG81AV
		Dilution Factor: 1		Analysis Time...: 12:58		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW15D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AW
		Dilution Factor: 1		Analysis Time...: 20:20		
Sodium	151000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AX
		Dilution Factor: 5		Analysis Time...: 10:52		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81A0
		Dilution Factor: 1		Analysis Time...: 20:20		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81A1
		Dilution Factor: 1		Analysis Time...: 20:20		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81A2
		Dilution Factor: 1		Analysis Time...: 20:20		
Selenium	16.2	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG81A3
		Dilution Factor: 1		Analysis Time...: 14:15		
Strontium	61.8	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81A4
		Dilution Factor: 5		Analysis Time...: 10:52		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AA
		Dilution Factor: 1		Analysis Time...: 20:20		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG81AC
		Dilution Factor: 1		Analysis Time...: 20:20		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG81AD
		Dilution Factor: 1		Analysis Time...: 14:15		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW17D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-005

Matrix.....: WATER

Date Sampled...: 08/16/11 13:00 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	8.3	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQG91AE
		Dilution Factor: 1		Analysis Time...: 09:59		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AJ
		Dilution Factor: 1		Analysis Time...: 20:27		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AK
		Dilution Factor: 1		Analysis Time...: 20:27		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG91AH
		Dilution Factor: 1		Analysis Time...: 14:22		
Barium	80.8	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AL
		Dilution Factor: 1		Analysis Time...: 20:27		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AM
		Dilution Factor: 1		Analysis Time...: 20:27		
Calcium	69400	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AN
		Dilution Factor: 5		Analysis Time...: 10:58		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AP
		Dilution Factor: 1		Analysis Time...: 20:27		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AQ
		Dilution Factor: 1		Analysis Time...: 20:27		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AR
		Dilution Factor: 1		Analysis Time...: 20:27		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AT
		Dilution Factor: 1		Analysis Time...: 20:27		
Iron	293	100	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AU
		Dilution Factor: 1		Analysis Time...: 20:27		
Magnesium	20500	1000	ug/L	SW846 6010C	08/17-08/23/11	MLQG91AV
		Dilution Factor: 1		Analysis Time...: 13:05		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW17D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	11.0 J	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AW
		Dilution Factor: 1		Analysis Time...: 20:27		
Sodium	314000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AX
		Dilution Factor: 5		Analysis Time...: 10:58		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91A0
		Dilution Factor: 1		Analysis Time...: 20:27		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91A1
		Dilution Factor: 1		Analysis Time...: 20:27		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91A2
		Dilution Factor: 1		Analysis Time...: 20:27		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG91A3
		Dilution Factor: 1		Analysis Time...: 14:22		
Strontium	316	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91A4
		Dilution Factor: 5		Analysis Time...: 10:58		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AA
		Dilution Factor: 1		Analysis Time...: 20:27		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQG91AC
		Dilution Factor: 1		Analysis Time...: 20:27		
Zinc	17.8 J	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQG91AD
		Dilution Factor: 1		Analysis Time...: 14:22		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-006

Matrix.....: WATER

Date Sampled...: 08/15/11 12:00 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	2.9	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQHA1AE
		Dilution Factor: 1		Analysis Time...: 10:06		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AJ
		Dilution Factor: 1		Analysis Time...: 20:33		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AK
		Dilution Factor: 1		Analysis Time...: 20:33		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQHA1AH
		Dilution Factor: 1		Analysis Time...: 14:28		
Barium	32.0 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AL
		Dilution Factor: 1		Analysis Time...: 20:33		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AM
		Dilution Factor: 1		Analysis Time...: 20:33		
Calcium	483000	20000	ug/L	SW846 6010C	08/17-08/24/11	MLQHA1AN
		Dilution Factor: 20		Analysis Time...: 10:24		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AP
		Dilution Factor: 1		Analysis Time...: 20:33		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AQ
		Dilution Factor: 1		Analysis Time...: 20:33		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AR
		Dilution Factor: 1		Analysis Time...: 20:33		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AT
		Dilution Factor: 1		Analysis Time...: 20:33		
Iron	ND	100	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AU
		Dilution Factor: 1		Analysis Time...: 20:33		
Magnesium	238000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AV
		Dilution Factor: 5		Analysis Time...: 11:04		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H170425-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	6.2 J	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AW
		Dilution Factor: 1		Analysis Time...: 20:33		
Sodium	733000	20000	ug/L	SW846 6010C	08/17-08/24/11	MLQHA1AX
		Dilution Factor: 20		Analysis Time...: 10:24		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1A0
		Dilution Factor: 1		Analysis Time...: 20:33		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1A1
		Dilution Factor: 1		Analysis Time...: 20:33		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1A2
		Dilution Factor: 1		Analysis Time...: 20:33		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQHA1A3
		Dilution Factor: 1		Analysis Time...: 14:28		
Strontium	8640	100	ug/L	SW846 6010C	08/17-08/24/11	MLQHA1A4
		Dilution Factor: 20		Analysis Time...: 10:24		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AA
		Dilution Factor: 1		Analysis Time...: 20:33		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHA1AC
		Dilution Factor: 1		Analysis Time...: 20:33		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQHA1AD
		Dilution Factor: 1		Analysis Time...: 14:28		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001

GC/MS Volatiles

Lot-Sample #....: F1H170425-007 Work Order #....: MLQHH1AC Matrix.....: WATER
 Date Sampled....: 08/16/11 08:45 Date Received...: 08/17/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #....: 1231041 Analysis Time...: 15:06
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	0.51 J	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001

GC/MS Volatiles

Lot-Sample #...: F1H170425-007 Work Order #...: MLQHH1AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	109	(85 - 115)
1,2-Dichloroethane-d4	112	(70 - 120)
4-Bromofluorobenzene	104	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001

TOTAL Metals

Lot-Sample #...: F1H170425-007

Matrix.....: WATER

Date Sampled...: 08/16/11 08:45 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	7.5	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQHH1A5
		Dilution Factor: 1		Analysis Time...: 10:13		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AF
		Dilution Factor: 1		Analysis Time...: 20:40		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AG
		Dilution Factor: 1		Analysis Time...: 20:40		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQHH1AE
		Dilution Factor: 1		Analysis Time...: 14:34		
Barium	158	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AH
		Dilution Factor: 1		Analysis Time...: 20:40		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AJ
		Dilution Factor: 1		Analysis Time...: 20:40		
Calcium	45300	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AK
		Dilution Factor: 5		Analysis Time...: 11:10		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AL
		Dilution Factor: 1		Analysis Time...: 20:40		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AM
		Dilution Factor: 1		Analysis Time...: 20:40		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AN
		Dilution Factor: 1		Analysis Time...: 20:40		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AP
		Dilution Factor: 1		Analysis Time...: 20:40		
Iron	1570	100	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AQ
		Dilution Factor: 1		Analysis Time...: 20:40		
Magnesium	135000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AR
		Dilution Factor: 5		Analysis Time...: 11:10		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001

TOTAL Metals

Lot-Sample #...: F1H170425-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	177	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AT
		Dilution Factor: 1		Analysis Time...: 20:40		
Sodium	109000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AU
		Dilution Factor: 5		Analysis Time...: 11:10		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AV
		Dilution Factor: 1		Analysis Time...: 20:40		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AW
		Dilution Factor: 1		Analysis Time...: 20:40		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1AX
		Dilution Factor: 1		Analysis Time...: 20:40		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQHH1A0
		Dilution Factor: 1		Analysis Time...: 14:34		
Strontium	240	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1A1
		Dilution Factor: 5		Analysis Time...: 11:10		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1A2
		Dilution Factor: 1		Analysis Time...: 20:40		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQHH1A3
		Dilution Factor: 1		Analysis Time...: 20:40		
Zinc	269	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQHH1A4
		Dilution Factor: 1		Analysis Time...: 14:34		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001

General Chemistry

Lot-Sample #...: F1H170425-007 Work Order #...: MLQHH Matrix.....: WATER
 Date Sampled...: 08/16/11 08:45 Date Received...: 08/17/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	69.3	20.0	mg/L	MCAWW 300.0A	08/17/11	1229091
				Dilution Factor: 100	Analysis Time...: 06:59	
Fluoride	14.6	1.0	mg/L	MCAWW 300.0A	08/17/11	1229092
				Dilution Factor: 10	Analysis Time...: 06:46	
Nitrate	0.014 B	0.020	mg/L	MCAWW 300.0A	08/17/11	1229093
				Dilution Factor: 1	Analysis Time...: 06:19	
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/17/11	1229094
				Dilution Factor: 10	Analysis Time...: 06:46	
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/17/11	1229095
				Dilution Factor: 1	Analysis Time...: 06:19	
Sulfate	35.2	2.5	mg/L	MCAWW 300.0A	08/17/11	1229096
				Dilution Factor: 5	Analysis Time...: 06:32	
Total Alkalinity	688	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
				Dilution Factor: 1	Analysis Time...: 00:00	
Total Dissolved Solids	848	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
				Dilution Factor: 1	Analysis Time...: 00:00	

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001

TOTAL Metals

Lot-Sample #...: F1H170425-008

Matrix.....: WATER

Date Sampled...: 08/16/11 09:15 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	8.0	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQJK1AG
		Dilution Factor: 1		Analysis Time...: 10:19		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AR
		Dilution Factor: 1		Analysis Time...: 20:46		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AT
		Dilution Factor: 1		Analysis Time...: 20:46		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJK1AQ
		Dilution Factor: 1		Analysis Time...: 14:41		
Barium	152	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AU
		Dilution Factor: 1		Analysis Time...: 20:46		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AV
		Dilution Factor: 1		Analysis Time...: 20:46		
Calcium	39300	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AW
		Dilution Factor: 5		Analysis Time...: 11:17		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AX
		Dilution Factor: 1		Analysis Time...: 20:46		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A0
		Dilution Factor: 1		Analysis Time...: 20:46		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A1
		Dilution Factor: 1		Analysis Time...: 20:46		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A2
		Dilution Factor: 1		Analysis Time...: 20:46		
Iron	1610	100	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A3
		Dilution Factor: 1		Analysis Time...: 20:46		
Magnesium	136000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A4
		Dilution Factor: 5		Analysis Time...: 11:17		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001

TOTAL Metals

Lot-Sample #...: F1H170425-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	224	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A5
		Dilution Factor: 1		Analysis Time...: 20:46		
Sodium	98000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A6
		Dilution Factor: 5		Analysis Time...: 11:17		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A7
		Dilution Factor: 1		Analysis Time...: 20:46		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A8
		Dilution Factor: 1		Analysis Time...: 20:46		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1A9
		Dilution Factor: 1		Analysis Time...: 20:46		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJK1AA
		Dilution Factor: 1		Analysis Time...: 14:41		
Strontium	182	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AC
		Dilution Factor: 5		Analysis Time...: 11:17		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AD
		Dilution Factor: 1		Analysis Time...: 20:46		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJK1AE
		Dilution Factor: 1		Analysis Time...: 20:46		
Zinc	273	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJK1AF
		Dilution Factor: 1		Analysis Time...: 14:41		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001

General Chemistry

Lot-Sample #...: F1H170425-008 Work Order #...: MLQJK Matrix.....: WATER

Date Sampled...: 08/16/11 09:15 Date Received...: 08/17/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	60.1	20.0	mg/L	MCAWW 300.0A	08/17/11	1229091
			Dilution Factor: 100	Analysis Time...: 10:07		
Fluoride	15.6	1.0	mg/L	MCAWW 300.0A	08/17/11	1229092
			Dilution Factor: 10	Analysis Time...: 09:54		
Nitrate	0.046	0.020	mg/L	MCAWW 300.0A	08/17/11	1229093
			Dilution Factor: 1	Analysis Time...: 09:27		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/17/11	1229094
			Dilution Factor: 10	Analysis Time...: 09:54		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/17/11	1229095
			Dilution Factor: 1	Analysis Time...: 09:27		
Sulfate	33.1	2.5	mg/L	MCAWW 300.0A	08/17/11	1229096
			Dilution Factor: 5	Analysis Time...: 09:40		
Total Alkalinity	698	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	833	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1	Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606DR0001

TOTAL Metals

Lot-Sample #...: F1H170425-009

Matrix.....: WATER

Date Sampled...: 08/15/11 09:55 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	12.8	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQJL1AT
		Dilution Factor: 1		Analysis Time...: 10:26		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1A3
		Dilution Factor: 1		Analysis Time...: 20:53		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1A4
		Dilution Factor: 1		Analysis Time...: 20:53		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJL1A2
		Dilution Factor: 1		Analysis Time...: 15:00		
Barium	74.4	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1A5
		Dilution Factor: 1		Analysis Time...: 20:53		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1A6
		Dilution Factor: 1		Analysis Time...: 20:53		
Calcium	134000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1A7
		Dilution Factor: 5		Analysis Time...: 11:23		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1A8
		Dilution Factor: 1		Analysis Time...: 20:53		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AA
		Dilution Factor: 1		Analysis Time...: 20:53		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AC
		Dilution Factor: 1		Analysis Time...: 20:53		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AD
		Dilution Factor: 1		Analysis Time...: 20:53		
Iron	727	100	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AE
		Dilution Factor: 1		Analysis Time...: 20:53		
Magnesium	83000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AF
		Dilution Factor: 5		Analysis Time...: 11:23		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606DR0001

TOTAL Metals

Lot-Sample #...: F1H170425-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	170	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AG
		Dilution Factor: 1		Analysis Time...: 20:53		
Sodium	197000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AH
		Dilution Factor: 5		Analysis Time...: 11:23		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AJ
		Dilution Factor: 1		Analysis Time...: 20:53		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AK
		Dilution Factor: 1		Analysis Time...: 20:53		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AL
		Dilution Factor: 1		Analysis Time...: 20:53		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJL1AM
		Dilution Factor: 1		Analysis Time...: 15:00		
Strontium	1740	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AN
		Dilution Factor: 5		Analysis Time...: 11:23		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AP
		Dilution Factor: 1		Analysis Time...: 20:53		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJL1AQ
		Dilution Factor: 1		Analysis Time...: 20:53		
Zinc	61.0	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJL1AR
		Dilution Factor: 1		Analysis Time...: 15:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606DR0001

General Chemistry

Lot-Sample #...: F1H170425-009 Work Order #...: MLQJL Matrix.....: WATER
 Date Sampled...: 08/15/11 09:55 Date Received...: 08/17/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	326	20.0	mg/L	MCAWW 300.0A	08/17/11	1229091
		Dilution Factor: 100		Analysis Time...: 11:01		
Fluoride	6.6	0.50	mg/L	MCAWW 300.0A	08/17/11	1229092
		Dilution Factor: 5		Analysis Time...: 10:34		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/17/11	1229093
		Dilution Factor: 1		Analysis Time...: 10:21		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/17/11	1229094
		Dilution Factor: 10		Analysis Time...: 10:47		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/17/11	1229095
		Dilution Factor: 1		Analysis Time...: 10:21		
Sulfate	96.1	5.0	mg/L	MCAWW 300.0A	08/17/11	1229096
		Dilution Factor: 10		Analysis Time...: 10:47		
Total Alkalinity	405	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1200	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW15D0001

TOTAL Metals

Lot-Sample #...: F1H170425-010

Matrix.....: WATER

Date Sampled...: 08/16/11 10:35 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	2.0	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQJP1A5
		Dilution Factor: 1		Analysis Time...: 10:33		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AE
		Dilution Factor: 1		Analysis Time...: 20:59		
Aluminum	313	200	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AF
		Dilution Factor: 1		Analysis Time...: 20:59		
Arsenic	6.0 J	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJP1AD
		Dilution Factor: 1		Analysis Time...: 15:07		
Barium	26.8 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AG
		Dilution Factor: 1		Analysis Time...: 20:59		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AH
		Dilution Factor: 1		Analysis Time...: 20:59		
Calcium	7090	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AJ
		Dilution Factor: 5		Analysis Time...: 11:29		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AK
		Dilution Factor: 1		Analysis Time...: 20:59		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AM
		Dilution Factor: 1		Analysis Time...: 20:59		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AN
		Dilution Factor: 1		Analysis Time...: 20:59		
Copper	7.4 J	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AP
		Dilution Factor: 1		Analysis Time...: 20:59		
Iron	283	100	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AQ
		Dilution Factor: 1		Analysis Time...: 20:59		
Magnesium	2000	1000	ug/L	SW846 6010C	08/17-08/23/11	MLQJP1AR
		Dilution Factor: 1		Analysis Time...: 13:11		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW15D0001

TOTAL Metals

Lot-Sample #...: F1H170425-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	3.8 J	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AT
		Dilution Factor: 1		Analysis Time...: 20:59		
Sodium	143000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AU
		Dilution Factor: 5		Analysis Time...: 11:29		
Nickel	14.7 J	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AV
		Dilution Factor: 1		Analysis Time...: 20:59		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AW
		Dilution Factor: 1		Analysis Time...: 20:59		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1AX
		Dilution Factor: 1		Analysis Time...: 20:59		
Selenium	11.2 J	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJP1A0
		Dilution Factor: 1		Analysis Time...: 15:07		
Strontium	59.0	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1A1
		Dilution Factor: 5		Analysis Time...: 11:29		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1A2
		Dilution Factor: 1		Analysis Time...: 20:59		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJP1A3
		Dilution Factor: 1		Analysis Time...: 20:59		
Zinc	18.3 J	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJP1A4
		Dilution Factor: 1		Analysis Time...: 15:07		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW15D0001

General Chemistry

Lot-Sample #...: F1H170425-010 Work Order #...: MLQJP Matrix.....: WATER
 Date Sampled...: 08/16/11 10:35 Date Received...: 08/17/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	79.9	20.0	mg/L	MCAWW 300.0A	08/18/11	1229091
		Dilution Factor: 100		Analysis Time...: 12:21		
Fluoride	13.6	1.0	mg/L	MCAWW 300.0A	08/18/11	1229092
		Dilution Factor: 10		Analysis Time...: 12:08		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/17/11	1229093
		Dilution Factor: 1		Analysis Time...: 11:41		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/18/11	1229094
		Dilution Factor: 10		Analysis Time...: 12:08		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/17/11	1229095
		Dilution Factor: 1		Analysis Time...: 11:41		
Sulfate	39.6	2.5	mg/L	MCAWW 300.0A	08/17/11	1229096
		Dilution Factor: 5		Analysis Time...: 11:55		
Total Alkalinity	129	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	405	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW17D0001

TOTAL Metals

Lot-Sample #...: F1H170425-011

Matrix.....: WATER

Date Sampled...: 08/16/11 13:00 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	8.5	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQJQ1A5
		Dilution Factor: 1		Analysis Time...: 10:53		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AE
		Dilution Factor: 1		Analysis Time...: 21:18		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AF
		Dilution Factor: 1		Analysis Time...: 21:18		
Arsenic	3.4 J	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJQ1AD
		Dilution Factor: 1		Analysis Time...: 15:13		
Barium	78.8	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AG
		Dilution Factor: 1		Analysis Time...: 21:18		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AH
		Dilution Factor: 1		Analysis Time...: 21:18		
Calcium	66400	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AJ
		Dilution Factor: 5		Analysis Time...: 11:48		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AK
		Dilution Factor: 1		Analysis Time...: 21:18		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AM
		Dilution Factor: 1		Analysis Time...: 21:18		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AN
		Dilution Factor: 1		Analysis Time...: 21:18		
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AP
		Dilution Factor: 1		Analysis Time...: 21:18		
Iron	1050	100	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AQ
		Dilution Factor: 1		Analysis Time...: 21:18		
Magnesium	20300	1000	ug/L	SW846 6010C	08/17-08/23/11	MLQJQ1AR
		Dilution Factor: 1		Analysis Time...: 13:17		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW17D0001

TOTAL Metals

Lot-Sample #...: F1H170425-011

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	11.2 J	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AT
		Dilution Factor: 1		Analysis Time...: 21:18		
Sodium	301000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AU
		Dilution Factor: 5		Analysis Time...: 11:48		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AV
		Dilution Factor: 1		Analysis Time...: 21:18		
Lead	1.6 J	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AW
		Dilution Factor: 1		Analysis Time...: 21:18		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1AX
		Dilution Factor: 1		Analysis Time...: 21:18		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJQ1A0
		Dilution Factor: 1		Analysis Time...: 15:13		
Strontium	311	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1A1
		Dilution Factor: 5		Analysis Time...: 11:48		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1A2
		Dilution Factor: 1		Analysis Time...: 21:18		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJQ1A3
		Dilution Factor: 1		Analysis Time...: 21:18		
Zinc	17.2 J	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJQ1A4
		Dilution Factor: 1		Analysis Time...: 15:13		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW17D0001

General Chemistry

Lot-Sample #...: F1H170425-011 Work Order #...: MLQJQ Matrix.....: WATER
 Date Sampled...: 08/16/11 13:00 Date Received...: 08/17/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	251	20.0	mg/L	MCAWW 300.0A	08/18/11	1229091
		Dilution Factor: 100		Analysis Time...: 01:15		
Fluoride	0.19	0.10	mg/L	MCAWW 300.0A	08/18/11	1229092
		Dilution Factor: 1		Analysis Time...: 12:35		
Nitrate	0.10	0.020	mg/L	MCAWW 300.0A	08/18/11	1229093
		Dilution Factor: 1		Analysis Time...: 12:35		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/18/11	1229094
		Dilution Factor: 10		Analysis Time...: 01:02		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/18/11	1229095
		Dilution Factor: 1		Analysis Time...: 12:35		
Sulfate	69.1	2.5	mg/L	MCAWW 300.0A	08/18/11	1229096
		Dilution Factor: 5		Analysis Time...: 12:48		
Total Alkalinity	410	5.0	mg/L	MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	975	10.0	mg/L	MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001

TOTAL Metals

Lot-Sample #...: F1H170425-012

Matrix.....: WATER

Date Sampled...: 08/15/11 12:00 Date Received...: 08/17/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1229103						
Uranium	1.7	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQJR1A3
		Dilution Factor: 1		Analysis Time...: 10:59		
Prep Batch #...: 1229104						
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AD
		Dilution Factor: 1		Analysis Time...: 21:25		
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AE
		Dilution Factor: 1		Analysis Time...: 21:25		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJR1AC
		Dilution Factor: 1		Analysis Time...: 15:20		
Barium	39.4 J	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AF
		Dilution Factor: 1		Analysis Time...: 21:25		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AG
		Dilution Factor: 1		Analysis Time...: 21:25		
Calcium	455000	20000	ug/L	SW846 6010C	08/17-08/23/11	MLQJR1AH
		Dilution Factor: 20		Analysis Time...: 14:15		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AJ
		Dilution Factor: 1		Analysis Time...: 21:25		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AK
		Dilution Factor: 1		Analysis Time...: 21:25		
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AL
		Dilution Factor: 1		Analysis Time...: 21:25		
Copper	7.6 J	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AM
		Dilution Factor: 1		Analysis Time...: 21:25		
Iron	81.0 J	100	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AN
		Dilution Factor: 1		Analysis Time...: 21:25		
Magnesium	225000	5000	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AP
		Dilution Factor: 5		Analysis Time...: 11:55		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001

TOTAL Metals

Lot-Sample #...: F1H170425-012

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	11.7 J	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AQ
		Dilution Factor: 1		Analysis Time...: 21:25		
Sodium	673000	20000	ug/L	SW846 6010C	08/17-08/23/11	MLQJR1AR
		Dilution Factor: 20		Analysis Time...: 14:15		
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AT
		Dilution Factor: 1		Analysis Time...: 21:25		
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AU
		Dilution Factor: 1		Analysis Time...: 21:25		
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1AV
		Dilution Factor: 1		Analysis Time...: 21:25		
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJR1AW
		Dilution Factor: 1		Analysis Time...: 15:20		
Strontium	7690	100	ug/L	SW846 6010C	08/17-08/23/11	MLQJR1AX
		Dilution Factor: 20		Analysis Time...: 14:15		
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1A0
		Dilution Factor: 1		Analysis Time...: 21:25		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQJR1A1
		Dilution Factor: 1		Analysis Time...: 21:25		
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQJR1A2
		Dilution Factor: 1		Analysis Time...: 15:20		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #2

GC/MS Volatiles

Lot-Sample #...: F1H170425-013 Work Order #...: MLQJ31AA Matrix.....: WATER
 Date Sampled...: 08/16/11 Date Received...: 08/17/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 11:05
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	3.1	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #2

GC/MS Volatiles

Lot-Sample #....: F1H170425-013 Work Order #....: MLQJ31AA Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H170425
 MB Lot-Sample #: F1H190000-041

Work Order #...: MLTXM1AA

Matrix.....: WATER

Analysis Date...: 08/19/11
 Dilution Factor: 1

Prep Date.....: 08/19/11

Analysis Time...: 05:48

Prep Batch #...: 1231041

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L		SW846 8260B
Benzene	ND	1.0	ug/L		SW846 8260B
Bromodichloromethane	ND	1.0	ug/L		SW846 8260B
Bromoform	ND	1.0	ug/L		SW846 8260B
Bromomethane	ND	2.0	ug/L		SW846 8260B
2-Butanone	ND	5.0	ug/L		SW846 8260B
Carbon disulfide	ND	2.0	ug/L		SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L		SW846 8260B
Chlorobenzene	ND	2.0	ug/L		SW846 8260B
Dibromochloromethane	ND	1.0	ug/L		SW846 8260B
Chloroethane	ND	2.0	ug/L		SW846 8260B
Chloroform	ND	1.0	ug/L		SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L		SW846 8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L		SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
Ethylbenzene	ND	1.0	ug/L		SW846 8260B
2-Hexanone	ND	5.0	ug/L		SW846 8260B
Methylene chloride	ND	1.0	ug/L		SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L		SW846 8260B
Styrene	ND	1.0	ug/L		SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L		SW846 8260B
Tetrachloroethene	ND	1.0	ug/L		SW846 8260B
Toluene	ND	1.0	ug/L		SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L		SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L		SW846 8260B
Trichloroethene	ND	1.0	ug/L		SW846 8260B
Vinyl chloride	ND	2.0	ug/L		SW846 8260B
Xylenes (total)	ND	5.0	ug/L		SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	106	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H170425

Work Order #...: MLTXM1AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
1,2-Dichloroethane-d4	103	(70 - 120)		
4-Bromofluorobenzene	103	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: F1H170425

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H170000-103 Prep Batch #....: 1229103						
Uranium	ND	1.0	ug/L	SW846 6020A	08/17-08/19/11	MLQNA1AA
		Dilution Factor: 1				
		Analysis Time...: 08:13				
MB Lot-Sample #: F1H170000-104 Prep Batch #....: 1229104						
Aluminum	ND	200	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AD
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Antimony	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AU
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/17-08/24/11	MLQNE1AA
		Dilution Factor: 1				
		Analysis Time...: 12:39				
Barium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AE
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AF
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AH
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Calcium	ND	1000	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AG
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Chromium	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AK
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AJ
		Dilution Factor: 1				
		Analysis Time...: 18:44				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H170425

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AL
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Iron	ND	100	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AM
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Lead	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AT
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Magnesium	ND	1000	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AN
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Manganese	ND	15.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AP
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Nickel	ND	40.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AR
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Selenium	ND	15.0	ug/L	SW846 6010C	08/17-08/24/11	MLQNE1AV
		Dilution Factor: 1				
		Analysis Time...: 12:39				
Silver	ND	10.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AC
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Sodium	ND	1000	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AQ
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Strontium	ND	5.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AW
		Dilution Factor: 1				
		Analysis Time...: 09:17				
Thallium	ND	20.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AX
		Dilution Factor: 1				
		Analysis Time...: 18:44				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/17-08/22/11	MLQNE1AO
		Dilution Factor: 1				
		Analysis Time...: 18:44				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H170425

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010C	08/17-08/24/11	MLQNE1A1

Dilution Factor: 1
Analysis Time...: 12:39

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H170425

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLVHL1AA 0.20 Dilution Factor: 1 Analysis Time...: 06:06	mg/L	MB Lot-Sample #: F1H170000-091 MCAWW 300.0A	08/17/11	1229091
Fluoride	ND	Work Order #: MLVHM1AA 0.10 Dilution Factor: 1 Analysis Time...: 06:06	mg/L	MB Lot-Sample #: F1H170000-092 MCAWW 300.0A	08/17/11	1229092
Nitrate	ND	Work Order #: MLVHN1AA 0.020 Dilution Factor: 1 Analysis Time...: 06:06	mg/L	MB Lot-Sample #: F1H170000-093 MCAWW 300.0A	08/17/11	1229093
Nitrite	ND	Work Order #: MLVHP1AA 0.020 Dilution Factor: 1 Analysis Time...: 06:06	mg/L	MB Lot-Sample #: F1H170000-094 MCAWW 300.0A	08/17/11	1229094
Phosphate as P, Ortho	ND	Work Order #: MLVHQ1AA 0.50 Dilution Factor: 1 Analysis Time...: 06:06	mg/L	MB Lot-Sample #: F1H170000-095 MCAWW 300.0A	08/17/11	1229095
Sulfate	ND	Work Order #: MLVHR1AA 0.50 Dilution Factor: 1 Analysis Time...: 06:06	mg/L	MB Lot-Sample #: F1H170000-096 MCAWW 300.0A	08/17/11	1229096
Total Alkalinity	ND	Work Order #: MLX1P1AA 5.0 Dilution Factor: 1 Analysis Time...: 00:00	mg/L	MB Lot-Sample #: F1H230000-125 MCAWW 310.1	08/23/11	1235125
Total Dissolved Solids	ND	Work Order #: MLQ6P1AA 10.0 Dilution Factor: 1 Analysis Time...: 00:00	mg/L	MB Lot-Sample #: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H170425 Work Order #...: MLTXM1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H190000-041
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 04:55
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Styrene	110	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	101	(65 - 130)	SW846 8260B
Tetrachloroethene	101	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	100	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	106	(70 - 130)	SW846 8260B
Dibromochloromethane	103	(60 - 135)	SW846 8260B
Vinyl chloride	83	(50 - 145)	SW846 8260B
Bromomethane	101	(30 - 145)	SW846 8260B
Chloroethane	90	(60 - 135)	SW846 8260B
Acetone	93	(40 - 140)	SW846 8260B
1,1-Dichloroethene	99	(70 - 130)	SW846 8260B
Methylene chloride	92	(55 - 140)	SW846 8260B
Carbon disulfide	90	(35 - 160)	SW846 8260B
1,1-Dichloroethane	94	(70 - 135)	SW846 8260B
2-Butanone	101	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	97	(85 - 115)	SW846 8260B
Chloroform	94	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	100	(65 - 130)	SW846 8260B
Carbon tetrachloride	100	(65 - 140)	SW846 8260B
1,2-Dichloroethane	96	(70 - 130)	SW846 8260B
Benzene	95	(80 - 120)	SW846 8260B
Trichloroethene	91	(70 - 125)	SW846 8260B
1,2-Dichloropropane	95	(75 - 125)	SW846 8260B
Bromodichloromethane	100	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	96	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)	SW846 8260B
Toluene	104	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	103	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	99	(75 - 125)	SW846 8260B
2-Hexanone	96	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	108	(60 - 135)	SW846 8260B
Chlorobenzene	95	(80 - 120)	SW846 8260B
Bromoform	109	(70 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H170425

Work Order #...: MLTXM1AC

Matrix.....: WATER

LCS Lot-Sample#: F1H190000-041

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Ethylbenzene	102	(75 - 125)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H170425

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H170000-103 Prep Batch #... : 1229103					
Uranium	109	(80 - 120)	SW846 6020A	08/17-08/19/11	MLQNE1A1C
		Dilution Factor: 1		Analysis Time...: 08:19	
LCS Lot-Sample#: F1H170000-104 Prep Batch #... : 1229104					
Arsenic	105	(80 - 120)	SW846 6010C	08/17-08/24/11	MLQNE1A2
		Dilution Factor: 1		Analysis Time...: 12:45	
Silver	93	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A3
		Dilution Factor: 1		Analysis Time...: 18:50	
Aluminum	106	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A4
		Dilution Factor: 1		Analysis Time...: 18:50	
Barium	104	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A5
		Dilution Factor: 1		Analysis Time...: 18:50	
Beryllium	112	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A6
		Dilution Factor: 1		Analysis Time...: 18:50	
Calcium	110	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A7
		Dilution Factor: 1		Analysis Time...: 09:23	
Cadmium	106	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A8
		Dilution Factor: 1		Analysis Time...: 18:50	
Cobalt	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1A9
		Dilution Factor: 1		Analysis Time...: 18:50	
Chromium	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CA
		Dilution Factor: 1		Analysis Time...: 18:50	
Copper	100	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CC
		Dilution Factor: 1		Analysis Time...: 18:50	
Iron	106	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CD
		Dilution Factor: 1		Analysis Time...: 18:50	
Magnesium	101	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CE
		Dilution Factor: 1		Analysis Time...: 09:23	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H170425

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	105	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CF
		Dilution Factor: 1		Analysis Time...: 18:50	
Sodium	104	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CG
		Dilution Factor: 1		Analysis Time...: 09:23	
Nickel	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CH
		Dilution Factor: 1		Analysis Time...: 18:50	
Lead	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CJ
		Dilution Factor: 1		Analysis Time...: 18:50	
Antimony	103	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CK
		Dilution Factor: 1		Analysis Time...: 18:50	
Selenium	105	(80 - 120)	SW846 6010C	08/17-08/24/11	MLQNE1CL
		Dilution Factor: 1		Analysis Time...: 12:45	
Strontium	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CM
		Dilution Factor: 1		Analysis Time...: 09:23	
Thallium	100	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CN
		Dilution Factor: 1		Analysis Time...: 18:50	
Vanadium	102	(80 - 120)	SW846 6010C	08/17-08/22/11	MLQNE1CP
		Dilution Factor: 1		Analysis Time...: 18:50	
Zinc	112	(80 - 120)	SW846 6010C	08/17-08/24/11	MLQNE1CQ
		Dilution Factor: 1		Analysis Time...: 12:45	

NOTE(S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H170425

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	93	Work Order #: MLVHL1AC (90 - 110)	LCS Lot-Sample#: F1H170000-091 MCAWW 300.0A	08/17/11	1229091
		Dilution Factor: 1	Analysis Time...: 05:52		
Fluoride	96	Work Order #: MLVHM1AC (90 - 110)	LCS Lot-Sample#: F1H170000-092 MCAWW 300.0A	08/17/11	1229092
		Dilution Factor: 1	Analysis Time...: 05:52		
Nitrate	95	Work Order #: MLVHN1AC (90 - 110)	LCS Lot-Sample#: F1H170000-093 MCAWW 300.0A	08/17/11	1229093
		Dilution Factor: 1	Analysis Time...: 05:52		
Nitrite	99	Work Order #: MLVHP1AC (90 - 110)	LCS Lot-Sample#: F1H170000-094 MCAWW 300.0A	08/17/11	1229094
		Dilution Factor: 1	Analysis Time...: 05:52		
Phosphate as P, Ortho	99	Work Order #: MLVHQ1AC (90 - 110)	LCS Lot-Sample#: F1H170000-095 MCAWW 300.0A	08/17/11	1229095
		Dilution Factor: 1	Analysis Time...: 05:52		
Sulfate	95	Work Order #: MLVHR1AC (90 - 110)	LCS Lot-Sample#: F1H170000-096 MCAWW 300.0A	08/17/11	1229096
		Dilution Factor: 1	Analysis Time...: 05:52		
Total Alkalinity	94	Work Order #: MLX1P1AC (90 - 110)	LCS Lot-Sample#: F1H230000-125 MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: MLX1P1AD (90 - 110)	LCS Lot-Sample#: F1H230000-125 MCAWW 310.1	08/23/11	1235125
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	98	Work Order #: MLQ6P1AC (90 - 113)	LCS Lot-Sample#: F1H170000-114 MCAWW 160.1	08/17-08/22/11	1229114
		Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H170425 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD
 Date Sampled...: 08/11/11 10:15 Date Received...: 08/12/11
 Prep Date.....: 08/19/11 Analysis Date...: 08/19/11
 Prep Batch #...: 1231041 Analysis Time...: 09:20
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	101	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.4	(0-20)	SW846 8260B
Dibromochloromethane	104	(60 - 135)			SW846 8260B
	102	(60 - 135)	1.6	(0-20)	SW846 8260B
Vinyl chloride	93	(50 - 145)			SW846 8260B
	96	(50 - 145)	2.4	(0-20)	SW846 8260B
Bromomethane	107	(30 - 145)			SW846 8260B
	102	(30 - 145)	5.0	(0-20)	SW846 8260B
Chloroethane	100	(60 - 135)			SW846 8260B
	97	(60 - 135)	3.2	(0-20)	SW846 8260B
Acetone	111	(40 - 140)			SW846 8260B
	95	(40 - 140)	15	(0-20)	SW846 8260B
1,1-Dichloroethene	107	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-20)	SW846 8260B
Methylene chloride	133	(55 - 140)			SW846 8260B
	135	(55 - 140)	1.7	(0-20)	SW846 8260B
Carbon disulfide	97	(35 - 160)			SW846 8260B
	86	(35 - 160)	12	(0-20)	SW846 8260B
1,1-Dichloroethane	100	(70 - 135)			SW846 8260B
	95	(70 - 135)	4.6	(0-20)	SW846 8260B
2-Butanone	91	(30 - 150)			SW846 8260B
	97	(30 - 150)	6.4	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	100	(85 - 115)			SW846 8260B
	98	(85 - 115)	2.4	(0-20)	SW846 8260B
Chloroform	99	(65 - 135)			SW846 8260B
	94	(65 - 135)	5.1	(0-20)	SW846 8260B
1,1,1-Trichloroethane	108	(65 - 130)			SW846 8260B
	102	(65 - 130)	5.6	(0-20)	SW846 8260B
Carbon tetrachloride	108	(65 - 140)			SW846 8260B
	102	(65 - 140)	5.4	(0-20)	SW846 8260B
1,2-Dichloroethane	99	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.19	(0-20)	SW846 8260B
Benzene	100	(80 - 120)			SW846 8260B
	98	(80 - 120)	2.2	(0-20)	SW846 8260B
Trichloroethene	93	(70 - 125)			SW846 8260B
	94	(70 - 125)	0.16	(0-20)	SW846 8260B
1,2-Dichloropropane	99	(75 - 125)			SW846 8260B
	98	(75 - 125)	0.89	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H170425 Work Order #...: MLLN71CF-MS Matrix.....: WATER
 MS Lot-Sample #: F1H120447-007 MLLN71CG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	103	(75 - 120)			SW846 8260B
	102	(75 - 120)	0.87	(0-20)	SW846 8260B
1,1,2-Trichloroethane	102	(75 - 125)			SW846 8260B
	97	(75 - 125)	5.2	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	107	(55 - 140)			SW846 8260B
	107	(55 - 140)	0.56	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	102	(75 - 120)	3.8	(0-20)	SW846 8260B
1,3-Dichlorobenzene	107	(75 - 125)			SW846 8260B
	105	(75 - 125)	2.2	(0-20)	SW846 8260B
1,4-Dichlorobenzene	100	(75 - 125)			SW846 8260B
	101	(75 - 125)	1.0	(0-20)	SW846 8260B
2-Hexanone	96	(55 - 130)			SW846 8260B
	91	(55 - 130)	5.8	(0-20)	SW846 8260B
4-Methyl-2-pentanone	96	(60 - 135)			SW846 8260B
	98	(60 - 135)	2.8	(0-20)	SW846 8260B
Chlorobenzene	100	(80 - 120)			SW846 8260B
	98	(80 - 120)	1.7	(0-20)	SW846 8260B
Bromoform	107	(70 - 130)			SW846 8260B
	111	(70 - 130)	3.0	(0-20)	SW846 8260B
Ethylbenzene	105	(75 - 125)			SW846 8260B
	104	(75 - 125)	1.2	(0-20)	SW846 8260B
Styrene	114	(65 - 135)			SW846 8260B
	110	(65 - 135)	3.6	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	97	(65 - 130)			SW846 8260B
	96	(65 - 130)	1.5	(0-20)	SW846 8260B
Tetrachloroethene	104	(45 - 150)			SW846 8260B
	101	(45 - 150)	2.3	(0-20)	SW846 8260B
1,2-Dichlorobenzene	104	(70 - 120)			SW846 8260B
	103	(70 - 120)	1.2	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(85 - 120)
	102	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
	102	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print indicates 70425 parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H170425

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H160430-001 Prep Batch #...: 1229103						
Uranium	112	(80 - 120)		SW846 6020A	08/17-08/19/11	MLPER1A6
	112	(80 - 120)	0.11 (0-20)	SW846 6020A	08/17-08/19/11	MLPER1A7
			Dilution Factor: 1			
			Analysis Time...: 08:39			
MS Lot-Sample #: F1H160430-001 Prep Batch #...: 1229104						
Aluminum	108	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CD
	104	(80 - 120)	3.7 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CE
			Dilution Factor: 1			
			Analysis Time...: 19:03			
Antimony	104	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1DA
	101	(80 - 120)	3.1 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1DC
			Dilution Factor: 1			
			Analysis Time...: 19:03			
Arsenic	108	(80 - 120)		SW846 6010C	08/17-08/24/11	MLPER1A8
	105	(80 - 120)	2.7 (0-20)	SW846 6010C	08/17-08/24/11	MLPER1A9
			Dilution Factor: 1			
			Analysis Time...: 12:58			
Barium	104	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CF
	101	(80 - 120)	3.0 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CG
			Dilution Factor: 1			
			Analysis Time...: 19:03			
Beryllium	108	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CH
	105	(80 - 120)	2.3 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CJ
			Dilution Factor: 1			
			Analysis Time...: 19:03			
Cadmium	98	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CM
	95	(80 - 120)	2.3 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CN
			Dilution Factor: 1			
			Analysis Time...: 19:03			
Calcium	180 N	(80 - 120)		SW846 6010C	08/17-08/23/11	MLPER1CK
	188 N	(80 - 120)	0.13 (0-20)	SW846 6010C	08/17-08/23/11	MLPER1CL
			Dilution Factor: 20			
			Analysis Time...: 13:30			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H170425

Matrix.....: WATER

Date Sampled...: 08/15/11 08:40 Date Received...: 08/16/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	97	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CR
	94	(80 - 120)	2.4 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CT
Dilution Factor: 1 Analysis Time...: 19:03						
Cobalt	95	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CP
	92	(80 - 120)	2.5 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CQ
Dilution Factor: 1 Analysis Time...: 19:03						
Copper	101	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CU
	98	(80 - 120)	3.6 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CV
Dilution Factor: 1 Analysis Time...: 19:03						
Iron	100	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1CW
	97	(80 - 120)	2.3 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1CX
Dilution Factor: 1 Analysis Time...: 19:03						
Lead	93	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1C8
	92	(80 - 120)	2.1 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1C9
Dilution Factor: 1 Analysis Time...: 19:03						
Magnesium	122 N	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1C0
	105	(80 - 120)	1.2 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1C1
Dilution Factor: 5 Analysis Time...: 09:35						
Manganese	100	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1C2
	98	(80 - 120)	2.6 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1C3
Dilution Factor: 1 Analysis Time...: 19:03						
Nickel	94	(80 - 120)		SW846 6010C	08/17-08/22/11	MLPER1C6
	92	(80 - 120)	2.3 (0-20)	SW846 6010C	08/17-08/22/11	MLPER1C7
Dilution Factor: 1 Analysis Time...: 19:03						
Selenium	109	(80 - 120)		SW846 6010C	08/17-08/24/11	MLPER1DD
	106	(80 - 120)	2.9 (0-20)	SW846 6010C	08/17-08/24/11	MLPER1DE
Dilution Factor: 1 Analysis Time...: 12:58						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H170425

Matrix.....: WATER

Date Sampled...: 08/16/11 08:45 Date Received...: 08/17/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	96	Work Order #...: MLQHH1CF (90 - 110)	MCAWW 300.0A Dilution Factor: 100	MS Lot-Sample #: F1H170425-007 08/17/11 Analysis Time...: 06:59	1229091
Fluoride	106	Work Order #...: MLQHH1CH (90 - 110)	MCAWW 300.0A Dilution Factor: 10	MS Lot-Sample #: F1H170425-007 08/17/11 Analysis Time...: 06:46	1229092
Nitrate	114 N	Work Order #...: MLQHH1CK (90 - 110)	MCAWW 300.0A Dilution Factor: 1	MS Lot-Sample #: F1H170425-007 08/17/11 Analysis Time...: 06:19	1229093
Nitrite	53 N	Work Order #...: MLQHH1CM (90 - 110)	MCAWW 300.0A Dilution Factor: 10	MS Lot-Sample #: F1H170425-007 08/17/11 Analysis Time...: 06:46	1229094
Phosphate as P, Ortho	122 N	Work Order #...: MLQHH1CP (90 - 110)	MCAWW 300.0A Dilution Factor: 1	MS Lot-Sample #: F1H170425-007 08/17/11 Analysis Time...: 06:19	1229095
Sulfate	90	Work Order #...: MLQHH1CR (90 - 110)	MCAWW 300.0A Dilution Factor: 5	MS Lot-Sample #: F1H170425-007 08/17/11 Analysis Time...: 06:32	1229096
Total Alkalinity	110	Work Order #...: MLPE41CG (80 - 120)	MCAWW 310.1 Dilution Factor: 1	MS Lot-Sample #: F1H160430-003 08/23/11 Analysis Time...: 00:00	1235125

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H170425

Work Order #...: MLQHH-SMP
MLQHH-DUP

Matrix.....: WATER

Date Sampled....: 08/16/11 08:45 Date Received...: 08/17/11

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride					SD Lot-Sample #: F1H170425-007		
69.3	73.1	mg/L	5.4	(0-20)	MCAWW 300.0A	08/17/11	1229091
		Dilution Factor: 100			Analysis Time...: 06:59		
Fluoride					SD Lot-Sample #: F1H170425-007		
14.6	14.7	mg/L	0.67	(0-20)	MCAWW 300.0A	08/17/11	1229092
		Dilution Factor: 10			Analysis Time...: 06:46		
Nitrate					SD Lot-Sample #: F1H170425-007		
0.014 B	0.014 B	mg/L	3.8	(0-20)	MCAWW 300.0A	08/17/11	1229093
		Dilution Factor: 1			Analysis Time...: 06:19		
Nitrite					SD Lot-Sample #: F1H170425-007		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/17/11	1229094
		Dilution Factor: 10			Analysis Time...: 06:46		
Phosphate as P, Ortho					SD Lot-Sample #: F1H170425-007		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/17/11	1229095
		Dilution Factor: 1			Analysis Time...: 06:19		
Sulfate					SD Lot-Sample #: F1H170425-007		
35.2	36.6	mg/L	3.9	(0-20)	MCAWW 300.0A	08/17/11	1229096
		Dilution Factor: 5			Analysis Time...: 06:32		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H170425 Work Order #...: MLLN1-SMP Matrix.....: WATER
MLLN1-DUP
Date Sampled...: 08/11/11 09:15 Date Received...: 08/12/11

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Total Dissolved Solids						SD Lot-Sample #: F1H120447-006		
	645	665	mg/L	3.1	(0-0.0)	MCAWW 160.1	08/17-08/22/11	1229114
			Dilution Factor: 1			Analysis Time...: 00:00		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F1H170425 Work Order #....: MLPE4-SMP Matrix.....: WATER
MLPE4-DUP
Date Sampled....: 08/15/11 08:40 Date Received...: 08/16/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity						SD Lot-Sample #: F1H160430-003		
	234	236	mg/L	0.68	(0-20)	MCAWW 310.1	08/23/11	1235125
			Dilution Factor: 1			Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW606D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H170425-001
Work Order: MLQGL
Matrix: WATER

Date Collected: 08/16/11 0845
Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 38
Uranium 234	2.88		0.52	0.10	0.1	08/22/11	08/23/11
Uranium 235/236	0.068		0.079	0.100	0.062	08/22/11	08/23/11
Uranium 238	2.37		0.46	0.10	0.05	08/22/11	08/23/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW14D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H170425-002
 Work Order: MLQG0
 Matrix: WATER

Date Collected: 08/16/11 0915
 Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238036	Yld % 46
Uranium 234	2.49		0.82	0.10	0.39	08/26/11	08/28/11
Uranium 235/236	-0.038	U	0.054	0.100	0.40	08/26/11	08/28/11
Uranium 238	2.09		0.74	0.10	0.32	08/26/11	08/28/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001 DISSOLVED DUP

Radiochemistry

Lab Sample ID: F1H170425-002X

Date Collected: 08/16/11 0915

Work Order: MLQGO

Date Received: 08/17/11 0915

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238036	Yld % 70
Uranium 234	2.35		0.64	0.10	0.25	08/26/11	08/28/11
Uranium 235/236	0.049	U	0.097	0.100	0.13	08/26/11	08/28/11
Uranium 238	1.96		0.58	0.10	0.23	08/26/11	08/28/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW606DR0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H170425-003
 Work Order: MLQG2
 Matrix: WATER

Date Collected: 08/15/11 0955
 Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 37
Uranium 234	4.20		0.67	0.10	0.09	08/22/11	08/23/11
Uranium 235/236	0.17		0.13	0.10	0.06	08/22/11	08/23/11
Uranium 238	4.54		0.71	0.10	0.15	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW15D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H170425-004
 Work Order: MLQG8
 Matrix: WATER

Date Collected: 08/16/11 1035
 Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 72
Uranium 234	0.48		0.14	0.10	0.07	08/22/11	08/23/11
Uranium 235/236	0.003	U	0.026	0.100	0.070	08/22/11	08/23/11
Uranium 238	0.58		0.16	0.10	0.06	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW17D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H170425-005
Work Order: MLQG9
Matrix: WATER

Date Collected: 08/16/11 1300
Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 77
Uranium 234	2.39		0.35	0.10	0.05	08/22/11	08/23/11
Uranium 235/236	0.161		0.084	0.100	0.029	08/22/11	08/23/11
Uranium 238	2.30		0.34	0.10	0.05	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H170425-006
 Work Order: MLQHA
 Matrix: WATER

Date Collected: 08/15/11 1200
 Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238036	Yld % 80
Uranium 234	1.29		0.44	0.10	0.23	08/26/11	08/28/11
Uranium 235/236	0.11	U	0.15	0.10	0.23	08/26/11	08/28/11
Uranium 238	0.55		0.30	0.10	0.26	08/26/11	08/28/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U F1H170425
 Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606D0001

Radiochemistry

Lab Sample ID: F1H170425-007
Work Order: MLQHH
Matrix: WATER

Date Collected: 08/16/11 0845
Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 37
Uranium 234	2.60		0.48	0.10	0.13	08/22/11	08/23/11
Uranium 235/236	0.19		0.13	0.10	0.12	08/22/11	08/23/11
Uranium 238	2.91		0.52	0.10	0.12	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW14D0001

Radiochemistry

Lab Sample ID: F1H170425-008
Work Order: MLQJK
Matrix: WATER

Date Collected: 08/16/11 0915
Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 42
Uranium 234	2.49		0.46	0.10	0.13	08/22/11	08/23/11
Uranium 235/236	0.17		0.12	0.10	0.06	08/22/11	08/23/11
Uranium 238	2.08		0.41	0.10	0.05	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW606DR0001

Radiochemistry

Lab Sample ID: F1H170425-009

Date Collected: 08/15/11 0955

Work Order: MLQJL

Date Received: 08/17/11 0915

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 50
Uranium 234	3.37		0.51	0.10	0.07	08/22/11	08/23/11
Uranium 235/236	0.23		0.13	0.10	0.08	08/22/11	08/23/11
Uranium 238	3.73		0.55	0.10	0.09	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW15D0001

Radiochemistry

Lab Sample ID: F1H170425-010
Work Order: MLQJP
Matrix: WATER

Date Collected: 08/16/11 1035
Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 69
Uranium 234	0.37		0.13	0.10	0.08	08/22/11	08/23/11
Uranium 235/236	0.022	U	0.036	0.100	0.056	08/22/11	08/23/11
Uranium 238	0.61		0.17	0.10	0.08	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1H170425**
Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW17D0001

Radiochemistry

Lab Sample ID: F1H170425-011

Date Collected: 08/16/11 1300

Work Order: MLQJQ

Date Received: 08/17/11 0915

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238036	Yld % 86
Uranium 234	2.27		0.56	0.10	0.21	08/26/11	08/28/11
Uranium 235/236	0.18		0.17	0.10	0.17	08/26/11	08/28/11
Uranium 238	1.82		0.50	0.10	0.19	08/26/11	08/28/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04CMW711DD0001

Radiochemistry

Lab Sample ID: F1H170425-012
 Work Order: MLQJR
 Matrix: WATER

Date Collected: 08/15/11 1200
 Date Received: 08/17/11 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1234168	Yld % 31
Uranium 234	0.80		0.28	0.10	0.15	08/22/11	08/23/11
Uranium 235/236	-0.007	U	0.014	0.100	0.13	08/22/11	08/23/11
Uranium 238	0.71		0.26	0.10	0.10	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H170425

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H170425

Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Prep	Lab Sample ID
			(2 σ+/-)			Date	Analysis Date
<hr/>							
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1238036	Yld %	95
							F1H260000-036B
Uranium 234	-0.002	U	0.017	0.100	0.051	08/26/11	08/28/11
Uranium 235/236	0.007	U	0.019	0.100	0.043	08/26/11	08/28/11
Uranium 238	-0.0038	U	0.0053	0.100	0.040	08/26/11	08/28/11
<hr/>							
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1234168	Yld %	93
							F1H220000-168B
Uranium 234	0.019	U	0.027	0.100	0.041	08/22/11	08/23/11
Uranium 235/236	-0.0024	U	0.0048	0.100	0.043	08/22/11	08/23/11
Uranium 238	-0.0019	U	0.0038	0.100	0.035	08/22/11	08/23/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H170425

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID		
					% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H260000-036C
Uranium 234	3.26	3.18	0.42	0.05	83	97	(76 - 136)
Uranium 238	3.39	3.72	0.47	0.04	83	110	(76 - 134)
	Batch #:	1238036		Analysis Date:	08/28/11		

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H170425

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H220000-168C	
Uranium 234	3.26	3.09	0.40	91	95	(76 - 136)	
Spk 2	3.27	3.11	0.41	86	95	(76 - 136)	0.8 %RPD
Uranium 238	3.39	3.39	0.43	91	100	(76 - 134)	
Spk 2	3.39	3.23	0.42	86	95	(76 - 134)	5 %RPD
Batch #:		1234168		Analysis Date: 08/23/11			

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1H170425
 Matrix: WATER

Date Sampled: 08/16/11
 Date Received: 08/17/11

Parameter	SAMPLE Result	Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID	
							Precision	
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H170425-002	
Uranium 234	2.49	0.82	46	2.35	0.64	70	6	%RPD
Uranium 235/236	-0.038 U	0.054	46	0.049 U	0.097	70	1600	%RPD
Uranium 238	2.09	0.74	46	1.96	0.58	70	7	%RPD
Batch #:		1238036 (Sample)		1238036 (Duplicate)				

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1H170425

U Result is less than the sample detection limit.

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R286,7

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-17

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-25

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS In LOT: 12

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A03MW606D0001 DISSOLVED			2011-08-16 / 845	MLQGL	WATER
SAMPLE COMMENTS:						
SB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A03MW14D0001 DISSOLVED			2011-08-16 / 915	MLQG0	WATER
SAMPLE COMMENTS:						
MG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F1H170425

78-8F 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R286,7
 Date Received: 2011-08-17
 Analytical Due Date: 2011-08-25
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 12

DoD QSM 4.1 please use 6020 for total uranium instead of 200.0

PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	
3	A03MW606DR0001 DISSOLVED			2011-08-15 / 955	MLQG2	WATER
SAMPLE COMMENTS:						
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06

F1H170425

79 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R286,7
 Date Received: 2011-08-17
 Analytical Due Date: 2011-08-25
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 12

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BE	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A03MW15D0001 DISSOLVED			2011-08-16 / 1035	MLQG8	WATER

SAMPLE COMMENTS:

CU	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06

F1H170425

80 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R286,7
 Date Received: 2011-08-17
 Analytical Due Date: 2011-08-25
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 12

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
----	----	-----	---------------	------------------------------------	----	---	----	-------------------	---------	------------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A03MW17D0001 DISSOLVED			2011-08-16 / 1300	MLQG9	WATER

SAMPLE COMMENTS:

MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04CMW711DD0001 DISSOLVED			2011-08-15 / 1200	MLQHA	WATER

SAMPLE COMMENTS:

AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

81 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R286,7
 Date Received: 2011-08-17
 Analytical Due Date: 2011-08-25
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS In LOT: 12

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER
7	A03MW606D0001			2011-08-16 / 845	MLQHH WATER

SAMPLE COMMENTS:

MG	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

82 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R286,7,2-63

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-17

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-25

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 12

Report Type: B

Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CD IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX IS	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 180.1 W	WATER, 180.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX CB	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER
8	A03MW14D0001			2011-08-16 / 915	MLQJK WATER

SAMPLE COMMENTS:

SB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

83 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R286,7,2-63

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-17

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-25

PO#: 697886

Report to:

Report Due Date:

2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 12

Report Type: B

Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A03MW606DR0001			2011-08-15 / 965	MLQJL	WATER

SAMPLE COMMENTS:

ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

84 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R286,7,2-63

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-17

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-25

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

EDD Code: 00

#SMPS in LOT: 12

DOD QSM 4.1 please use 6020 for total uranium instead of 200.8

BA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW W	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW W	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW W	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW W	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW W	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW W	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW W	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW W	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	A03MW15D0001			2011-08-16 / 1035	MLQJP	WATER

SAMPLE COMMENTS:

MN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

85 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R286,7,2-63
 Date Received: 2011-08-17
 Analytical Due Date: 2011-08-25
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 12

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 11 A03MW17D0001 2011-08-16 / 1300 MLQJQ WATER

SAMPLE COMMENTS:

MG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE IS	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

86 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R286,7,2-63

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-17

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-25

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 12

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER
12	A04CMW711DD0001			2011-08-15 / 1200	MLQJR WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H170425

87 of 90

F1H170425

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R286,7
 Date Received: 2011-08-17
 Analytical Due Date: 2011-08-25
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 12

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
13	TRIP BLANK #2			2011-08-16 / 0	MLQJ3	WATER
<u>SAMPLE COMMENTS:</u>						
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N

F1H170425

88 of 90

[illegible]

Special Instructions/QC Requirements & Comments:				America St. Louis			
	Company: Shaw E & I. Inc.	Date/Time: 8/16/11 16:15	Rec		Company: BFL0	Date/Time: 08-16-11 16:15	
	Company: BFL0	Date/Time: 08-16-11 16:40	Rec		Company:	Date/Time:	
	Company: Baffco	Date/Time: 8/16/11 17:00	Rec		Company: T#572	Date/Time: 8/17/11 0915	

Lot #(s): FIH170425 TestAmerica St. Louis

CUR Form #: 1 1 3

CONDITION UPON RECEIPT FORM

Client: Shaw

Quote No: 89251

COC/RFA No: 010

Initiated By: [Signature]

Date: 8.17.11

Time: 0915



Shipping Information

Shipper: ☒ FedEx ☐ UPS ☐ DHL ☐ Courier ☐ Client Other: _____ Multiple Packages: ☒ Y ☐ N

Shipping # (s):*

Sample Temperature (s):**

1. <u>4855 0258 4320</u>	6. _____	1. <u>↑</u>	6. _____
2. <u>4329</u>	7. _____	2. <u>ambient</u>	7. _____
3. <u>4318</u>	8. _____	3. <u>3</u>	8. _____
4. _____	9. _____	4. _____	9. _____
5. _____	10. _____	5. _____	10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

second sample - labels have no "J"
4th 5th ↓ ↓ ↓ ↓

per TE lagged per chain.

Corrective Action:

☐ Client Contact Name: _____
☐ Sample(s) processed "as is" _____
☐ Sample(s) on hold until: _____

Informed by: _____

Project Management Review

If released, notify: _____

Date: 8/18/11

THIS FORM MUST BE COMPLETED BY THE PERSON INITIATING THE ACTION. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. Y40415

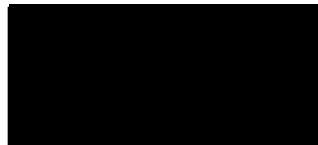
Guterl Steel

Lot #: F1H190431



Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.



Project Manager

August 31, 2011

F1H190431

1 of 96

Case Narrative
LOT NUMBER: F1H190431

This report contains the analytical results for the 14 samples received under chain of custody by TestAmerica in St. Louis on August 19, 2011. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1237141**

The CCV recovery was outside the upper QC limit (greater than 20% D) for Vinyl acetate, Carbon Tetrachloride, 1,1,2,2-Tetrachloroethane, sec-Butylbenzene, Nonanal and 1,2-Dibromo-3-chloropropane indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit or were not target analytes in the associated samples.

The CCV recoveries are outside the lower QC limit (greater than 20% D) for Naphthalene indicating a potential low bias for those analytes in the samples associated with this CCV. This analyte is not a target analytes in the associated samples.

The LCS recovery for 1,1,2,2-Tetrachloroethane is outside the upper QC limit, indicating a potential positive bias for that analytes. This analyte was not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.

The MS and MSD recoveries for 1,1,2,2-Tetrachloroethane are outside the upper QC limit, indicating a potential positive bias for that analytes. These analytes were not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.

The MSD recovery for 1,1,1-Trichloroethane, 1,2-Dichloroethene and 1,2-Dichloroethene (total) are outside the established QC limits. The RPD is within method acceptance criteria indicating matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1H190431 (7): A04DMW710DD0001

F1H190431 (8): A04DFB710DD0001

F1H190431 (9): A04DMW712DD0001

F1H190431 (10): A04BMW707DD0001

F1H190431 (14): TRIP BLANK #3

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1234136**

The MS and MSD recoveries for calcium and sodium are outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H190431 (1): A04DMW710DD0001 DISSOLVED
 F1H190431 (2): A04DFB710DD0001 DISSOLVED
 F1H190431 (3): A04DMW712DD0001 DISSOLVED
 F1H190431 (4): A04AMW610D0001 DISSOLVED
 F1H190431 (5): A04AMW200001 DISSOLVED
 F1H190431 (6): A04AM2100001 DISSOLVED
 F1H190431 (7): A04DMW710DD0001
 F1H190431 (8): A04DFB710DD0001
 F1H190431 (9): A04DMW712DD0001
 F1H190431 (11): A04AMW610D0001
 F1H190431 (12): A04AMW200001
 F1H190431 (13): A04AMW210001

Chloride (MCAWW 300.0A)**Batch: 1231100**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H190431 (7): A04DMW710DD0001
 F1H190431 (9): A04DMW712DD0001
 F1H190431 (11): A04AMW610D0001
 F1H190431 (12): A04AMW200001
 F1H190431 (13): A04AMW210001

Sulfate (MCAWW 300.0A)**Batch: 1231105**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H190431 (7): A04DMW710DD0001
 F1H190431 (9): A04DMW712DD0001
 F1H190431 (11): A04AMW610D0001
 F1H190431 (12): A04AMW200001
 F1H190431 (13): A04AMW210001

Nitrate (MCAWW 300.0A)**Batch: 1231102**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H190431 (12): A04AMW200001

Nitrite (MCAWW 300.0A)**Batch: 1231103**

The following samples were reported ND at dilution for Nitrite, due to high concentrations of Chloride, which masked the retention time for Nitrite in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H190431 (9): A04DMW712DD0001
F1H190431 (11): A04AMW610D0001
F1H190431 (12): A04AMW200001
F1H190431 (13): A04AMW210001

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H190431 (7): A04DMW710DD0001
F1H190431 (8): A04DFB710DD0001
F1H190431 (9): A04DMW712DD0001
F1H190431 (11): A04AMW610D0001
F1H190431 (12): A04AMW200001
F1H190431 (13): A04AMW210001

Orthophosphate (MCAWW 033.0A)**Batch: 1231104**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries Ortho Phos in batch are attributed to matrix interference.

Affected Samples:

F1H190431 (7): A04DMW710DD0001
F1H190431 (8): A04DFB710DD0001
F1H190431 (9): A04DMW712DD0001
F1H190431 (11): A04AMW610D0001
F1H190431 (12): A04AMW200001
F1H190431 (13): A04AMW210001

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample provided to perform the sample duplicate, an LCS duplicate was used instead.

Affected Samples:

F1H190431 (1): A04DMW710DD0001 DISSOLVED
F1H190431 (2): A04DFB710DD0001 DISSOLVED
F1H190431 (3): A04DMW712DD0001 DISSOLVED
F1H190431 (4): A04AMW610D0001 DISSOLVED
F1H190431 (5): A04AMW200001 DISSOLVED
F1H190431 (6): A04AM2100001 DISSOLVED
F1H190431 (7): A04DMW710DD0001
F1H190431 (8): A04DFB710DD0001
F1H190431 (9): A04DMW712DD0001
F1H190431 (11): A04AMW610D0001
F1H190431 (12): A04AMW200001
F1H190431 (13): A04AMW210001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H190431

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F1H190431**

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT</u>	<u>SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
MLT39	001	A04DMW710DD0001	DISSOLVED	08/18/11	08:25
MLT4E	002	A04DFB710DD0001	DISSOLVED	08/18/11	08:50
MLT4H	003	A04DMW712DD0001	DISSOLVED	08/18/11	09:35
MLT4K	004	A04AMW610D0001	DISSOLVED	08/18/11	11:10
MLT4V	005	A04AMW200001	DISSOLVED	08/18/11	12:05
MLT46	006	A04AM2100001	DISSOLVED	08/18/11	12:45
MLT47	007	A04DMW710DD0001		08/18/11	08:25
MLT5A	008	A04DFB710DD0001		08/18/11	08:50
MLT5D	009	A04DMW712DD0001		08/18/11	09:35
MLT5F	010	A04BMW707DD0001		08/18/11	10:30
MLT5H	011	A04AMW610D0001		08/18/11	11:10
MLT54	012	A04AMW200001		08/18/11	12:05
MLT6E	013	A04AMW210001		08/18/11	12:45
MLT6H	014	TRIP BLANK #3		08/18/11	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-001

Matrix.....: WATER

Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	67.0	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT391A3
		Dilution Factor: 1		Analysis Time...: 03:50		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AD
		Dilution Factor: 1		Analysis Time...: 20:21		
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLT391AE
		Dilution Factor: 1		Analysis Time...: 20:21		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AC
		Dilution Factor: 1		Analysis Time...: 20:21		
Barium	51.0	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AF
		Dilution Factor: 1		Analysis Time...: 20:21		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AG
		Dilution Factor: 1		Analysis Time...: 20:21		
Calcium	203000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT391AH
		Dilution Factor: 10		Analysis Time...: 19:30		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AJ
		Dilution Factor: 1		Analysis Time...: 20:21		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AK
		Dilution Factor: 1		Analysis Time...: 20:21		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AL
		Dilution Factor: 1		Analysis Time...: 20:21		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AM
		Dilution Factor: 1		Analysis Time...: 20:21		
Iron	167	100	ug/L	SW846 6010C	08/22-08/26/11	MLT391AN
		Dilution Factor: 1		Analysis Time...: 17:36		
Magnesium	34100	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT391AP
		Dilution Factor: 1		Analysis Time...: 17:36		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	26.0	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AQ
		Dilution Factor: 1		Analysis Time...: 20:21		
Sodium	214000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT391AR
		Dilution Factor: 10		Analysis Time...: 19:30		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AT
		Dilution Factor: 1		Analysis Time...: 20:21		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AU
		Dilution Factor: 1		Analysis Time...: 20:21		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AV
		Dilution Factor: 1		Analysis Time...: 20:21		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391AW
		Dilution Factor: 1		Analysis Time...: 20:21		
Strontium	1130	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT391AX
		Dilution Factor: 10		Analysis Time...: 19:30		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT391A0
		Dilution Factor: 1		Analysis Time...: 14:48		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391A1
		Dilution Factor: 1		Analysis Time...: 20:21		
Zinc	12.4 J	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT391A2
		Dilution Factor: 1		Analysis Time...: 20:21		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-002

Matrix.....: WATER

Date Sampled...: 08/18/11 08:50 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	0.25 J	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT4E1AE
		Dilution Factor: 1		Analysis Time...: 04:16		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AJ
		Dilution Factor: 1		Analysis Time...: 20:46		
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AK
		Dilution Factor: 1		Analysis Time...: 20:46		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AH
		Dilution Factor: 1		Analysis Time...: 20:46		
Barium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AL
		Dilution Factor: 1		Analysis Time...: 20:46		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AM
		Dilution Factor: 1		Analysis Time...: 20:46		
Calcium	256 J	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4E1AN
		Dilution Factor: 1		Analysis Time...: 18:02		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AP
		Dilution Factor: 1		Analysis Time...: 20:46		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AQ
		Dilution Factor: 1		Analysis Time...: 20:46		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AR
		Dilution Factor: 1		Analysis Time...: 20:46		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AT
		Dilution Factor: 1		Analysis Time...: 20:46		
Iron	ND	100	ug/L	SW846 6010C	08/22-08/26/11	MLT4E1AU
		Dilution Factor: 1		Analysis Time...: 18:02		
Magnesium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4E1AV
		Dilution Factor: 1		Analysis Time...: 18:02		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AW
		Dilution Factor: 1		Analysis Time...: 20:46		
Sodium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4E1AX
		Dilution Factor: 1		Analysis Time...: 18:02		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1A0
		Dilution Factor: 1		Analysis Time...: 20:46		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1A1
		Dilution Factor: 1		Analysis Time...: 20:46		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1A2
		Dilution Factor: 1		Analysis Time...: 20:46		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1A3
		Dilution Factor: 1		Analysis Time...: 20:46		
Strontium	0.75 J	5.0	ug/L	SW846 6010C	08/22-08/26/11	MLT4E1A4
		Dilution Factor: 1		Analysis Time...: 18:02		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT4E1AA
		Dilution Factor: 1		Analysis Time...: 15:27		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AC
		Dilution Factor: 1		Analysis Time...: 20:46		
Zinc	10.5 J	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4E1AD
		Dilution Factor: 1		Analysis Time...: 20:46		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-003

Matrix.....: WATER

Date Sampled...: 08/18/11 09:35 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	38.8	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT4H1AE
		Dilution Factor: 1		Analysis Time...: 04:30		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AJ
		Dilution Factor: 1		Analysis Time...: 20:59		
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AK
		Dilution Factor: 1		Analysis Time...: 20:59		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AH
		Dilution Factor: 1		Analysis Time...: 20:59		
Barium	60.8	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AL
		Dilution Factor: 1		Analysis Time...: 20:59		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AM
		Dilution Factor: 1		Analysis Time...: 20:59		
Calcium	166000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT4H1AN
		Dilution Factor: 10		Analysis Time...: 20:20		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AP
		Dilution Factor: 1		Analysis Time...: 20:59		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AQ
		Dilution Factor: 1		Analysis Time...: 20:59		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AR
		Dilution Factor: 1		Analysis Time...: 20:59		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AT
		Dilution Factor: 1		Analysis Time...: 20:59		
Iron	43.8 J	100	ug/L	SW846 6010C	08/22-08/26/11	MLT4H1AU
		Dilution Factor: 1		Analysis Time...: 18:14		
Magnesium	47800	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4H1AV
		Dilution Factor: 1		Analysis Time...: 18:14		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	9.7 J	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AW
		Dilution Factor: 1		Analysis Time...: 20:59		
Sodium	276000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT4H1AX
		Dilution Factor: 10		Analysis Time...: 20:20		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1A0
		Dilution Factor: 1		Analysis Time...: 20:59		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1A1
		Dilution Factor: 1		Analysis Time...: 20:59		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1A2
		Dilution Factor: 1		Analysis Time...: 20:59		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1A3
		Dilution Factor: 1		Analysis Time...: 20:59		
Strontium	878	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT4H1A4
		Dilution Factor: 10		Analysis Time...: 20:20		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT4H1AA
		Dilution Factor: 1		Analysis Time...: 15:33		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AC
		Dilution Factor: 1		Analysis Time...: 20:59		
Zinc	79.3	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4H1AD
		Dilution Factor: 1		Analysis Time...: 20:59		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW610D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-004

Matrix.....: WATER

Date Sampled...: 08/18/11 11:10 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	10.6	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT4K1AE
		Dilution Factor: 1		Analysis Time...: 04:36		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AJ
		Dilution Factor: 1		Analysis Time...: 21:06		
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AK
		Dilution Factor: 1		Analysis Time...: 21:06		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AH
		Dilution Factor: 1		Analysis Time...: 21:06		
Barium	19.1 J	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AL
		Dilution Factor: 1		Analysis Time...: 21:06		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AM
		Dilution Factor: 1		Analysis Time...: 21:06		
Calcium	84600	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT4K1AN
		Dilution Factor: 10		Analysis Time...: 20:26		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AP
		Dilution Factor: 1		Analysis Time...: 21:06		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AQ
		Dilution Factor: 1		Analysis Time...: 21:06		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AR
		Dilution Factor: 1		Analysis Time...: 21:06		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AT
		Dilution Factor: 1		Analysis Time...: 21:06		
Iron	74.7 J	100	ug/L	SW846 6010C	08/22-08/26/11	MLT4K1AU
		Dilution Factor: 1		Analysis Time...: 18:20		
Magnesium	32000	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4K1AV
		Dilution Factor: 1		Analysis Time...: 18:20		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW610D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	76.3	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AW
		Dilution Factor: 1		Analysis Time...: 21:06		
Sodium	119000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT4K1AX
		Dilution Factor: 10		Analysis Time...: 20:26		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1A0
		Dilution Factor: 1		Analysis Time...: 21:06		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1A1
		Dilution Factor: 1		Analysis Time...: 21:06		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1A2
		Dilution Factor: 1		Analysis Time...: 21:06		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1A3
		Dilution Factor: 1		Analysis Time...: 21:06		
Strontium	488	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT4K1A4
		Dilution Factor: 10		Analysis Time...: 20:26		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT4K1AA
		Dilution Factor: 1		Analysis Time...: 15:46		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AC
		Dilution Factor: 1		Analysis Time...: 21:06		
Zinc	14.8 J	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4K1AD
		Dilution Factor: 1		Analysis Time...: 21:06		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW200001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-005

Matrix.....: WATER

Date Sampled...: 08/18/11 12:05 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	13.3	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT4V1AE
		Dilution Factor: 1		Analysis Time...: 04:56		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AJ
		Dilution Factor: 1		Analysis Time...: 21:25		
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AK
		Dilution Factor: 1		Analysis Time...: 21:25		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AH
		Dilution Factor: 1		Analysis Time...: 21:25		
Barium	57.4	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AL
		Dilution Factor: 1		Analysis Time...: 21:25		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AM
		Dilution Factor: 1		Analysis Time...: 21:25		
Calcium	91900	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT4V1AN
		Dilution Factor: 10		Analysis Time...: 20:33		
Cadmium	1.1 J	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AP
		Dilution Factor: 1		Analysis Time...: 21:25		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AQ
		Dilution Factor: 1		Analysis Time...: 21:25		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AR
		Dilution Factor: 1		Analysis Time...: 21:25		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AT
		Dilution Factor: 1		Analysis Time...: 21:25		
Iron	28.7 J	100	ug/L	SW846 6010C	08/22-08/26/11	MLT4V1AU
		Dilution Factor: 1		Analysis Time...: 18:39		
Magnesium	20300	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4V1AV
		Dilution Factor: 1		Analysis Time...: 18:39		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW200001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AW
		Dilution Factor: 1		Analysis Time...: 21:25		
Sodium	46200	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT4V1AX
		Dilution Factor: 1		Analysis Time...: 18:39		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1A0
		Dilution Factor: 1		Analysis Time...: 21:25		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1A1
		Dilution Factor: 1		Analysis Time...: 21:25		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1A2
		Dilution Factor: 1		Analysis Time...: 21:25		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1A3
		Dilution Factor: 1		Analysis Time...: 21:25		
Strontium	206	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT4V1A4
		Dilution Factor: 10		Analysis Time...: 20:33		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT4V1AA
		Dilution Factor: 1		Analysis Time...: 15:53		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AC
		Dilution Factor: 1		Analysis Time...: 21:25		
Zinc	251	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT4V1AD
		Dilution Factor: 1		Analysis Time...: 21:25		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AM2100001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-006

Matrix.....: WATER

Date Sampled...: 08/18/11 12:45 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	3.2	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT461AE
		Dilution Factor: 1		Analysis Time...: 05:03		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AJ
		Dilution Factor: 1		Analysis Time...: 21:31		
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLT461AK
		Dilution Factor: 1		Analysis Time...: 21:31		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AH
		Dilution Factor: 1		Analysis Time...: 21:31		
Barium	72.0	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AL
		Dilution Factor: 1		Analysis Time...: 21:31		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AM
		Dilution Factor: 1		Analysis Time...: 21:31		
Calcium	110000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT461AN
		Dilution Factor: 10		Analysis Time...: 20:39		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AP
		Dilution Factor: 1		Analysis Time...: 21:31		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AQ
		Dilution Factor: 1		Analysis Time...: 21:31		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AR
		Dilution Factor: 1		Analysis Time...: 21:31		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AT
		Dilution Factor: 1		Analysis Time...: 21:31		
Iron	ND	100	ug/L	SW846 6010C	08/22-08/26/11	MLT461AU
		Dilution Factor: 1		Analysis Time...: 18:46		
Magnesium	36500	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT461AV
		Dilution Factor: 1		Analysis Time...: 18:46		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AM2100001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H190431-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	5.1 J	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AW
		Dilution Factor: 1		Analysis Time...: 21:31		
Sodium	223000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT461AX
		Dilution Factor: 10		Analysis Time...: 20:39		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461A0
		Dilution Factor: 1		Analysis Time...: 21:31		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461A1
		Dilution Factor: 1		Analysis Time...: 21:31		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461A2
		Dilution Factor: 1		Analysis Time...: 21:31		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461A3
		Dilution Factor: 1		Analysis Time...: 21:31		
Strontium	608	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT461A4
		Dilution Factor: 10		Analysis Time...: 20:39		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT461AA
		Dilution Factor: 1		Analysis Time...: 15:59		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AC
		Dilution Factor: 1		Analysis Time...: 21:31		
Zinc	ND	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT461AD
		Dilution Factor: 1		Analysis Time...: 21:31		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001

GC/MS Volatiles

Lot-Sample #...: F1H190431-007 Work Order #...: MLT471AC Matrix.....: WATER
 Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11
 Prep Date.....: 08/24/11 Analysis Date...: 08/25/11
 Prep Batch #...: 1237141 Analysis Time...: 01:00
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	19	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	10	1.0	ug/L
1,2-Dichloroethene	29	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	13	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	8.4	1.0	ug/L
Vinyl chloride	0.86 J	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001

GC/MS Volatiles

Lot-Sample #...: F1H190431-007 Work Order #...: MLT471AC Matrix.....: WATER

<u>SURROGATE</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
Toluene-d8	114	(85 - 120)
Dibromofluoromethane	86	(85 - 115)
1,2-Dichloroethane-d4	85	(70 - 120)
4-Bromofluorobenzene	95	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001

TOTAL Metals

Lot-Sample #...: F1H190431-007

Matrix.....: WATER

Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	60.8	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT471A5
		Dilution Factor: 1		Analysis Time...: 05:10		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AF
		Dilution Factor: 1		Analysis Time...: 21:38		
Aluminum	346	200	ug/L	SW846 6010C	08/22-08/27/11	MLT471AG
		Dilution Factor: 1		Analysis Time...: 21:38		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AE
		Dilution Factor: 1		Analysis Time...: 21:38		
Barium	51.9	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AH
		Dilution Factor: 1		Analysis Time...: 21:38		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AJ
		Dilution Factor: 1		Analysis Time...: 21:38		
Calcium	195000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT471AK
		Dilution Factor: 10		Analysis Time...: 20:45		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AL
		Dilution Factor: 1		Analysis Time...: 21:38		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AM
		Dilution Factor: 1		Analysis Time...: 21:38		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AN
		Dilution Factor: 1		Analysis Time...: 21:38		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AP
		Dilution Factor: 1		Analysis Time...: 21:38		
Iron	300	100	ug/L	SW846 6010C	08/22-08/26/11	MLT471AQ
		Dilution Factor: 1		Analysis Time...: 18:52		
Magnesium	34000	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT471AR
		Dilution Factor: 1		Analysis Time...: 18:52		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001

TOTAL Metals

Lot-Sample #...: F1H190431-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	29.4	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AT
		Dilution Factor: 1		Analysis Time...: 21:38		
Sodium	198000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT471AU
		Dilution Factor: 10		Analysis Time...: 20:45		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AV
		Dilution Factor: 1		Analysis Time...: 21:38		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AW
		Dilution Factor: 1		Analysis Time...: 21:38		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471AX
		Dilution Factor: 1		Analysis Time...: 21:38		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471A0
		Dilution Factor: 1		Analysis Time...: 21:38		
Strontium	1120	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT471A1
		Dilution Factor: 10		Analysis Time...: 20:45		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT471A2
		Dilution Factor: 1		Analysis Time...: 16:05		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471A3
		Dilution Factor: 1		Analysis Time...: 21:38		
Zinc	11.3 J	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT471A4
		Dilution Factor: 1		Analysis Time...: 21:38		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001

General Chemistry

Lot-Sample #...: F1H190431-007 Work Order #...: MLT47 Matrix.....: WATER
 Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	352	20.0	mg/L	MCAWW 300.0A	08/19/11	1231100
		Dilution Factor: 100		Analysis Time...: 10:52		
Fluoride	0.97	0.10	mg/L	MCAWW 300.0A	08/19/11	1231101
		Dilution Factor: 1		Analysis Time...: 09:35		
Nitrate	0.028	0.020	mg/L	MCAWW 300.0A	08/19/11	1231102
		Dilution Factor: 1		Analysis Time...: 09:35		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/19/11	1231103
		Dilution Factor: 10		Analysis Time...: 10:37		
Phosphate as P, Ortho	0.28 B,J	0.50	mg/L	MCAWW 300.0A	08/19/11	1231104
		Dilution Factor: 1		Analysis Time...: 09:35		
Sulfate	263	50.0	mg/L	MCAWW 300.0A	08/19/11	1231105
		Dilution Factor: 100		Analysis Time...: 10:52		
Total Alkalinity	270	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1340	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001

GC/MS Volatiles

Lot-Sample #....: F1H190431-008 Work Order #....: MLT5A1AN Matrix.....: WATER
 Date Sampled....: 08/18/11 08:50 Date Received...: 08/19/11
 Prep Date.....: 08/24/11 Analysis Date...: 08/25/11
 Prep Batch #....: 1237141 Analysis Time...: 02:11
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	7.7	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	3.4 J	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.14 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001

GC/MS Volatiles

Lot-Sample #...: F1H190431-008 Work Order #...: MLT5A1AN Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Toluene-d8	114	(85 - 120)
Dibromofluoromethane	90	(85 - 115)
1,2-Dichloroethane-d4	91	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001

TOTAL Metals

Lot-Sample #...: F1H190431-008

Matrix.....: WATER

Date Sampled...: 08/18/11 08:50 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	ND	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT5A1AG
		Dilution Factor: 1		Analysis Time...: 05:16		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AR
		Dilution Factor: 1		Analysis Time...: 21:44		
Aluminum	87.8 J	200	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AT
		Dilution Factor: 1		Analysis Time...: 21:44		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AQ
		Dilution Factor: 1		Analysis Time...: 21:44		
Barium	25.0 J	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AU
		Dilution Factor: 1		Analysis Time...: 21:44		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AV
		Dilution Factor: 1		Analysis Time...: 21:44		
Calcium	1670	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT5A1AW
		Dilution Factor: 1		Analysis Time...: 18:58		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AX
		Dilution Factor: 1		Analysis Time...: 21:44		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A0
		Dilution Factor: 1		Analysis Time...: 21:44		
Chromium	4.5 J	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A1
		Dilution Factor: 1		Analysis Time...: 21:44		
Copper	791	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A2
		Dilution Factor: 1		Analysis Time...: 21:44		
Iron	150	100	ug/L	SW846 6010C	08/22-08/26/11	MLT5A1A3
		Dilution Factor: 1		Analysis Time...: 18:58		
Magnesium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT5A1A4
		Dilution Factor: 1		Analysis Time...: 18:58		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001

TOTAL Metals

Lot-Sample #...: F1H190431-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	45.2	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A5
		Dilution Factor: 1		Analysis Time...: 21:44		
Sodium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT5A1A6
		Dilution Factor: 1		Analysis Time...: 18:58		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A7
		Dilution Factor: 1		Analysis Time...: 21:44		
Lead	25.6	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A8
		Dilution Factor: 1		Analysis Time...: 21:44		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1A9
		Dilution Factor: 1		Analysis Time...: 21:44		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AA
		Dilution Factor: 1		Analysis Time...: 21:44		
Strontium	13.4	5.0	ug/L	SW846 6010C	08/22-08/26/11	MLT5A1AC
		Dilution Factor: 1		Analysis Time...: 18:58		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT5A1AD
		Dilution Factor: 1		Analysis Time...: 16:25		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AE
		Dilution Factor: 1		Analysis Time...: 21:44		
Zinc	683	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5A1AF
		Dilution Factor: 1		Analysis Time...: 21:44		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001

General Chemistry

Lot-Sample #...: F1H190431-008 Work Order #...: MLT5A Matrix.....: WATER
 Date Sampled...: 08/18/11 08:50 Date Received...: 08/19/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	0.41	0.20	mg/L	MCAWW 300.0A	08/20/11	1231100
		Dilution Factor: 1		Analysis Time...: 02:43		
Fluoride	ND	0.10	mg/L	MCAWW 300.0A	08/20/11	1231101
		Dilution Factor: 1		Analysis Time...: 02:43		
Nitrate	0.0069 B	0.020	mg/L	MCAWW 300.0A	08/20/11	1231102
		Dilution Factor: 1		Analysis Time...: 02:43		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	08/20/11	1231103
		Dilution Factor: 1		Analysis Time...: 02:43		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/20/11	1231104
		Dilution Factor: 1		Analysis Time...: 02:43		
Sulfate	0.30 B	0.50	mg/L	MCAWW 300.0A	08/20/11	1231105
		Dilution Factor: 1		Analysis Time...: 02:43		
Total Alkalinity	2.8 B	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	11.0	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001

GC/MS Volatiles

Lot-Sample #...: F1H190431-009 Work Order #...: MLT5D1A1 Matrix.....: WATER
 Date Sampled...: 08/18/11 09:35 Date Received...: 08/19/11
 Prep Date.....: 08/24/11 Analysis Date...: 08/25/11
 Prep Batch #...: 1237141 Analysis Time...: 02:34
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	5.7	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	3.5	1.0	ug/L
1,2-Dichloroethene	14	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	2.0	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	1.9	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	0.41 J	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.27 J	1.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001

GC/MS Volatiles

Lot-Sample #...: F1H190431-009 Work Order #...: MLT5D1A1 Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	114	(85 - 120)
Dibromofluoromethane	88	(85 - 115)
1,2-Dichloroethane-d4	88	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001

TOTAL Metals

Lot-Sample #...: F1H190431-009

Matrix.....: WATER

Date Sampled...: 08/18/11 09:35 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	38.7	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT5D1AT
		Dilution Factor: 1		Analysis Time...: 05:23		
Prep Batch #...: 1234136						
Zinc	84.4	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AR
		Dilution Factor: 1		Analysis Time...: 21:51		
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1A4
		Dilution Factor: 1		Analysis Time...: 21:51		
Aluminum	110 J	200	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1A5
		Dilution Factor: 1		Analysis Time...: 21:51		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1A3
		Dilution Factor: 1		Analysis Time...: 21:51		
Barium	62.4	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1A6
		Dilution Factor: 1		Analysis Time...: 21:51		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1A7
		Dilution Factor: 1		Analysis Time...: 21:51		
Calcium	169000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT5D1A8
		Dilution Factor: 10		Analysis Time...: 21:11		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1A9
		Dilution Factor: 1		Analysis Time...: 21:51		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AA
		Dilution Factor: 1		Analysis Time...: 21:51		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AC
		Dilution Factor: 1		Analysis Time...: 21:51		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AD
		Dilution Factor: 1		Analysis Time...: 21:51		
Iron	145	100	ug/L	SW846 6010C	08/22-08/26/11	MLT5D1AE
		Dilution Factor: 1		Analysis Time...: 19:05		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001

TOTAL Metals

Lot-Sample #...: F1H190431-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Magnesium	47600	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT5D1AF
		Dilution Factor: 1		Analysis Time...: 19:05		
Manganese	15.3	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AG
		Dilution Factor: 1		Analysis Time...: 21:51		
Sodium	279000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT5D1AH
		Dilution Factor: 10		Analysis Time...: 21:11		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AJ
		Dilution Factor: 1		Analysis Time...: 21:51		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AK
		Dilution Factor: 1		Analysis Time...: 21:51		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AL
		Dilution Factor: 1		Analysis Time...: 21:51		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AM
		Dilution Factor: 1		Analysis Time...: 21:51		
Strontium	887	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT5D1AN
		Dilution Factor: 10		Analysis Time...: 21:11		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT5D1AP
		Dilution Factor: 1		Analysis Time...: 16:31		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5D1AQ
		Dilution Factor: 1		Analysis Time...: 21:51		

NOTE(S) :

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001

General Chemistry

Lot-Sample #...: F1H190431-009 Work Order #...: MLT5D Matrix.....: WATER
 Date Sampled...: 08/18/11 09:35 Date Received...: 08/19/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	463	20.0	mg/L	MCAWW 300.0A	08/19/11	1231100
		Dilution Factor: 100		Analysis Time...: 11:54		
Fluoride	1.2	0.10	mg/L	MCAWW 300.0A	08/19/11	1231101
		Dilution Factor: 1		Analysis Time...: 11:07		
Nitrate	0.15	0.020	mg/L	MCAWW 300.0A	08/19/11	1231102
		Dilution Factor: 1		Analysis Time...: 11:07		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/19/11	1231103
		Dilution Factor: 10		Analysis Time...: 11:38		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/19/11	1231104
		Dilution Factor: 1		Analysis Time...: 11:07		
Sulfate	220	50.0	mg/L	MCAWW 300.0A	08/19/11	1231105
		Dilution Factor: 100		Analysis Time...: 11:54		
Total Alkalinity	321	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1490	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001

GC/MS Volatiles

Lot-Sample #....: F1H190431-010 Work Order #....: MLT5F1AA Matrix.....: WATER
 Date Sampled....: 08/18/11 10:30 Date Received...: 08/19/11
 Prep Date.....: 08/24/11 Analysis Date...: 08/25/11
 Prep Batch #....: 1237141 Analysis Time...: 02:58
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	17	2.0	ug/L
Benzene	4.0	1.0	ug/L
Bromodichloromethane	1.0	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	2.0	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	0.34 J	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	6.2	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	1.5	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	0.56 J	2.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	8.3	1.0	ug/L
1,1,1-Trichloroethane	2.4	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	9.8	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001

GC/MS Volatiles

Lot-Sample #...: F1H190431-010 Work Order #...: MLT5F1AA Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	112	(85 - 120)
Dibromofluoromethane	90	(85 - 115)
1,2-Dichloroethane-d4	90	(70 - 120)
4-Bromofluorobenzene	96	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW610D0001

TOTAL Metals

Lot-Sample #...: F1H190431-011

Matrix.....: WATER

Date Sampled...: 08/18/11 11:10 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	9.6	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT5H1AT
		Dilution Factor: 1		Analysis Time...: 05:30		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1A4
		Dilution Factor: 1		Analysis Time...: 21:57		
Aluminum	432	200	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1A5
		Dilution Factor: 1		Analysis Time...: 21:57		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1A3
		Dilution Factor: 1		Analysis Time...: 21:57		
Barium	17.6 J	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1A6
		Dilution Factor: 1		Analysis Time...: 21:57		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1A7
		Dilution Factor: 1		Analysis Time...: 21:57		
Calcium	101000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT5H1A8
		Dilution Factor: 10		Analysis Time...: 21:17		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1A9
		Dilution Factor: 1		Analysis Time...: 21:57		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AA
		Dilution Factor: 1		Analysis Time...: 21:57		
Chromium	5.8 J	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AC
		Dilution Factor: 1		Analysis Time...: 21:57		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AD
		Dilution Factor: 1		Analysis Time...: 21:57		
Iron	530	100	ug/L	SW846 6010C	08/22-08/26/11	MLT5H1AE
		Dilution Factor: 1		Analysis Time...: 19:11		
Magnesium	38900	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT5H1AF
		Dilution Factor: 1		Analysis Time...: 19:11		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW610D0001

TOTAL Metals

Lot-Sample #...: F1H190431-011

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	132	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AG
		Dilution Factor: 1		Analysis Time...: 21:57		
Sodium	125000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT5H1AH
		Dilution Factor: 10		Analysis Time...: 21:17		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AJ
		Dilution Factor: 1		Analysis Time...: 21:57		
Lead	5.5 J	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AK
		Dilution Factor: 1		Analysis Time...: 21:57		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AL
		Dilution Factor: 1		Analysis Time...: 21:57		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AM
		Dilution Factor: 1		Analysis Time...: 21:57		
Strontium	559	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT5H1AN
		Dilution Factor: 10		Analysis Time...: 21:17		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT5H1AP
		Dilution Factor: 1		Analysis Time...: 16:38		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AQ
		Dilution Factor: 1		Analysis Time...: 21:57		
Zinc	39.2	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT5H1AR
		Dilution Factor: 1		Analysis Time...: 21:57		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW610D0001

General Chemistry

Lot-Sample #...: F1H190431-011 Work Order #...: MLT5H Matrix.....: WATER
 Date Sampled...: 08/18/11 11:10 Date Received...: 08/19/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	99.2	20.0	mg/L	MCAWW 300.0A	08/19/11	1231100
		Dilution Factor: 100		Analysis Time...: 06:45		
Fluoride	0.66	0.10	mg/L	MCAWW 300.0A	08/19/11	1231101
		Dilution Factor: 1		Analysis Time...: 05:59		
Nitrate	0.64	0.020	mg/L	MCAWW 300.0A	08/19/11	1231102
		Dilution Factor: 1		Analysis Time...: 05:59		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/19/11	1231103
		Dilution Factor: 5		Analysis Time...: 06:14		
Phosphate as P, Ortho	0.16 B,J	0.50	mg/L	MCAWW 300.0A	08/19/11	1231104
		Dilution Factor: 1		Analysis Time...: 05:59		
Sulfate	90.3	5.0	mg/L	MCAWW 300.0A	08/19/11	1231105
		Dilution Factor: 10		Analysis Time...: 06:30		
Total Alkalinity	383	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	678	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW200001

TOTAL Metals

Lot-Sample #...: F1H190431-012

Matrix.....: WATER

Date Sampled...: 08/18/11 12:05 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	13.5	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT541A5
		Dilution Factor: 1		Analysis Time...: 05:36		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AF
		Dilution Factor: 1		Analysis Time...: 22:04		
Aluminum	369	200	ug/L	SW846 6010C	08/22-08/27/11	MLT541AG
		Dilution Factor: 1		Analysis Time...: 22:04		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AE
		Dilution Factor: 1		Analysis Time...: 22:04		
Barium	59.5	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AH
		Dilution Factor: 1		Analysis Time...: 22:04		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AJ
		Dilution Factor: 1		Analysis Time...: 22:04		
Calcium	91800	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT541AK
		Dilution Factor: 10		Analysis Time...: 21:23		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AL
		Dilution Factor: 1		Analysis Time...: 22:04		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AM
		Dilution Factor: 1		Analysis Time...: 22:04		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AN
		Dilution Factor: 1		Analysis Time...: 22:04		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AP
		Dilution Factor: 1		Analysis Time...: 22:04		
Iron	250	100	ug/L	SW846 6010C	08/22-08/26/11	MLT541AQ
		Dilution Factor: 1		Analysis Time...: 19:17		
Magnesium	20900	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT541AR
		Dilution Factor: 1		Analysis Time...: 19:17		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW200001

TOTAL Metals

Lot-Sample #...: F1H190431-012

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	22.5	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AT
		Dilution Factor: 1		Analysis Time...: 22:04		
Sodium	46500	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT541AU
		Dilution Factor: 1		Analysis Time...: 19:17		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AV
		Dilution Factor: 1		Analysis Time...: 22:04		
Lead	2.1 J	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AW
		Dilution Factor: 1		Analysis Time...: 22:04		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541AX
		Dilution Factor: 1		Analysis Time...: 22:04		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541A0
		Dilution Factor: 1		Analysis Time...: 22:04		
Strontium	195	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT541A1
		Dilution Factor: 10		Analysis Time...: 21:23		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT541A2
		Dilution Factor: 1		Analysis Time...: 16:44		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541A3
		Dilution Factor: 1		Analysis Time...: 22:04		
Zinc	265	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT541A4
		Dilution Factor: 1		Analysis Time...: 22:04		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW200001

General Chemistry

Lot-Sample #...: F1H190431-012 Work Order #...: MLT54 Matrix.....: WATER
 Date Sampled...: 08/18/11 12:05 Date Received...: 08/19/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	66.1	20.0	mg/L	MCAWW 300.0A	08/20/11	1231100
		Dilution Factor: 100		Analysis Time...: 12:55		
Fluoride	0.58	0.10	mg/L	MCAWW 300.0A	08/20/11	1231101
		Dilution Factor: 1		Analysis Time...: 12:09		
Nitrate	4.1	0.10	mg/L	MCAWW 300.0A	08/20/11	1231102
		Dilution Factor: 5		Analysis Time...: 12:25		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/20/11	1231103
		Dilution Factor: 5		Analysis Time...: 12:25		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/20/11	1231104
		Dilution Factor: 1		Analysis Time...: 12:09		
Sulfate	25.7	2.5	mg/L	MCAWW 300.0A	08/20/11	1231105
		Dilution Factor: 5		Analysis Time...: 12:25		
Total Alkalinity	270	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	461	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW210001

TOTAL Metals

Lot-Sample #...: F1H190431-013

Matrix.....: WATER

Date Sampled...: 08/18/11 12:45 Date Received...: 08/19/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1234135						
Uranium	3.1	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLT6E1AG
		Dilution Factor: 1		Analysis Time...: 05:43		
Prep Batch #...: 1234136						
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AQ
		Dilution Factor: 1		Analysis Time...: 22:10		
Aluminum	93.9 J	200	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AR
		Dilution Factor: 1		Analysis Time...: 22:10		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AP
		Dilution Factor: 1		Analysis Time...: 22:10		
Barium	72.0	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AT
		Dilution Factor: 1		Analysis Time...: 22:10		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AU
		Dilution Factor: 1		Analysis Time...: 22:10		
Calcium	80100	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT6E1AV
		Dilution Factor: 10		Analysis Time...: 21:29		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AW
		Dilution Factor: 1		Analysis Time...: 22:10		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AX
		Dilution Factor: 1		Analysis Time...: 22:10		
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1A0
		Dilution Factor: 1		Analysis Time...: 22:10		
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1A1
		Dilution Factor: 1		Analysis Time...: 22:10		
Iron	64.9 J	100	ug/L	SW846 6010C	08/22-08/26/11	MLT6E1A2
		Dilution Factor: 1		Analysis Time...: 19:23		
Magnesium	25500	1000	ug/L	SW846 6010C	08/22-08/26/11	MLT6E1A3
		Dilution Factor: 1		Analysis Time...: 19:23		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW210001

TOTAL Metals

Lot-Sample #...: F1H190431-013

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	4.3 J	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1A4
		Dilution Factor: 1		Analysis Time...: 22:10		
Sodium	207000	10000	ug/L	SW846 6010C	08/22-08/26/11	MLT6E1A5
		Dilution Factor: 10		Analysis Time...: 21:29		
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1A6
		Dilution Factor: 1		Analysis Time...: 22:10		
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1A7
		Dilution Factor: 1		Analysis Time...: 22:10		
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1A8
		Dilution Factor: 1		Analysis Time...: 22:10		
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AA
		Dilution Factor: 1		Analysis Time...: 22:10		
Strontium	177	50.0	ug/L	SW846 6010C	08/22-08/26/11	MLT6E1AC
		Dilution Factor: 10		Analysis Time...: 21:29		
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLT6E1AD
		Dilution Factor: 1		Analysis Time...: 16:51		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AE
		Dilution Factor: 1		Analysis Time...: 22:10		
Zinc	64.9	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLT6E1AF
		Dilution Factor: 1		Analysis Time...: 22:10		

NOTE(S) :

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW210001

General Chemistry

Lot-Sample #...: F1H190431-013 Work Order #...: MLT6E Matrix.....: WATER
 Date Sampled...: 08/18/11 12:45 Date Received...: 08/19/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	231	20.0	mg/L	MCAWW 300.0A	08/20/11	1231100
		Dilution Factor: 100		Analysis Time...: 02:28		
Fluoride	0.24	0.10	mg/L	MCAWW 300.0A	08/20/11	1231101
		Dilution Factor: 1		Analysis Time...: 01:42		
Nitrate	0.091	0.020	mg/L	MCAWW 300.0A	08/20/11	1231102
		Dilution Factor: 1		Analysis Time...: 01:42		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/20/11	1231103
		Dilution Factor: 10		Analysis Time...: 02:13		
Phosphate as P, Ortho	0.066 B,J	0.50	mg/L	MCAWW 300.0A	08/20/11	1231104
		Dilution Factor: 1		Analysis Time...: 01:42		
Sulfate	88.1	2.5	mg/L	MCAWW 300.0A	08/20/11	1231105
		Dilution Factor: 5		Analysis Time...: 01:57		
Total Alkalinity	377	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	913	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #3

GC/MS Volatiles

Lot-Sample #....: F1H190431-014 Work Order #....: MLT6H1AA Matrix.....: WATER
 Date Sampled....: 08/18/11 Date Received...: 08/19/11
 Prep Date.....: 08/24/11 Analysis Date...: 08/25/11
 Prep Batch #....: 1237141 Analysis Time...: 00:36
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	0.077 J	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #3

GC/MS Volatiles

Lot-Sample #....: F1H190431-014 Work Order #....: MLT6H1AA Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	116	(85 - 120)
Dibromofluoromethane	88	(85 - 115)
1,2-Dichloroethane-d4	86	(70 - 120)
4-Bromofluorobenzene	95	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H190431
 MB Lot-Sample #: F1H250000-141

Work Order #...: ML2TV1AA

Matrix.....: WATER

Analysis Date...: 08/25/11

Prep Date.....: 08/24/11

Analysis Time...: 00:13

Dilution Factor: 1

Prep Batch #...: 1237141

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	114	(85 - 120)
Dibromofluoromethane	90	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H190431

Work Order #...: ML2TV1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	90	(70 - 120)		
4-Bromofluorobenzene	93	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H220000-135 Prep Batch #...: 1234135						
Uranium	ND	1.0	ug/L	SW846 6020A	08/22-08/24/11	MLWFC1AA
		Dilution Factor: 1				
		Analysis Time...: 03:36				
MB Lot-Sample #: F1H220000-136 Prep Batch #...: 1234136						
Aluminum	ND	200	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AD
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Antimony	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AU
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AA
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Barium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AE
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AF
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AH
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Calcium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLWFE1AG
		Dilution Factor: 1				
		Analysis Time...: 17:24				
Chromium	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AK
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AJ
		Dilution Factor: 1				
		Analysis Time...: 20:08				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AL
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Iron	ND	100	ug/L	SW846 6010C	08/22-08/26/11	MLWFE1AM
		Dilution Factor: 1				
		Analysis Time...: 17:24				
Lead	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AT
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Magnesium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLWFE1AN
		Dilution Factor: 1				
		Analysis Time...: 17:24				
Manganese	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AP
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Nickel	ND	40.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AR
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Selenium	ND	15.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AV
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Silver	ND	10.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AC
		Dilution Factor: 1				
		Analysis Time...: 20:08				
Sodium	ND	1000	ug/L	SW846 6010C	08/22-08/26/11	MLWFE1AQ
		Dilution Factor: 1				
		Analysis Time...: 17:24				
Strontium	ND	5.0	ug/L	SW846 6010C	08/22-08/26/11	MLWFE1AW
		Dilution Factor: 1				
		Analysis Time...: 17:24				
Thallium	ND	20.0	ug/L	SW846 6010C	08/22-08/28/11	MLWFE1AX
		Dilution Factor: 1				
		Analysis Time...: 14:35				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1AO
		Dilution Factor: 1				
		Analysis Time...: 20:08				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Zinc	ND	20.0	ug/L	SW846 6010C	08/22-08/27/11	MLWFE1A1
		Dilution Factor: 1				
		Analysis Time...: 20:08				

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H190431

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: MLX571AA 0.20 Dilution Factor: 1 Analysis Time...: 01:06	mg/L	MB Lot-Sample #: F1H190000-100 MCAWW 300.0A	08/19/11	1231100
Fluoride	ND	Work Order #: MLX581AA 0.10 Dilution Factor: 1 Analysis Time...: 01:06	mg/L	MB Lot-Sample #: F1H190000-101 MCAWW 300.0A	08/19/11	1231101
Nitrate	ND	Work Order #: MLX6A1AA 0.020 Dilution Factor: 1 Analysis Time...: 01:06	mg/L	MB Lot-Sample #: F1H190000-102 MCAWW 300.0A	08/19/11	1231102
Nitrite	ND	Work Order #: MLX6F1AA 0.020 Dilution Factor: 1 Analysis Time...: 01:06	mg/L	MB Lot-Sample #: F1H190000-103 MCAWW 300.0A	08/19/11	1231103
Phosphate as P, Ortho	0.20 B	Work Order #: MLX6H1AA 0.50 Dilution Factor: 1 Analysis Time...: 01:06	mg/L	MB Lot-Sample #: F1H190000-104 MCAWW 300.0A	08/19/11	1231104
Sulfate	ND	Work Order #: MLX6J1AA 0.50 Dilution Factor: 1 Analysis Time...: 01:06	mg/L	MB Lot-Sample #: F1H190000-105 MCAWW 300.0A	08/19/11	1231105
Total Alkalinity	ND	Work Order #: ML3DL1AA 5.0 Dilution Factor: 1 Analysis Time...: 00:00	mg/L	MB Lot-Sample #: F1H260000-032 MCAWW 310.1	08/26/11	1238032
Total Dissolved Solids	ND	Work Order #: ML0CP1AA 10.0 Dilution Factor: 1 Analysis Time...: 00:00	mg/L	MB Lot-Sample #: F1H240000-026 MCAWW 160.1	08/24-08/25/11	1236026

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result, Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H190431 Work Order #...: ML2TV1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H250000-141
 Prep Date.....: 08/24/11 Analysis Date...: 08/24/11
 Prep Batch #...: 1237141 Analysis Time...: 22:38
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chlorobenzene	98	(80 - 120)	SW846 8260B
Bromoform	78	(70 - 130)	SW846 8260B
Ethylbenzene	102	(75 - 125)	SW846 8260B
Styrene	103	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	408 a	(65 - 130)	SW846 8260B
Tetrachloroethene	84	(45 - 150)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 120)	SW846 8260B
cis-1,3-Dichloropropene	81	(70 - 130)	SW846 8260B
Dibromochloromethane	93	(60 - 135)	SW846 8260B
Vinyl chloride	98	(50 - 145)	SW846 8260B
Bromomethane	97	(30 - 145)	SW846 8260B
Chloroethane	102	(60 - 135)	SW846 8260B
Acetone	65	(40 - 140)	SW846 8260B
1,1-Dichloroethene	103	(70 - 130)	SW846 8260B
Methylene chloride	91	(55 - 140)	SW846 8260B
Carbon disulfide	105	(35 - 160)	SW846 8260B
1,1-Dichloroethane	102	(70 - 135)	SW846 8260B
2-Butanone	83	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	97	(85 - 115)	SW846 8260B
Chloroform	97	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	107	(65 - 130)	SW846 8260B
Carbon tetrachloride	115	(65 - 140)	SW846 8260B
1,2-Dichloroethane	85	(70 - 130)	SW846 8260B
Benzene	98	(80 - 120)	SW846 8260B
Trichloroethene	87	(70 - 125)	SW846 8260B
1,2-Dichloropropane	91	(75 - 125)	SW846 8260B
Bromodichloromethane	83	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	85	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	102	(55 - 140)	SW846 8260B
Toluene	100	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	99	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	97	(75 - 125)	SW846 8260B
2-Hexanone	83	(55 - 130)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H190431 Work Order #...: ML2TV1AC Matrix.....: WATER
LCS Lot-Sample#: F1H250000-141

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
4-Methyl-2-pentanone	83	(60 - 135)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	102	(85 - 115)
1,2-Dichloroethane-d4	93	(70 - 120)
4-Bromofluorobenzene	95	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H220000-135 Prep Batch #... : 1234135					
Uranium	107	(80 - 120)	SW846 6020A	08/22-08/24/11	MLWFC1AC
		Dilution Factor: 1	Analysis Time...: 03:43		
LCS Lot-Sample#: F1H220000-136 Prep Batch #... : 1234136					
Arsenic	105	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A2
		Dilution Factor: 1	Analysis Time...: 20:14		
Silver	94	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A3
		Dilution Factor: 1	Analysis Time...: 20:14		
Aluminum	109	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A4
		Dilution Factor: 1	Analysis Time...: 20:14		
Barium	108	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A5
		Dilution Factor: 1	Analysis Time...: 20:14		
Beryllium	116	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A6
		Dilution Factor: 1	Analysis Time...: 20:14		
Calcium	105	(80 - 120)	SW846 6010C	08/22-08/26/11	MLWFE1A7
		Dilution Factor: 1	Analysis Time...: 17:30		
Cadmium	107	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A8
		Dilution Factor: 1	Analysis Time...: 20:14		
Cobalt	104	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1A9
		Dilution Factor: 1	Analysis Time...: 20:14		
Chromium	104	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CA
		Dilution Factor: 1	Analysis Time...: 20:14		
Copper	104	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CC
		Dilution Factor: 1	Analysis Time...: 20:14		
Iron	106	(80 - 120)	SW846 6010C	08/22-08/26/11	MLWFE1CD
		Dilution Factor: 1	Analysis Time...: 17:30		
Magnesium	100	(80 - 120)	SW846 6010C	08/22-08/26/11	MLWFE1CE
		Dilution Factor: 1	Analysis Time...: 17:30		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	108	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CF
		Dilution Factor: 1		Analysis Time...: 20:14	
Sodium	103	(80 - 120)	SW846 6010C	08/22-08/26/11	MLWFE1CG
		Dilution Factor: 1		Analysis Time...: 17:30	
Nickel	104	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CH
		Dilution Factor: 1		Analysis Time...: 20:14	
Lead	103	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CJ
		Dilution Factor: 1		Analysis Time...: 20:14	
Antimony	107	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CK
		Dilution Factor: 1		Analysis Time...: 20:14	
Selenium	106	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CL
		Dilution Factor: 1		Analysis Time...: 20:14	
Strontium	100	(80 - 120)	SW846 6010C	08/22-08/26/11	MLWFE1CM
		Dilution Factor: 1		Analysis Time...: 17:30	
Thallium	100	(80 - 120)	SW846 6010C	08/22-08/28/11	MLWFE1CN
		Dilution Factor: 1		Analysis Time...: 14:42	
Vanadium	105	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CP
		Dilution Factor: 1		Analysis Time...: 20:14	
Zinc	113	(80 - 120)	SW846 6010C	08/22-08/27/11	MLWFE1CQ
		Dilution Factor: 1		Analysis Time...: 20:14	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H190431

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	97	(90 - 110)	Work Order #: MLX571AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H190000-100 08/19/11 Analysis Time...: 12:51	1231100
Fluoride	99	(90 - 110)	Work Order #: MLX581AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H190000-101 08/19/11 Analysis Time...: 12:51	1231101
Nitrate	99	(90 - 110)	Work Order #: MLX6A1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H190000-102 08/19/11 Analysis Time...: 12:51	1231102
Nitrite	100	(90 - 110)	Work Order #: MLX6F1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H190000-103 08/19/11 Analysis Time...: 12:51	1231103
Phosphate as P, Ortho	101	(90 - 110)	Work Order #: MLX6H1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H190000-104 08/19/11 Analysis Time...: 12:51	1231104
Sulfate	97	(90 - 110)	Work Order #: MLX6J1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H190000-105 08/19/11 Analysis Time...: 12:51	1231105
Total Alkalinity	94	(90 - 110)	Work Order #: ML3DL1AC MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H260000-032 08/26/11 Analysis Time...: 00:00	1238032
Total Alkalinity	94	(90 - 110)	Work Order #: ML3DL1AD MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H260000-032 08/26/11 Analysis Time...: 00:00	1238032
Total Dissolved Solids	98	(90 - 113)	Work Order #: ML0CP1AC MCAWW 160.1 Dilution Factor: 1	LCS Lot-Sample#: F1H240000-026 08/24-08/25/11 Analysis Time...: 00:00	1236026

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H190431 Work Order #...: MLT471CG-MS Matrix.....: WATER
 MS Lot-Sample #: F1H190431-007 MLT471CH-MSD
 Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11
 Prep Date.....: 08/24/11 Analysis Date...: 08/25/11
 Prep Batch #...: 1237141 Analysis Time...: 01:24
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	82	(70 - 130)			SW846 8260B
	88	(70 - 130)	6.3	(0-20)	SW846 8260B
Dibromochloromethane	91	(60 - 135)			SW846 8260B
	96	(60 - 135)	5.6	(0-20)	SW846 8260B
Vinyl chloride	89	(50 - 145)			SW846 8260B
	86	(50 - 145)	3.3	(0-20)	SW846 8260B
Bromomethane	86	(30 - 145)			SW846 8260B
	89	(30 - 145)	3.9	(0-20)	SW846 8260B
Chloroethane	91	(60 - 135)			SW846 8260B
	91	(60 - 135)	0.51	(0-20)	SW846 8260B
Acetone	56	(40 - 140)			SW846 8260B
	65	(40 - 140)	15	(0-20)	SW846 8260B
1,1-Dichloroethene	106	(70 - 130)			SW846 8260B
	114	(70 - 130)	4.0	(0-20)	SW846 8260B
Methylene chloride	81	(55 - 140)			SW846 8260B
	88	(55 - 140)	8.0	(0-20)	SW846 8260B
Carbon disulfide	91	(35 - 160)			SW846 8260B
	96	(35 - 160)	4.9	(0-20)	SW846 8260B
1,1-Dichloroethane	125	(70 - 135)			SW846 8260B
	142 a	(70 - 135)	5.2	(0-20)	SW846 8260B
2-Butanone	86	(30 - 150)			SW846 8260B
	86	(30 - 150)	0.17	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	108	(85 - 115)			SW846 8260B
	124 a	(85 - 115)	6.0	(0-20)	SW846 8260B
Chloroform	101	(65 - 135)			SW846 8260B
	99	(65 - 135)	2.2	(0-20)	SW846 8260B
1,1,1-Trichloroethane	119	(65 - 130)			SW846 8260B
	136 a	(65 - 130)	6.7	(0-20)	SW846 8260B
Carbon tetrachloride	108	(65 - 140)			SW846 8260B
	108	(65 - 140)	0.83	(0-20)	SW846 8260B
1,2-Dichloroethane	87	(70 - 130)			SW846 8260B
	91	(70 - 130)	4.5	(0-20)	SW846 8260B
Benzene	98	(80 - 120)			SW846 8260B
	102	(80 - 120)	4.0	(0-20)	SW846 8260B
Trichloroethene	109	(70 - 125)			SW846 8260B
	111	(70 - 125)	1.1	(0-20)	SW846 8260B
1,2-Dichloropropane	101	(75 - 125)			SW846 8260B
	100	(75 - 125)	0.49	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H190431 Work Order #...: MLT471CG-MS Matrix.....: WATER
 MS Lot-Sample #: F1H190431-007 MLT471CH-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	87	(75 - 120)			SW846 8260B
	86	(75 - 120)	0.62	(0-20)	SW846 8260B
1,1,2-Trichloroethane	86	(75 - 125)			SW846 8260B
	87	(75 - 125)	1.3	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	96	(55 - 140)			SW846 8260B
	101	(55 - 140)	5.0	(0-20)	SW846 8260B
Toluene	104	(75 - 120)			SW846 8260B
	102	(75 - 120)	1.3	(0-20)	SW846 8260B
1,3-Dichlorobenzene	104	(75 - 125)			SW846 8260B
	104	(75 - 125)	0.48	(0-20)	SW846 8260B
1,4-Dichlorobenzene	94	(75 - 125)			SW846 8260B
	101	(75 - 125)	7.4	(0-20)	SW846 8260B
2-Hexanone	85	(55 - 130)			SW846 8260B
	91	(55 - 130)	6.6	(0-20)	SW846 8260B
4-Methyl-2-pentanone	87	(60 - 135)			SW846 8260B
	88	(60 - 135)	1.9	(0-20)	SW846 8260B
Chlorobenzene	103	(80 - 120)			SW846 8260B
	101	(80 - 120)	2.5	(0-20)	SW846 8260B
Bromoform	78	(70 - 130)			SW846 8260B
	83	(70 - 130)	5.0	(0-20)	SW846 8260B
Ethylbenzene	108	(75 - 125)			SW846 8260B
	103	(75 - 125)	5.1	(0-20)	SW846 8260B
Styrene	104	(65 - 135)			SW846 8260B
	108	(65 - 135)	4.6	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	412 a	(65 - 130)			SW846 8260B
	437 a	(65 - 130)	5.9	(0-20)	SW846 8260B
Tetrachloroethene	59	(45 - 150)			SW846 8260B
	57	(45 - 150)	3.0	(0-20)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 120)			SW846 8260B
	100	(70 - 120)	5.3	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(85 - 120)
	104	(85 - 120)
Dibromofluoromethane	98	(85 - 115)
	100	(85 - 115)
1,2-Dichloroethane-d4	91	(70 - 120)
	94	(70 - 120)
4-Bromofluorobenzene	94	(75 - 120)
	95	(75 - 120)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H190431 Work Order #...: MLT471CG-MS Matrix.....: WATER
MS Lot-Sample #: F1H190431-007 MLT471CH-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
------------------	-----------------------------	----------------------------

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H190431-001 Prep Batch #...: 1234135						
Uranium	105	(80 - 120)		SW846 6020A	08/22-08/24/11	MLT391A5
	102	(80 - 120)	2.9 (0-20)	SW846 6020A	08/22-08/24/11	MLT391A6
		Dilution Factor: 1				
		Analysis Time...: 04:03				
MS Lot-Sample #: F1H190431-001 Prep Batch #...: 1234136						
Aluminum	105	(80 - 120)		SW846 6010C	08/22-08/27/11	MLT391CC
	105	(80 - 120)	0.16 (0-20)	SW846 6010C	08/22-08/27/11	MLT391CD
		Dilution Factor: 1				
		Analysis Time...: 20:33				
Antimony	102	(80 - 120)		SW846 6010C	08/22-08/27/11	MLT391C9
	101	(80 - 120)	0.18 (0-20)	SW846 6010C	08/22-08/27/11	MLT391DA
		Dilution Factor: 1				
		Analysis Time...: 20:33				
Arsenic	102	(80 - 120)		SW846 6010C	08/22-08/27/11	MLT391A7
	102	(80 - 120)	0.24 (0-20)	SW846 6010C	08/22-08/27/11	MLT391A8
		Dilution Factor: 1				
		Analysis Time...: 20:33				
Barium	103	(80 - 120)		SW846 6010C	08/22-08/27/11	MLT391CE
	103	(80 - 120)	0.10 (0-20)	SW846 6010C	08/22-08/27/11	MLT391CF
		Dilution Factor: 1				
		Analysis Time...: 20:33				
Beryllium	110	(80 - 120)		SW846 6010C	08/22-08/27/11	MLT391CG
	110	(80 - 120)	0.02 (0-20)	SW846 6010C	08/22-08/27/11	MLT391CH
		Dilution Factor: 1				
		Analysis Time...: 20:33				
Cadmium	98	(80 - 120)		SW846 6010C	08/22-08/27/11	MLT391CL
	98	(80 - 120)	0.09 (0-20)	SW846 6010C	08/22-08/27/11	MLT391CM
		Dilution Factor: 1				
		Analysis Time...: 20:33				
Calcium	41 N	(80 - 120)		SW846 6010C	08/22-08/26/11	MLT391CJ
	23 N	(80 - 120)	0.84 (0-20)	SW846 6010C	08/22-08/26/11	MLT391CK
		Dilution Factor: 10				
		Analysis Time...: 19:55				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	97	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391CQ
	97	(80 - 120)	0.09	(0-20)	SW846 6010C	08/22-08/27/11	MLT391CR
			Dilution Factor: 1				
			Analysis Time...: 20:33				
Cobalt	95	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391CN
	95	(80 - 120)	0.12	(0-20)	SW846 6010C	08/22-08/27/11	MLT391CP
			Dilution Factor: 1				
			Analysis Time...: 20:33				
Copper	99	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391CT
	99	(80 - 120)	0.30	(0-20)	SW846 6010C	08/22-08/27/11	MLT391CU
			Dilution Factor: 1				
			Analysis Time...: 20:33				
Iron	101	(80 - 120)			SW846 6010C	08/22-08/26/11	MLT391CV
	101	(80 - 120)	0.08	(0-20)	SW846 6010C	08/22-08/26/11	MLT391CW
			Dilution Factor: 1				
			Analysis Time...: 17:49				
Lead	94	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391C7
	94	(80 - 120)	0.48	(0-20)	SW846 6010C	08/22-08/27/11	MLT391C8
			Dilution Factor: 1				
			Analysis Time...: 20:33				
Magnesium	93	(80 - 120)			SW846 6010C	08/22-08/26/11	MLT391CX
	97	(80 - 120)	1.0	(0-20)	SW846 6010C	08/22-08/26/11	MLT391C0
			Dilution Factor: 1				
			Analysis Time...: 17:49				
Manganese	100	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391C1
	100	(80 - 120)	0.31	(0-20)	SW846 6010C	08/22-08/27/11	MLT391C2
			Dilution Factor: 1				
			Analysis Time...: 20:33				
Nickel	94	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391C5
	95	(80 - 120)	0.23	(0-20)	SW846 6010C	08/22-08/27/11	MLT391C6
			Dilution Factor: 1				
			Analysis Time...: 20:33				
Selenium	101	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391DC
	102	(80 - 120)	1.2	(0-20)	SW846 6010C	08/22-08/27/11	MLT391DD
			Dilution Factor: 1				
			Analysis Time...: 20:33				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H190431

Matrix.....: WATER

Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	91	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391A9
	90	(80 - 120)	0.40	(0-20)	SW846 6010C	08/22-08/27/11	MLT391CA
Dilution Factor: 1							
Analysis Time...: 20:33							
Sodium	33 N	(80 - 120)			SW846 6010C	08/22-08/26/11	MLT391C3
	16 N	(80 - 120)	0.76	(0-20)	SW846 6010C	08/22-08/26/11	MLT391C4
Dilution Factor: 10							
Analysis Time...: 19:55							
Strontium	94	(80 - 120)			SW846 6010C	08/22-08/26/11	MLT391DE
	92	(80 - 120)	0.80	(0-20)	SW846 6010C	08/22-08/26/11	MLT391DF
Dilution Factor: 10							
Analysis Time...: 19:55							
Thallium	92	(80 - 120)			SW846 6010C	08/22-08/28/11	MLT391DG
	92	(80 - 120)	0.78	(0-20)	SW846 6010C	08/22-08/28/11	MLT391DH
Dilution Factor: 1							
Analysis Time...: 15:14							
Vanadium	99	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391DJ
	99	(80 - 120)	0.04	(0-20)	SW846 6010C	08/22-08/27/11	MLT391DK
Dilution Factor: 1							
Analysis Time...: 20:33							
Zinc	107	(80 - 120)			SW846 6010C	08/22-08/27/11	MLT391DL
	108	(80 - 120)	0.36	(0-20)	SW846 6010C	08/22-08/27/11	MLT391DM
Dilution Factor: 1							
Analysis Time...: 20:33							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: F1H190431

Matrix.....: WATER

Date Sampled....: 08/18/11 11:10 Date Received...: 08/19/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	99	Work Order #....: MLT5H1CM (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H190431-011 08/19/11	1231100
		Dilution Factor: 100		Analysis Time...: 06:45	
Fluoride	97	Work Order #....: MLT5H1CP (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H190431-011 08/19/11	1231101
		Dilution Factor: 1		Analysis Time...: 05:59	
Nitrate	94	Work Order #....: MLT5H1CR (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H190431-011 08/19/11	1231102
		Dilution Factor: 1		Analysis Time...: 05:59	
Nitrite	76 N	Work Order #....: MLT5H1CU (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H190431-011 08/19/11	1231103
		Dilution Factor: 5		Analysis Time...: 06:14	
Phosphate as P, Ortho	61 N	Work Order #....: MLT5H1CW (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H190431-011 08/19/11	1231104
		Dilution Factor: 1		Analysis Time...: 05:59	
Sulfate	103	Work Order #....: MLT5H1C0 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H190431-011 08/19/11	1231105
		Dilution Factor: 10		Analysis Time...: 06:30	
Total Alkalinity	144 N	Work Order #....: MLXMN1EH (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H230464-002 08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H190431

Work Order #...: MLT5H-SMP
MLT5H-DUP

Matrix.....: WATER

Date Sampled...: 08/18/11 11:10 Date Received...: 08/19/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	99.2	97.0	mg/L	2.2	(0-20)	SD Lot-Sample #: F1H190431-011 MCAWW 300.0A Dilution Factor: 100 Analysis Time...: 06:45	08/19/11	1231100
Fluoride	0.66	0.64	mg/L	2.1	(0-20)	SD Lot-Sample #: F1H190431-011 MCAWW 300.0A Dilution Factor: 1 Analysis Time...: 05:59	08/19/11	1231101
Nitrate	0.64	0.62	mg/L	3.7	(0-20)	SD Lot-Sample #: F1H190431-011 MCAWW 300.0A Dilution Factor: 1 Analysis Time...: 05:59	08/19/11	1231102
Nitrite	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H190431-011 MCAWW 300.0A Dilution Factor: 5 Analysis Time...: 06:14	08/19/11	1231103
Phosphate as P, Ortho	0.16 B,J	0.079 B	mg/L	69	(0-20)	SD Lot-Sample #: F1H190431-011 MCAWW 300.0A Dilution Factor: 1 Analysis Time...: 05:59	08/19/11	1231104
Sulfate	90.3	90.5	mg/L	0.24	(0-20)	SD Lot-Sample #: F1H190431-011 MCAWW 300.0A Dilution Factor: 10 Analysis Time...: 06:30	08/19/11	1231105

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H190431

Work Order #...: MLT47-SMP
MLT47-DUP

Matrix.....: WATER

Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	1340	1380	mg/L	2.4	(0-0.0)	MCAWW 160.1	08/24-08/25/11	1236026
Dilution Factor: 1				Analysis Time.: 00:00				
SD Lot-Sample #:						F1H190431-007		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H190431

Work Order #...: MLXMN-SMP
MLXMN-DUP

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	382	388	mg/L	1.5	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 310.1	08/26/11	1238032
				Dilution Factor: 1	Analysis Time...: 00:00			

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H190431-001
 Work Order: MLT39
 Matrix: WATER

Date Collected: 08/18/11 0825
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 56
Uranium 234	21.0		2.0	0.1	0.06	08/23/11	08/29/11
Uranium 235/236	1.38		0.32	0.10	0.04	08/23/11	08/29/11
Uranium 238	21.3		2.1	0.1	0.07	08/23/11	08/29/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

70 of 96

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H190431-002
 Work Order: MLT4E
 Matrix: WATER

Date Collected: 08/18/11 0850
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Y1d % 84
Uranium 234	0.019	U	0.030	0.100	0.050	08/23/11	08/27/11
Uranium 235/236	0.011	U	0.021	0.100	0.028	08/23/11	08/27/11
Uranium 238	0.004	U	0.018	0.100	0.045	08/23/11	08/27/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H190431-003
Work Order: MLT4H
Matrix: WATER

Date Collected: 08/18/11 0935
Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 57
Uranium 234	14.0		1.4	0.1	0.08	08/23/11	08/27/11
Uranium 235/236	0.63		0.20	0.10	0.08	08/23/11	08/27/11
Uranium 238	12.4		1.3	0.1	0.06	08/23/11	08/27/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

72 of 96

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04AMW610D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H190431-004
 Work Order: MLT4K
 Matrix: WATER

Date Collected: 08/18/11 1110
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 81
Uranium 234	2.56		0.36	0.10	0.04	08/23/11	08/27/11
Uranium 235/236	0.130		0.075	0.100	0.046	08/23/11	08/27/11
Uranium 238	2.61		0.37	0.10	0.04	08/23/11	08/27/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

73 of 96

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04AMW200001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H190431-005
 Work Order: MLT4V
 Matrix: WATER

Date Collected: 08/18/11 1205
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 88
Uranium 234	3.89		0.49	0.10	0.05	08/23/11	08/27/11
Uranium 235/236	0.24		0.10	0.10	0.03	08/23/11	08/27/11
Uranium 238	3.82		0.48	0.10	0.02	08/23/11	08/27/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

74 of 96

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04AM2100001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H190431-006
 Work Order: MLT46
 Matrix: WATER

Date Collected: 08/18/11 1245
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 66
Uranium 234	1.03		0.23	0.10	0.05	08/23/11	08/27/11
Uranium 235/236	0.037	U	0.047	0.100	0.060	08/23/11	08/27/11
Uranium 238	0.93		0.21	0.10	0.03	08/23/11	08/27/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0001

Radiochemistry

Lab Sample ID: F1H190431-007

Date Collected: 08/18/11 0825

Work Order: MLT47

Date Received: 08/19/11 0910

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 62
Uranium 234	18.6		1.8	0.1	0.06	08/23/11	08/27/11
Uranium 235/236	1.02		0.25	0.10	0.06	08/23/11	08/27/11
Uranium 238	19.1		1.8	0.1	0.06	08/23/11	08/27/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

76 of 96

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DFB710DD0001

Radiochemistry

Lab Sample ID: F1H190431-008
 Work Order: MLT5A
 Matrix: WATER

Date Collected: 08/18/11 0850
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 74
Uranium 234	0.016	U	0.027	0.100	0.042	08/23/11	08/27/11
Uranium 235/236	0.012	U	0.023	0.100	0.031	08/23/11	08/27/11
Uranium 238	0.007	U	0.019	0.100	0.042	08/23/11	08/27/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW712DD0001

Radiochemistry

Lab Sample ID: F1H190431-009

Date Collected: 08/18/11 0935

Work Order: MLT5D

Date Received: 08/19/11 0910

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 55
Uranium 234	13.2		1.4	0.1	0.05	08/23/11	08/27/11
Uranium 235/236	0.59		0.19	0.10	0.07	08/23/11	08/27/11
Uranium 238	12.7		1.3	0.1	0.06	08/23/11	08/27/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

78 of 96

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW610D0001

Radiochemistry

Lab Sample ID: F1H190431-011
 Work Order: MLT5H
 Matrix: WATER

Date Collected: 08/18/11 1110
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 72
Uranium 234	2.54		0.37	0.10	0.03	08/23/11	08/27/11
Uranium 235/236	0.104		0.070	0.100	0.031	08/23/11	08/27/11
Uranium 238	2.66		0.39	0.10	0.03	08/23/11	08/27/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

79 of 96

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW200001

Radiochemistry

Lab Sample ID: F1H190431-012

Date Collected: 08/18/11 1205

Work Order: MLT54

Date Received: 08/19/11 0910

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 67
Uranium 234	4.50		0.56	0.10	0.03	08/23/11	08/27/11
Uranium 235/236	0.23		0.11	0.10	0.03	08/23/11	08/27/11
Uranium 238	4.27		0.54	0.10	0.03	08/23/11	08/27/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

80 of 96

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW210001

Radiochemistry

Lab Sample ID: F1H190431-013
 Work Order: MLT6E
 Matrix: WATER

Date Collected: 08/18/11 1245
 Date Received: 08/19/11 0910

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1235027	Yld % 76
Uranium 234	0.73		0.18	0.10	0.05	08/23/11	08/27/11
Uranium 235/236	0.058		0.052	0.100	0.031	08/23/11	08/27/11
Uranium 238	0.79		0.18	0.10	0.04	08/23/11	08/27/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H190431

81 of 96

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H190431
Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Lab Sample ID		
			(2 σ+/-)			Prep Date	Analysis Date	
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1235027	Yld %	80	FLH230000-027B
Uranium 234	0.025	U	0.034	0.100	0.053	08/23/11	08/29/11	
Uranium 235/236	-0.0026	U	0.0051	0.100	0.047	08/23/11	08/29/11	
Uranium 238	0.006	U	0.017	0.100	0.037	08/23/11	08/29/11	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H190431

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H230000-027C	
Uranium 234	3.26	2.86	0.39	85	88	(76 - 136)	
Spk 2	3.26	3.09	0.41	87	95	(76 - 136)	8 %RPD
Uranium 238	3.39	3.32	0.43	85	98	(76 - 134)	
Spk 2	3.39	3.39	0.43	87	100	(76 - 134)	2 %RPD
Batch #:		1235027	Analysis Date: 08/29/11				

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R299-300
 Date Received: 2011-08-19
 Analytical Due Date: 2011-08-26
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LQT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04DMW710DD0001 DISSOLVED			2011-08-18 / 825	MLT39	WATER
SAMPLE COMMENTS:						
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A04DFB710DD0001 DISSOLVED			2011-08-18 / 850	MLT4E	WATER
SAMPLE COMMENTS:						
MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R299-300

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-19

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-26

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 0020 for total uranium instead of 200.8

PB	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NI	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
MN	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AL	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CU	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CO	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CD	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AG	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
BE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
FE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
BA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
AS	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
UX	IS	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04DMW712DD0001 DISSOLVED			2011-08-18 / 935	MLT4H	WATER

SAMPLE COMMENTS:

CU	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
VX	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
TL	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SE	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SB	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
PB	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NI	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
MN	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
ZN	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CR	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CO	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CD	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
CA	IS	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06

F1H190431

CLIENT ANALYSIS SUMMARY

Storage Loc:

R299-300

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-19

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-26

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 8020 for total uranium instead of 200.8

BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A04AMW610D0001 DISSOLVED			2011-08-18 / 1110	MLT4K	WATER

SAMPLE COMMENTS:

NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R299-300

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-19

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-26

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
----	----	-----	---------------	------------------------------------	----	---	----	-------------------	---------	------------	----

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A04AMW200001 DISSOLVED			2011-08-18 / 1205	MLT4V	WATER

SAMPLE COMMENTS:

MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04AM2100001 DISSOLVED			2011-08-18 / 1245	MLT46	WATER

SAMPLE COMMENTS:

MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R299-300

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-19

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-26

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 14

Report Type: B
EDD Code: 00

Standard Report

DoD QSM 4.1 please use 6020 for total uranium instead of 200.0

SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	A04DMW710DD0001			2011-08-18 / 825	MLT47	WATER

SAMPLE COMMENTS:

MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R299-300,2-85

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-19

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-26

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 14

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV		RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW W	160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW W	300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW W	300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW W	300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW W	300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW W	300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW W	300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW W	310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
8	A04DFB710DD0001			2011-08-18 / 850	MLT5A	WATER
SAMPLE COMMENTS:						
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R299-300,2-85
 Date Received: 2011-08-19
 Analytical Due Date: 2011-08-26
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AG I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A04DMW712DD0001			2011-08-18 / 935	MLT5D	WATER
SAMPLE COMMENTS:						
MN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AS I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
ZN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
VX I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
TL I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SR I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
SB I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
PB I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NI I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
NA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
AL I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
FE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06
CU I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X PROT: A WRK LOC 06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Project Manager: LMF

Quote #: 89251

SDG:

Storage Loc:

R299-300,2-85

Project: Y40415

Guterl Steel

Date Received:

2011-08-19

PO#: 697886

Report to: [REDACTED]

Analytical Due Date:

2011-08-26

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Due Date:

2011-08-29

Report Type: B

Standard Report

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4 X	PROT: A	WRK LOC	06	
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX	ZV			RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I						
10	A04BMW707DD0001			2011-08-18 / 1030	MLT5F	WATER						
SAMPLE COMMENTS:												
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
11	A04AMW610D0001			2011-08-18 / 1110	MLT5H	WATER

SAMPLE COMMENTS:

MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4 X	PROT: A	WRK LOC	06	
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R299-300,2-85

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-19

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-26

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-08-29

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 14

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER
12	A04AMW200001			2011-08-18 / 1205	MLT54 WATER

SAMPLE COMMENTS:

MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H190431**CLIENT ANALYSIS SUMMARY**

Storage Loc: **R299-300,2-85**
 Date Received: 2011-08-19
 Analytical Due Date: 2011-08-26
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS In LOT: 14

DOD QSM 4.1 please use 6020 for total uranium instead of 200.8

CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I\$	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			RAD SCREEN WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
13	A04AMW210001			2011-08-18 / 1245	MLT6E	WATER

SAMPLE COMMENTS:

VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H190431

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc: R299-300,2-85
 Date Received: 2011-08-19
 Analytical Due Date: 2011-08-26
 Report Due Date: 2011-08-29
 Report Type: B Standard Report
 EDD Code: 00

Project Manager: LMF
 Project: Y40415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
14	TRIP BLANK #3			2011-08-18 / 0	MLT6H	WATER
SAMPLE COMMENTS:						
XX	QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X
					PROT: A	WRK LOC 06 TIC: N

TestAmerica St. Louis

15 Rider Trail North

St. Louis, MO 63045

Phone 314.298.8566 fax 314.298.8757

Cul 180

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Karl Van Keuren, PG, PMP		Site Contact: Kevin Cronin		Date: 08/18/2011		COC No: 011	
Law Environmental & Infrastructure, Inc.		Tel/Fax: (513) 782-4745 / (513) 782-4807		Lab Contact: Lynn Fussner		Carrier:		1 of 1 COCs	
50 Section Avenue		Analysis Turnaround Time						Job No. 140416.09020100	
Cincinnati, Ohio 45212		Calendar (C) or Work Days (W)						SDG No.	
3) 782-4700 Phone		TAT if different from Below							
3) 782-4807 FAX		<input type="checkbox"/> 2 weeks							
Project Name: Former Guterl Specialty Steel Corporation FUSRA		<input type="checkbox"/> 1 week							
Address: Lockport, NY		<input type="checkbox"/> 2 days							
Job #		<input type="checkbox"/> 1 day							

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Isotopic Thorium (α-spec)	Isotopic Uranium (α-spec)	Total Uranium	TAL Metals except Mercury	Anions	Alkalinity	Total Dissolved Solids	Volatile Organic Compounds (VOCs)	TCLP Volatiles	TCLP Semi-volatiles	TCLP Metals except Mercury	Mercury	Sample Specific Notes:
4DMW710DD0001	8/18/2011	0825	Grab	GW	10	X	X	X	X	X	X	X	X	X					4xLP 2x250P 1x500P 3xVA 40
4DFB710DD0001	8/18/2011	0850	Grab	GW	10	X	X	X	X	X	X	X	X	X					↓ ↓ ↓ ↓
4DMW712DD0001	8/18/2011	0935	Grab	GW	10	X	X	X	X	X	X	X	X	X					↓ ↓ ↓ ↓
4BMW707DD0001	8/18/2011	1030	Grab	GW	3									X					3xVA 40
4AMW610D0001	8/18/2011	1110	Grab	GW	7	X	X	X	X	X	X	X	X						4xLP 2x250P 1x500P
4AMW200001	8/18/2011	1205	Grab	GW	7	X	X	X	X	X	X	X	X						↓ ↓ ↓ ↓
4AMW210001	8/18/2011	1245	Grab	GW	7	X	X	X	X	X	X	X	X						↓ ↓ ↓ ↓
Blank #3	8/18/2011	--	TB	--	1								X						1xVA 40

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other 1, 2, and 4

Sample Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Special Instructions/QC Requirements & Comments:

	Company: Shaw E & I, Inc.	Date/Time: 8-18-11/16:10		Company: BFLO	Date/Time: 8-18-11 16:10
	Company: BFLO	Date/Time: 8-18-11 16:10		Company: BFLO	Date/Time: 8/18/11 16:30
	Company: BFLO	Date/Time: 8/18/11 16:30		Company: TASSZ	Date/Time: 8/19/11 0910

TestAmerica St. Louis

CONDITION UPON RECEIPT FORM

Client: SHAW ENVIRO

Quote No: 89251

COC/RFA No: 011

Initiated By: NVD

Date: 8/19/11

Time: 0910

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____

Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 4649
2. 4485 0258 4650
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 4
2. 4
3. _____
4. _____
5. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> <u>N</u> <u>N/A</u>	Are there custody seals present on the cooler?	8. <u>Y</u> <u>N</u> <u>N/A</u>	Are there custody seals present on bottles?
2. <u>Y</u> <u>N</u> <u>N/A</u>	Do custody seals on cooler appear to be tampered with?	9. <u>Y</u> <u>N</u> <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> <u>N</u> <u>N/A</u>	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> <u>N</u> <u>N/A</u>	Was sample received with proper pH? (if not, make note below)
4. <u>Y</u> <u>N</u> <u>N/A</u>	Sample received with Chain of Custody?	11. <u>Y</u> <u>N</u> <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> <u>N</u> <u>N/A</u>	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> <u>N</u> <u>N/A</u>	Sample received in proper containers?
6. <u>Y</u> <u>N</u> <u>N/A</u>	Was sample received broken?	13. <u>Y</u> <u>N</u> <u>N/A</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> <u>N</u> <u>N/A</u>	Is sample volume sufficient for analysis?	14. <u>Y</u> <u>N</u> <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

SAMPLE ID A04AMW610DOO01 IS ACTUALLY LABELED AS A04AMW60/DOO01 AND WILL BE LOGGED PER C.O.C

Corrective Action:

- ☐ Client Contact Name: _____
- ☐ Sample(s) processed "as is" _____
- ☐ Sample(s) on hold until: 8/22/11

Informed by: _____

If released, notify: _____

Project Management Review: _____

Date: 8/22/11

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT


PROJECT NO. 140415

Guterl Steel

Lot #: F1H230407


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

September 6, 2011

Case Narrative
LOT NUMBER: F1H230407

This report contains the analytical results for the nine samples received under chain of custody by TestAmerica in St. Louis on August 23, 2011. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1237192**

The CCV recoveries are outside the upper QC limit (greater than 20% D) for Bromomethane, Chloroethane, Trichlorofluoromethane and 1,2,3-Trichloropropane indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit or were not target analytes in the associated samples.

The LCS recovery for Bromomethane is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H230407 (5): TRIP BLANK #5

F1H230407 (7): A02MW50001

F1H230407 (8): A02MW120001

F1H230407 (9): A02MW30001

The samples were analyzed at a dilution based upon laboratory screening information. The reporting limit has been adjusted for the dilution.

Affected Samples:

F1H230407 (7): A02MW50001

Batch: 124401

The MS/MSD analysis was not performed with this batch; the associated samples are dilutions only. The MS/MSD was performed with original analyses. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

The %RSD for Ethyl acetate exceeds the acceptance criteria. The analyte will not be reported from this ICAL.

The following compounds were removed from the initial calibration lowest point due to poor response. Ethyl ether, Methyl acetate, Acetonitrile, Ethyl acetate, 2-Butanone, Isobutanol, 1,4-dioxane, 2-Nitropropane and Cyclohexanone. Additionally, Acetone was removed from the lowest 2 points.

n-Propylbenzene and sec-Butylbenzene were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration.

The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

Affected Samples:

F1H230407 (7): A02MW50001

F1H230407 (8): A02MW120001

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1236078**

There was insufficient digestate volume for the analysis of thallium. The samples were re-prepared and the re-extract batch is 1242041.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

The serial dilution for sodium is outside of method acceptance criteria indicating matrix interference. All associated samples are flagged accordingly.

1236078-F1H230407-007

The MS (MSD) recovery for calcium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

1236078-F1H230407-002

The MS (MSD) recovery for strontium is outside the established QC limits. The RPD is within method acceptance criteria indicating matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1H230407 (1): A02MW600D0001 DISSOLVED
F1H230407 (2): A02MW50001 DISSOLVED
F1H230407 (3): A02MW120001 DISSOLVED
F1H230407 (4): A02MW30001 DISSOLVED
F1H230407 (6): A02M600D0001
F1H230407 (7): A02MW50001
F1H230407 (8): A02MW120001
F1H230407 (9): A02MW30001

The concentration of strontium in the CCB is greater than 2 times the MDL. The samples associated with this CCB exhibit concentrations greater than ten times the concentrations observed in the CCB.

Affected Samples:

F1H230407 (7): A02MW50001
F1H230407 (9): A02MW30001

Chloride (MCAWW 300.0A)**Batch: 1235141**

The following samples were analyzed at a dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230407 (6): A02M600D0001
F1H230407 (7): A02MW50001
F1H230407 (9): A02MW30001

Nitrate (MCAWW 300.0A)**Batch: 1235143**

The following samples were analyzed at a dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230407 (6): A02M600D0001

F1H230407 (7): A02MW50001

F1H230407 (9): A02MW30001

Sulfate (MCAWW 300.0A)**Batch: 1235146**

The following samples were analyzed at a dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230407 (6): A02M600D0001

F1H230407 (7): A02MW50001

F1H230407 (8): A02MW120001

F1H230407 (9): A02MW30001

Fluoride (MCAWW 300.0A)**Batch: 1235142**

The following samples were reported ND at a dilution, due to matrix interferences, which masked the target retention times in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230407 (6): A02M600D0001

Nitrite (MCAWW 300.0A)**Batch: 1235144**

The following samples were reported ND at a dilution, due to matrix interferences, which masked the target retention times in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H230407 (6): A02M600D0001

F1H230407 (7): A02MW50001

F1H230407 (8): A02MW120001

F1H230407 (9): A02MW30001

Orthophosphate as P (MCAWW 300.0A)**Batch: 1235145**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H230407 (6): A02M600D0001

F1H230407 (7): A02MW50001

F1H230407 (8): A02MW120001

F1H230407 (9): A02MW30001

Filteralbe residue (TDS) (MCAWW 160.1)**Batch: 1238124**

The sample was analyzed at a dilution based on high concentrations of target analytes. The reporting limit has been adjusted accordingly.

Affected Samples:

F1H230407 (6): A02M600D0001

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample to perform the sample duplicate.

Affected Samples:

F1H230407 (1): A02MW600D0001 DISSOLVED

F1H230407 (2): A02MW50001 DISSOLVED

F1H230407 (3): A02MW120001 DISSOLVED

F1H230407 (4): A02MW30001 DISSOLVED

F1H230407 (6): A02M600D0001

F1H230407 (7): A02MW50001

F1H230407 (8): A02MW120001

F1H230407 (9): A02MW30001

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H230407

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H230407

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLW8C	001	A02MW600D0001 DISSOLVED	08/22/11	09:00
MLW8D	002	A02MW50001 DISSOLVED	08/22/11	11:05
MLW8E	003	A02MW120001 DISSOLVED	08/22/11	12:30
MLW8F	004	A02MW30001 DISSOLVED	08/22/11	13:45
MLW86	005	TRIP BLANK #5	08/22/11	
MLW88	006	A02M600D0001	08/22/11	09:00
MLW9L	007	A02MW50001	08/22/11	11:00
MLW9Q	008	A02MW120001	08/22/11	12:30
MLW9X	009	A02MW30001	08/22/11	13:45

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW600D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-001

Matrix.....: WATER

Date Sampled...: 08/22/11 09:00 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236076						
Uranium	2.5	1	ug/L	SW846 6020A	08/24-08/26/11	MLW8C1A3
		Dilution Factor: 1		Analysis Time...: 06:29		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AD
		Dilution Factor: 1		Analysis Time...: 01:17		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AE
		Dilution Factor: 1		Analysis Time...: 01:17		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AC
		Dilution Factor: 1		Analysis Time...: 01:17		
Barium	197	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AF
		Dilution Factor: 1		Analysis Time...: 01:17		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AG
		Dilution Factor: 1		Analysis Time...: 01:17		
Calcium	369000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW8C1AH
		Dilution Factor: 10		Analysis Time...: 18:11		
Cadmium	1.2 J	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AJ
		Dilution Factor: 1		Analysis Time...: 01:17		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AK
		Dilution Factor: 1		Analysis Time...: 01:17		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AL
		Dilution Factor: 1		Analysis Time...: 01:17		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AM
		Dilution Factor: 1		Analysis Time...: 01:17		
Iron	322	100	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AN
		Dilution Factor: 1		Analysis Time...: 01:17		
Magnesium	149000	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW8C1AP
		Dilution Factor: 10		Analysis Time...: 18:11		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW600D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	353	15	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AQ
		Dilution Factor: 1		Analysis Time...: 01:17		
Sodium	1840000 E	50000	ug/L	SW846 6010C	08/24-08/30/11	MLW8C1AR
		Dilution Factor: 50		Analysis Time...: 15:10		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AT
		Dilution Factor: 1		Analysis Time...: 01:17		
Lead	1.5 J	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AU
		Dilution Factor: 1		Analysis Time...: 01:17		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AV
		Dilution Factor: 1		Analysis Time...: 01:17		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1AW
		Dilution Factor: 1		Analysis Time...: 01:17		
Strontium	1340 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLW8C1AX
		Dilution Factor: 10		Analysis Time...: 13:29		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1A1
		Dilution Factor: 1		Analysis Time...: 01:17		
Zinc	611	20	ug/L	SW846 6010C	08/24-08/28/11	MLW8C1A2
		Dilution Factor: 1		Analysis Time...: 01:17		
Prep Batch #...: 1242041						
Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	MLW8C2A0
		Dilution Factor: 1		Analysis Time...: 17:10		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-002

Matrix.....: WATER

Date Sampled...: 08/22/11 11:05 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236076						
Uranium	6.2	1	ug/L	SW846 6020A	08/24-08/26/11	MLW8D1AE
		Dilution Factor: 1		Analysis Time...: 06:36		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AJ
		Dilution Factor: 1		Analysis Time...: 01:23		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AK
		Dilution Factor: 1		Analysis Time...: 01:23		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AH
		Dilution Factor: 1		Analysis Time...: 01:23		
Barium	54.6	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AL
		Dilution Factor: 1		Analysis Time...: 01:23		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AM
		Dilution Factor: 1		Analysis Time...: 01:23		
Calcium	95200 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW8D1AN
		Dilution Factor: 10		Analysis Time...: 18:17		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AP
		Dilution Factor: 1		Analysis Time...: 01:23		
Cobalt	5.6 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AQ
		Dilution Factor: 1		Analysis Time...: 01:23		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AR
		Dilution Factor: 1		Analysis Time...: 01:23		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AT
		Dilution Factor: 1		Analysis Time...: 01:23		
Iron	2970	100	ug/L	SW846 6010C	08/24-08/28/11	MLW8D1AU
		Dilution Factor: 1		Analysis Time...: 01:23		
Magnesium	21600	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW8D1AV
		Dilution Factor: 1		Analysis Time...: 16:35		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-002

Matrix.....: WATER

		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD		ANALYSIS DATE	ORDER #
Manganese	292	15	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1AW
		Dilution Factor: 1		Analysis Time...: 01:23			
Sodium	10600 E	1000	ug/L	SW846 6010C		08/24-08/27/11	MLW8D1AX
		Dilution Factor: 1		Analysis Time...: 16:35			
Nickel	524	40	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1AO
		Dilution Factor: 1		Analysis Time...: 01:23			
Lead	ND	10	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1A1
		Dilution Factor: 1		Analysis Time...: 01:23			
Antimony	ND	10	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1A2
		Dilution Factor: 1		Analysis Time...: 01:23			
Selenium	ND	15	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1A3
		Dilution Factor: 1		Analysis Time...: 01:23			
Strontium	269 N	50	ug/L	SW846 6010C		08/24-08/30/11	MLW8D1A4
		Dilution Factor: 10		Analysis Time...: 13:35			
Vanadium	ND	50	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1AC
		Dilution Factor: 1		Analysis Time...: 01:23			
Zinc	7.8 J	20	ug/L	SW846 6010C		08/24-08/28/11	MLW8D1AD
		Dilution Factor: 1		Analysis Time...: 01:23			
Prep Batch #...: 1242041							
Thallium	ND	20	ug/L	SW846 6010C		08/29-08/31/11	MLW8D2AA
		Dilution Factor: 1		Analysis Time...: 17:16			

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-003

Matrix.....: WATER

Date Sampled...: 08/22/11 12:30 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236076						
Uranium	3.8	1	ug/L	SW846 6020A	08/24-08/26/11	MLW8E1AE
		Dilution Factor: 1		Analysis Time...: 07:02		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AJ
		Dilution Factor: 1		Analysis Time...: 01:49		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AK
		Dilution Factor: 1		Analysis Time...: 01:49		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AH
		Dilution Factor: 1		Analysis Time...: 01:49		
Barium	76.4	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AL
		Dilution Factor: 1		Analysis Time...: 01:49		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AM
		Dilution Factor: 1		Analysis Time...: 01:49		
Calcium	62400 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW8E1AN
		Dilution Factor: 10		Analysis Time...: 18:43		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AP
		Dilution Factor: 1		Analysis Time...: 01:49		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AQ
		Dilution Factor: 1		Analysis Time...: 01:49		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AR
		Dilution Factor: 1		Analysis Time...: 01:49		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AT
		Dilution Factor: 1		Analysis Time...: 01:49		
Iron	217	100	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AU
		Dilution Factor: 1		Analysis Time...: 01:49		
Magnesium	14200	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW8E1AV
		Dilution Factor: 1		Analysis Time...: 17:01		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	344	15	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AW
		Dilution Factor: 1		Analysis Time...: 01:49		
Sodium	1960 E	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW8E1AX
		Dilution Factor: 1		Analysis Time...: 17:01		
Nickel	227	40	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AO
		Dilution Factor: 1		Analysis Time...: 01:49		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1A1
		Dilution Factor: 1		Analysis Time...: 01:49		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1A2
		Dilution Factor: 1		Analysis Time...: 01:49		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1A3
		Dilution Factor: 1		Analysis Time...: 01:49		
Strontium	183 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLW8E1A4
		Dilution Factor: 10		Analysis Time...: 14:00		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AC
		Dilution Factor: 1		Analysis Time...: 01:49		
Zinc	42.0	20	ug/L	SW846 6010C	08/24-08/28/11	MLW8E1AD
		Dilution Factor: 1		Analysis Time...: 01:49		
Prep Batch #...: 1242041						
Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	MLW8E2AA
		Dilution Factor: 1		Analysis Time...: 17:42		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-004

Matrix.....: WATER

Date Sampled...: 08/22/11 13:45 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236076						
Uranium	2.5	1	ug/L	SW846 6020A	08/24-08/26/11	MLW8F1AE
		Dilution Factor: 1		Analysis Time...: 07:16		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AJ
		Dilution Factor: 1		Analysis Time...: 02:02		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AK
		Dilution Factor: 1		Analysis Time...: 02:02		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AH
		Dilution Factor: 1		Analysis Time...: 02:02		
Barium	81.1	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AL
		Dilution Factor: 1		Analysis Time...: 02:02		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AM
		Dilution Factor: 1		Analysis Time...: 02:02		
Calcium	103000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW8F1AN
		Dilution Factor: 10		Analysis Time...: 19:09		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AP
		Dilution Factor: 1		Analysis Time...: 02:02		
Cobalt	20.6 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AQ
		Dilution Factor: 1		Analysis Time...: 02:02		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AR
		Dilution Factor: 1		Analysis Time...: 02:02		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AT
		Dilution Factor: 1		Analysis Time...: 02:02		
Iron	3330	100	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AU
		Dilution Factor: 1		Analysis Time...: 02:02		
Magnesium	26900	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW8F1AV
		Dilution Factor: 1		Analysis Time...: 17:14		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230407-004

Matrix.....: WATER

		REPORTING			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Manganese	348	15	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AW
		Dilution Factor: 1		Analysis Time...: 02:02		
Sodium	10200 E	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW8F1AX
		Dilution Factor: 1		Analysis Time...: 17:14		
Nickel	954	40	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1A0
		Dilution Factor: 1		Analysis Time...: 02:02		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1A1
		Dilution Factor: 1		Analysis Time...: 02:02		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1A2
		Dilution Factor: 1		Analysis Time...: 02:02		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1A3
		Dilution Factor: 1		Analysis Time...: 02:02		
Strontium	236 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLW8F1A4
		Dilution Factor: 10		Analysis Time...: 14:13		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AC
		Dilution Factor: 1		Analysis Time...: 02:02		
Zinc	26.4	20	ug/L	SW846 6010C	08/24-08/28/11	MLW8F1AD
		Dilution Factor: 1		Analysis Time...: 02:02		
Prep Batch #...: 1242041						
Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	MLW8F2AA
		Dilution Factor: 1		Analysis Time...: 17:55		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #5

GC/MS Volatiles

Lot-Sample #...: F1H230407-005 Work Order #...: MLW861AA Matrix.....: WATER
 Date Sampled...: 08/22/11 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/25/11
 Prep Batch #...: 1237192 Analysis Time...: 22:57
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #5

GC/MS Volatiles

Lot-Sample #...: F1H230407-005 Work Order #...: MLW861AA Matrix.....: WATER

<u>SURROGATE</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
Toluene-d8	113	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
1,2-Dichloroethane-d4	98	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02M600D0001

TOTAL Metals

Lot-Sample #...: F1H230407-006

Matrix.....: WATER

Date Sampled...: 08/22/11 09:00 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236076						
Uranium	2.4	1	ug/L	SW846 6020A	08/24-08/26/11	MLW881A4
		Dilution Factor: 1		Analysis Time...: 07:36		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW881AE
		Dilution Factor: 1		Analysis Time...: 02:08		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW881AF
		Dilution Factor: 1		Analysis Time...: 02:08		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW881AD
		Dilution Factor: 1		Analysis Time...: 02:08		
Barium	192	50	ug/L	SW846 6010C	08/24-08/28/11	MLW881AG
		Dilution Factor: 1		Analysis Time...: 02:08		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW881AH
		Dilution Factor: 1		Analysis Time...: 02:08		
Calcium	380000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW881AJ
		Dilution Factor: 10		Analysis Time...: 19:15		
Cadmium	1.2 J	5	ug/L	SW846 6010C	08/24-08/28/11	MLW881AK
		Dilution Factor: 1		Analysis Time...: 02:08		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW881AL
		Dilution Factor: 1		Analysis Time...: 02:08		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW881AM
		Dilution Factor: 1		Analysis Time...: 02:08		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW881AN
		Dilution Factor: 1		Analysis Time...: 02:08		
Iron	648	100	ug/L	SW846 6010C	08/24-08/28/11	MLW881AP
		Dilution Factor: 1		Analysis Time...: 02:08		
Magnesium	152000	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW881AQ
		Dilution Factor: 10		Analysis Time...: 19:15		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02M600D0001

TOTAL Metals

Lot-Sample #...: F1H230407-006

Matrix.....: WATER

		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD		ANALYSIS DATE	ORDER #
Manganese	353	15	ug/L	SW846 6010C		08/24-08/28/11	MLW881AR
		Dilution Factor: 1		Analysis Time...: 02:08			
Sodium	1830000 E	50000	ug/L	SW846 6010C		08/24-08/30/11	MLW881AT
		Dilution Factor: 50		Analysis Time...: 15:16			
Nickel	ND	40	ug/L	SW846 6010C		08/24-08/28/11	MLW881AU
		Dilution Factor: 1		Analysis Time...: 02:08			
Lead	16.4	10	ug/L	SW846 6010C		08/24-08/28/11	MLW881AV
		Dilution Factor: 1		Analysis Time...: 02:08			
Antimony	ND	10	ug/L	SW846 6010C		08/24-08/28/11	MLW881AW
		Dilution Factor: 1		Analysis Time...: 02:08			
Selenium	ND	15	ug/L	SW846 6010C		08/24-08/28/11	MLW881AX
		Dilution Factor: 1		Analysis Time...: 02:08			
Strontium	1280 N	50	ug/L	SW846 6010C		08/24-08/30/11	MLW881A0
		Dilution Factor: 10		Analysis Time...: 14:19			
Vanadium	ND	50	ug/L	SW846 6010C		08/24-08/28/11	MLW881A2
		Dilution Factor: 1		Analysis Time...: 02:08			
Zinc	614	20	ug/L	SW846 6010C		08/24-08/28/11	MLW881A3
		Dilution Factor: 1		Analysis Time...: 02:08			
Prep Batch #...: 1242041							
Thallium	ND	20	ug/L	SW846 6010C		08/29-08/31/11	MLW882A1
		Dilution Factor: 1		Analysis Time...: 18:14			

NOTE(S) :

- N Spiked analyte recovery is outside stated control limits.
 J Estimated result. Result is less than RL.
 E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02M600D0001

General Chemistry

Lot-Sample #....: F1H230407-006 Work Order #....: MLW88 Matrix.....: WATER
 Date Sampled....: 08/22/11 09:00 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	2660	400	mg/L	MCAWW 300.0A	08/24/11	1235141
		Dilution Factor: 2000		Analysis Time...: 01:30		
Fluoride	0.13 B	1.0	mg/L	MCAWW 300.0A	08/24/11	1235142
		Dilution Factor: 10		Analysis Time...: 12:57		
Nitrate	ND	0.20	mg/L	MCAWW 300.0A	08/24/11	1235143
		Dilution Factor: 10		Analysis Time...: 12:57		
Nitrite	ND	40.0	mg/L	MCAWW 300.0A	08/24/11	1235144
		Dilution Factor: 2000		Analysis Time...: 01:30		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1235145
		Dilution Factor: 1		Analysis Time...: 12:40		
Sulfate	209	100	mg/L	MCAWW 300.0A	08/24/11	1235146
		Dilution Factor: 200		Analysis Time...: 01:13		
Total Alkalinity	524	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	5400	1000	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 100		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

GC/MS Volatiles

Lot-Sample #....: F1H230407-007 Work Order #....: MLW9L1CE Matrix.....: WATER
 Date Sampled....: 08/22/11 11:00 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/25/11
 Prep Batch #....: 1237192 Analysis Time...: 23:51
 Dilution Factor: 10
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	20	ug/L
Benzene	3.2 J,D	10	ug/L
Bromodichloromethane	ND	10	ug/L
Bromoform	ND	10	ug/L
Bromomethane	ND	20	ug/L
2-Butanone	ND	50	ug/L
Carbon disulfide	ND	20	ug/L
Carbon tetrachloride	ND	10	ug/L
Chlorobenzene	ND	20	ug/L
Dibromochloromethane	ND	10	ug/L
Chloroethane	130 D	20	ug/L
Chloroform	7.0 J,D	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichloroethane	ND	10	ug/L
1,1-Dichloroethene	20 D	10	ug/L
1,2-Dichloroethene	17 J,D	20	ug/L
(total)			
1,2-Dichloropropane	ND	10	ug/L
cis-1,3-Dichloropropene	ND	10	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	10	ug/L
2-Hexanone	ND	50	ug/L
Methylene chloride	ND	10	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Styrene	ND	10	ug/L
1,1,2,2-Tetrachloroethane	ND	10	ug/L
Tetrachloroethene	1.9 J,D	10	ug/L
Toluene	ND	10	ug/L
1,1,1-Trichloroethane	71 D	10	ug/L
1,1,2-Trichloroethane	ND	10	ug/L
Trichloroethene	12 D	10	ug/L
Vinyl chloride	7.5 J,D	20	ug/L
Xylenes (total)	ND	50	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

GC/MS Volatiles

Lot-Sample #...: F1H230407-007 Work Order #...: MLW9L1CE Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
1,2-Dichloroethane-d4	100	(70 - 120)
4-Bromofluorobenzene	99	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

GC/MS Volatiles

Lot-Sample #...: F1H230407-007 Work Order #...: MLW9L2CE Matrix.....: WATER
Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11
Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
Prep Batch #...: 1244011 Analysis Time...: 19:51
Dilution Factor: 20
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
1,1-Dichloroethane	560 D	20	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	96	(85 - 120)
Dibromofluoromethane	101	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	95	(75 - 120)

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

TOTAL Metals

Lot-Sample #...: F1H230407-007

Matrix.....: WATER

Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236076						
Uranium	6.1	1	ug/L	SW846 6020A	08/24-08/26/11	MLW9L1AF
		Dilution Factor: 1		Analysis Time...: 07:42		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AQ
		Dilution Factor: 1		Analysis Time...: 02:15		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AR
		Dilution Factor: 1		Analysis Time...: 02:15		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AP
		Dilution Factor: 1		Analysis Time...: 02:15		
Barium	53.7	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AT
		Dilution Factor: 1		Analysis Time...: 02:15		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AU
		Dilution Factor: 1		Analysis Time...: 02:15		
Calcium	96400 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW9L1AV
		Dilution Factor: 10		Analysis Time...: 19:21		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AW
		Dilution Factor: 1		Analysis Time...: 02:15		
Cobalt	5.5 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AX
		Dilution Factor: 1		Analysis Time...: 02:15		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A0
		Dilution Factor: 1		Analysis Time...: 02:15		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A1
		Dilution Factor: 1		Analysis Time...: 02:15		
Iron	2840	100	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A2
		Dilution Factor: 1		Analysis Time...: 02:15		
Magnesium	21500	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW9L1A3
		Dilution Factor: 1		Analysis Time...: 17:26		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

TOTAL Metals

Lot-Sample #...: F1H230407-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	288	15	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A4
		Dilution Factor: 1		Analysis Time...: 02:15		
Sodium	10800 E	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW9L1A5
		Dilution Factor: 1		Analysis Time...: 17:26		
Nickel	534	40	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A6
		Dilution Factor: 1		Analysis Time...: 02:15		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A7
		Dilution Factor: 1		Analysis Time...: 02:15		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A8
		Dilution Factor: 1		Analysis Time...: 02:15		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1A9
		Dilution Factor: 1		Analysis Time...: 02:15		
Strontium	212 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLW9L1AA
		Dilution Factor: 10		Analysis Time...: 14:26		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AD
		Dilution Factor: 1		Analysis Time...: 02:15		
Zinc	8.6 J	20	ug/L	SW846 6010C	08/24-08/28/11	MLW9L1AE
		Dilution Factor: 1		Analysis Time...: 02:15		
Prep Batch #...: 1242041						
Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	MLW9L2AC
		Dilution Factor: 1		Analysis Time...: 18:21		

NOTE(S) :

- N Spiked analyte recovery is outside stated control limits.
 J Estimated result. Result is less than RL.
 E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

General Chemistry

Lot-Sample #...: F1H230407-007 Work Order #...: MLW9L Matrix.....: WATER
 Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	16.6	1.0	mg/L	MCAWW 300.0A	08/24/11	1235141
		Dilution Factor: 5		Analysis Time...: 02:02		
Fluoride	2.9	0.50	mg/L	MCAWW 300.0A	08/24/11	1235142
		Dilution Factor: 5		Analysis Time...: 02:02		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/24/11	1235143
		Dilution Factor: 1		Analysis Time...: 01:46		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/24/11	1235144
		Dilution Factor: 5		Analysis Time...: 02:02		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1235145
		Dilution Factor: 1		Analysis Time...: 01:46		
Sulfate	73.2	2.5	mg/L	MCAWW 300.0A	08/24/11	1235146
		Dilution Factor: 5		Analysis Time...: 02:02		
Total Alkalinity	254	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	400	10.0	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001

GC/MS Volatiles

Lot-Sample #...: F1H230407-008 Work Order #...: MLW9Q1CE Matrix.....: WATER
 Date Sampled...: 08/22/11 12:30 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #...: 1237192 Analysis Time...: 00:18
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	0.13 J	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	38	1.0	ug/L
1,2-Dichlorobenzene	0.83 J	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	18	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	2.6	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Toluene	4.1	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	20	1.0	ug/L
Vinyl chloride	6.2	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	111	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
4-Bromofluorobenzene	106	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001

GC/MS Volatiles

Lot-Sample #...: F1H230407-008 Work Order #...: MLW9Q2CE Matrix.....: WATER
 Date Sampled...: 08/22/11 12:30 Date Received...: 08/23/11
 Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
 Prep Batch #...: 1244011 Analysis Time...: 21:04
 Dilution Factor: 5
 Method.....: SW846 8260B

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Carbon tetrachloride	85 D	5.0	ug/L
1,2-Dichloroethene (total)	130 D	10	ug/L
Tetrachloroethene	110 D	5.0	ug/L
1,1,1-Trichloroethane	60 D	5.0	ug/L
Xylenes (total)	130 D	25	ug/L
SURROGATE	PERCENT	RECOVERY	
	RECOVERY	LIMITS	
Toluene-d8	96	(85 - 120)	
Dibromofluoromethane	95	(85 - 115)	
1,2-Dichloroethane-d4	92	(70 - 120)	
4-Bromofluorobenzene	93	(75 - 120)	

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001

TOTAL Metals

Lot-Sample #...: F1H230407-008

Matrix.....: WATER

Date Sampled...: 08/22/11 12:30 Date Received...: 08/23/11

		REPORTING		PREPARATION-		WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #...: 1236076						
Uranium	3.9	1	ug/L	SW846 6020A	08/24-08/26/11	MLW9Q1AR
		Dilution Factor: 1		Analysis Time...: 08:02		
Prep Batch #...: 1236078						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A3
		Dilution Factor: 1		Analysis Time...: 02:47		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A4
		Dilution Factor: 1		Analysis Time...: 02:47		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A2
		Dilution Factor: 1		Analysis Time...: 02:47		
Barium	77.0	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A5
		Dilution Factor: 1		Analysis Time...: 02:47		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A6
		Dilution Factor: 1		Analysis Time...: 02:47		
Calcium	62100 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW9Q1A7
		Dilution Factor: 10		Analysis Time...: 19:41		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A8
		Dilution Factor: 1		Analysis Time...: 02:47		
Cobalt	4.2 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1A9
		Dilution Factor: 1		Analysis Time...: 02:47		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AA
		Dilution Factor: 1		Analysis Time...: 02:47		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AC
		Dilution Factor: 1		Analysis Time...: 02:47		
Iron	802	100	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AD
		Dilution Factor: 1		Analysis Time...: 02:47		
Magnesium	14300	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW9Q1AE
		Dilution Factor: 1		Analysis Time...: 17:58		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001

TOTAL Metals

Lot-Sample #...: F1H230407-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	348	15	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AF
		Dilution Factor: 1		Analysis Time...: 02:47		
Sodium	2070 E	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW9Q1AG
		Dilution Factor: 1		Analysis Time...: 17:58		
Nickel	246	40	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AH
		Dilution Factor: 1		Analysis Time...: 02:47		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AJ
		Dilution Factor: 1		Analysis Time...: 02:47		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AK
		Dilution Factor: 1		Analysis Time...: 02:47		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AL
		Dilution Factor: 1		Analysis Time...: 02:47		
Strontium	206 N	50	ug/L	SW846 6010C	08/24-08/31/11	MLW9Q1AM
		Dilution Factor: 10		Analysis Time...: 13:28		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AP
		Dilution Factor: 1		Analysis Time...: 02:47		
Zinc	46.4	20	ug/L	SW846 6010C	08/24-08/28/11	MLW9Q1AQ
		Dilution Factor: 1		Analysis Time...: 02:47		

Prep Batch #...: 1242041

Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	MLW9Q2AN
		Dilution Factor: 1		Analysis Time...: 18:40		

NOTE(S):

- N Spiked analyte recovery is outside stated control limits.
 J Estimated result. Result is less than RL.
 E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001

General Chemistry

Lot-Sample #...: F1H230407-008 Work Order #...: MLW9Q Matrix.....: WATER
 Date Sampled...: 08/22/11 12:30 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	1.8	0.20	mg/L	MCAWW 300.0A	08/24/11	1235141
		Dilution Factor: 1		Analysis Time...: 05:36		
Fluoride	1.5	0.10	mg/L	MCAWW 300.0A	08/24/11	1235142
		Dilution Factor: 1		Analysis Time...: 05:36		
Nitrate	0.017 B	0.020	mg/L	MCAWW 300.0A	08/24/11	1235143
		Dilution Factor: 1		Analysis Time...: 05:36		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	08/24/11	1235144
		Dilution Factor: 1		Analysis Time...: 05:36		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1235145
		Dilution Factor: 1		Analysis Time...: 05:36		
Sulfate	21.1	2.5	mg/L	MCAWW 300.0A	08/24/11	1235146
		Dilution Factor: 5		Analysis Time...: 05:52		
Total Alkalinity	196	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	233	10.0	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001

GC/MS Volatiles

Lot-Sample #....: F1H230407-009 Work Order #....: MLW9X1CE Matrix.....: WATER
 Date Sampled....: 08/22/11 13:45 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #....: 1237192 Analysis Time...: 00:44
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	0.24 J	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	16	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	4.8	1.0	ug/L
1,2-Dichloroethene	2.3	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	2.5	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.77 J	1.0	ug/L
Vinyl chloride	0.47 J	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001

GC/MS Volatiles

Lot-Sample #...: F1H230407-009 Work Order #...: MLW9X1CE Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	112	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001

TOTAL Metals

Lot-Sample #...: F1H230407-009

Matrix.....: WATER

Date Sampled...: 08/22/11 13:45 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1236076					
Uranium	2.6	1	ug/L	SW846 6020A	08/24-08/26/11	MLW9X1A4
		Dilution Factor: 1		Analysis Time...: 08:09		
Prep Batch #...	1236078					
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AE
		Dilution Factor: 1		Analysis Time...: 02:54		
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AF
		Dilution Factor: 1		Analysis Time...: 02:54		
Arsenic	3.4 J	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AD
		Dilution Factor: 1		Analysis Time...: 02:54		
Barium	80.5	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AG
		Dilution Factor: 1		Analysis Time...: 02:54		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AH
		Dilution Factor: 1		Analysis Time...: 02:54		
Calcium	102000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLW9X1AJ
		Dilution Factor: 10		Analysis Time...: 19:47		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AK
		Dilution Factor: 1		Analysis Time...: 02:54		
Cobalt	21.1 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AL
		Dilution Factor: 1		Analysis Time...: 02:54		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AM
		Dilution Factor: 1		Analysis Time...: 02:54		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AN
		Dilution Factor: 1		Analysis Time...: 02:54		
Iron	5880	100	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AP
		Dilution Factor: 1		Analysis Time...: 02:54		
Magnesium	26100	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW9X1AQ
		Dilution Factor: 1		Analysis Time...: 18:05		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001

TOTAL Metals

Lot-Sample #...: F1H230407-009

Matrix.....: WATER

		REPORTING			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Manganese	349	15	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AR
		Dilution Factor: 1		Analysis Time...: 02:54		
Sodium	10500 E	1000	ug/L	SW846 6010C	08/24-08/27/11	MLW9X1AT
		Dilution Factor: 1		Analysis Time...: 18:05		
Nickel	1000	40	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AU
		Dilution Factor: 1		Analysis Time...: 02:54		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AV
		Dilution Factor: 1		Analysis Time...: 02:54		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AW
		Dilution Factor: 1		Analysis Time...: 02:54		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1AX
		Dilution Factor: 1		Analysis Time...: 02:54		
Strontium	289 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLW9X1A0
		Dilution Factor: 10		Analysis Time...: 15:03		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1A2
		Dilution Factor: 1		Analysis Time...: 02:54		
Zinc	29.9	20	ug/L	SW846 6010C	08/24-08/28/11	MLW9X1A3
		Dilution Factor: 1		Analysis Time...: 02:54		
Prep Batch #...: 1242041						
Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	MLW9X2A1
		Dilution Factor: 1		Analysis Time...: 18:47		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001

General Chemistry

Lot-Sample #...: F1H230407-009 Work Order #...: MLW9X Matrix.....: WATER
 Date Sampled...: 08/22/11 13:45 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	11.1	1.0	mg/L	MCAWW 300.0A	08/24/11	1235141
		Dilution Factor: 5		Analysis Time...: 07:31		
Fluoride	4.4	0.50	mg/L	MCAWW 300.0A	08/24/11	1235142
		Dilution Factor: 5		Analysis Time...: 07:31		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	08/24/11	1235143
		Dilution Factor: 1		Analysis Time...: 07:14		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/24/11	1235144
		Dilution Factor: 5		Analysis Time...: 07:31		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1235145
		Dilution Factor: 1		Analysis Time...: 07:14		
Sulfate	41.6	2.5	mg/L	MCAWW 300.0A	08/24/11	1235146
		Dilution Factor: 5		Analysis Time...: 07:31		
Total Alkalinity	325	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	410	10.0	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1		Analysis Time...: 00:00		

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H230407
 MB Lot-Sample #: F1H250000-192

Work Order #...: ML3581AA

Matrix.....: WATER

Analysis Date...: 08/25/11

Prep Date.....: 08/25/11

Analysis Time...: 22:13

Dilution Factor: 1

Prep Batch #...: 1237192

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	106	(85 - 120)
Dibromofluoromethane	102	(85 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H230407

Work Order #...: ML3581AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	102	(70 - 120)		
4-Bromofluorobenzene	99	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H230407
 MB Lot-Sample #: F1I010000-011

Work Order #...: ML7GA1AA

Matrix.....: WATER

Analysis Date...: 08/31/11

Prep Date.....: 08/31/11

Analysis Time...: 19:26

Dilution Factor: 1

Prep Batch #...: 1244011

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	98	(85 - 120)
Dibromofluoromethane	99	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	97	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H240000-076 Prep Batch #... : 1236076						
Uranium	ND	1	ug/L	SW846 6020A	08/24-08/26/11	ML0JG1AA
		Dilution Factor: 1				
		Analysis Time...: 06:16				
MB Lot-Sample #: F1H240000-078 Prep Batch #... : 1236078						
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AD
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AU
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AA
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Barium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AE
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AF
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AH
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Calcium	ND	1000	ug/L	SW846 6010C	08/24-08/27/11	ML0JL1AG
		Dilution Factor: 1				
		Analysis Time...: 16:03				
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AK
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AJ
		Dilution Factor: 1				
		Analysis Time...: 00:51				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AL
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Iron	ND	100	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AM
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AT
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Magnesium	ND	1000	ug/L	SW846 6010C	08/24-08/27/11	ML0JL1AN
		Dilution Factor: 1				
		Analysis Time...: 16:03				
Manganese	ND	15	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AP
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AR
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AV
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1AC
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Sodium	329 J	1000	ug/L	SW846 6010C	08/24-08/27/11	ML0JL1AQ
		Dilution Factor: 1				
		Analysis Time...: 16:03				
Strontium	0.75 J	5	ug/L	SW846 6010C	08/24-08/30/11	ML0JL1AW
		Dilution Factor: 1				
		Analysis Time...: 13:04				
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1A0
		Dilution Factor: 1				
		Analysis Time...: 00:51				
Zinc	ND	20	ug/L	SW846 6010C	08/24-08/28/11	ML0JL1A1
		Dilution Factor: 1				
		Analysis Time...: 00:51				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H300000-041 Prep Batch #... : 1242041						
Thallium	ND	20	ug/L	SW846 6010C	08/29-08/31/11	ML43N1AA
Dilution Factor: 1						
Analysis Time...: 16:57						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H230407

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: ML2CL1AA 0.20	mg/L	MB Lot-Sample #: F1H230000-141 MCAWW 300.0A	08/24/11	1235141
		Dilution Factor: 1 Analysis Time...: 12:24				
Fluoride	ND	Work Order #: ML2CR1AA 0.10	mg/L	MB Lot-Sample #: F1H230000-142 MCAWW 300.0A	08/24/11	1235142
		Dilution Factor: 1 Analysis Time...: 12:24				
Nitrate	ND	Work Order #: ML2C01AA 0.020	mg/L	MB Lot-Sample #: F1H230000-143 MCAWW 300.0A	08/24/11	1235143
		Dilution Factor: 1 Analysis Time...: 12:24				
Nitrite	ND	Work Order #: ML2C41AA 0.020	mg/L	MB Lot-Sample #: F1H230000-144 MCAWW 300.0A	08/24/11	1235144
		Dilution Factor: 1 Analysis Time...: 12:24				
Phosphate as P, Ortho	ND	Work Order #: ML2C81AA 0.50	mg/L	MB Lot-Sample #: F1H230000-145 MCAWW 300.0A	08/24/11	1235145
		Dilution Factor: 1 Analysis Time...: 12:24				
Sulfate	ND	Work Order #: ML2DC1AA 0.50	mg/L	MB Lot-Sample #: F1H230000-146 MCAWW 300.0A	08/24/11	1235146
		Dilution Factor: 1 Analysis Time...: 12:24				
Total Alkalinity	ND	Work Order #: ML51P1AA 5.0	mg/L	MB Lot-Sample #: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: ML4AF1AA 10.0	mg/L	MB Lot-Sample #: F1H260000-124 MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230407 Work Order #...: ML3581AC Matrix.....: WATER
 LCS Lot-Sample#: F1H250000-192
 Prep Date.....: 08/25/11 Analysis Date...: 08/25/11
 Prep Batch #...: 1237192 Analysis Time...: 21:20
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
cis-1,3-Dichloropropene	104	(70 - 130)	SW846 8260B
Dibromochloromethane	102	(60 - 135)	SW846 8260B
Vinyl chloride	116	(50 - 145)	SW846 8260B
Bromomethane	153 a	(30 - 145)	SW846 8260B
Chloroethane	120	(60 - 135)	SW846 8260B
Acetone	105	(40 - 140)	SW846 8260B
1,1-Dichloroethene	100	(70 - 130)	SW846 8260B
Methylene chloride	90	(55 - 140)	SW846 8260B
Carbon disulfide	95	(35 - 160)	SW846 8260B
1,1-Dichloroethane	100	(70 - 135)	SW846 8260B
2-Butanone	105	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	98	(85 - 115)	SW846 8260B
Chloroform	99	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	101	(65 - 130)	SW846 8260B
Carbon tetrachloride	101	(65 - 140)	SW846 8260B
1,2-Dichloroethane	97	(70 - 130)	SW846 8260B
Benzene	99	(80 - 120)	SW846 8260B
Trichloroethene	95	(70 - 125)	SW846 8260B
1,2-Dichloropropane	97	(75 - 125)	SW846 8260B
Bromodichloromethane	100	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	100	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)	SW846 8260B
Toluene	107	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	104	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	100	(75 - 125)	SW846 8260B
2-Hexanone	96	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	110	(60 - 135)	SW846 8260B
Chlorobenzene	100	(80 - 120)	SW846 8260B
Bromoform	106	(70 - 130)	SW846 8260B
Ethylbenzene	106	(75 - 125)	SW846 8260B
Styrene	110	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	106	(65 - 130)	SW846 8260B
Tetrachloroethene	99	(45 - 150)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230407 Work Order #...: ML3581AC Matrix.....: WATER
LCS Lot-Sample#: F1H250000-192

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,2-Dichlorobenzene	102	(70 - 120)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230407 Work Order #...: ML7GA1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1I010000-011 ML7GA1AD-LCSD
 Prep Date.....: 08/31/11 Analysis Date...: 09/01/11
 Prep Batch #...: 1244011 Analysis Time...: 04:21
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethane	108	(70 - 135)			SW846 8260B
	108	(70 - 135)	0.37	(0-20)	SW846 8260B
1,2-Dichloroethene	105	(85 - 115)			SW846 8260B
(total)	107	(85 - 115)	2.0	(0-20)	SW846 8260B
1,1,1-Trichloroethane	107	(65 - 130)			SW846 8260B
	110	(65 - 130)	2.8	(0-20)	SW846 8260B
Carbon tetrachloride	107	(65 - 140)			SW846 8260B
	112	(65 - 140)	4.2	(0-20)	SW846 8260B
Tetrachloroethene	105	(45 - 150)			SW846 8260B
	113	(45 - 150)	7.0	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	96	(85 - 120)
	102	(85 - 120)
Dibromofluoromethane	98	(85 - 115)
	95	(85 - 115)
1,2-Dichloroethane-d4	96	(70 - 120)
	91	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	103	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H240000-076 Prep Batch #... : 1236076					
Uranium	94	(80 - 120)	SW846 6020A	08/24-08/26/11	ML0JG1AC
		Dilution Factor: 1		Analysis Time...: 06:22	
LCS Lot-Sample#: F1H240000-078 Prep Batch #... : 1236078					
Arsenic	103	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A2
		Dilution Factor: 1		Analysis Time...: 00:57	
Silver	93	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A3
		Dilution Factor: 1		Analysis Time...: 00:57	
Aluminum	108	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A4
		Dilution Factor: 1		Analysis Time...: 00:57	
Barium	109	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A5
		Dilution Factor: 1		Analysis Time...: 00:57	
Beryllium	116	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A6
		Dilution Factor: 1		Analysis Time...: 00:57	
Calcium	105	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JL1A7
		Dilution Factor: 1		Analysis Time...: 16:10	
Cadmium	108	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A8
		Dilution Factor: 1		Analysis Time...: 00:57	
Cobalt	104	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1A9
		Dilution Factor: 1		Analysis Time...: 00:57	
Chromium	104	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CA
		Dilution Factor: 1		Analysis Time...: 00:57	
Copper	103	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CC
		Dilution Factor: 1		Analysis Time...: 00:57	
Iron	109	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CD
		Dilution Factor: 1		Analysis Time...: 00:57	
Magnesium	97	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JL1CE
		Dilution Factor: 1		Analysis Time...: 16:10	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F1H230407

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	107	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CF
		Dilution Factor: 1		Analysis Time...: 00:57	
Sodium	103	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JL1CG
		Dilution Factor: 1		Analysis Time...: 16:10	
Nickel	104	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CH
		Dilution Factor: 1		Analysis Time...: 00:57	
Lead	104	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CJ
		Dilution Factor: 1		Analysis Time...: 00:57	
Antimony	105	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CK
		Dilution Factor: 1		Analysis Time...: 00:57	
Selenium	105	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CL
		Dilution Factor: 1		Analysis Time...: 00:57	
Strontium	105	(80 - 120)	SW846 6010C	08/24-08/30/11	ML0JL1CM
		Dilution Factor: 1		Analysis Time...: 13:10	
Vanadium	105	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CP
		Dilution Factor: 1		Analysis Time...: 00:57	
Zinc	113	(80 - 120)	SW846 6010C	08/24-08/28/11	ML0JL1CQ
		Dilution Factor: 1		Analysis Time...: 00:57	
LCS Lot-Sample#: F1H300000-041 Prep Batch #....: 1242041					
Thallium	103	(80 - 120)	SW846 6010C	08/29-08/31/11	ML43N1AC
		Dilution Factor: 1		Analysis Time...: 17:04	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230407

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	92	Work Order #: ML2CL1AC (90 - 110)	LCS Lot-Sample#: F1H230000-141 MCAWW 300.0A	08/24/11	1235141
		Dilution Factor: 1	Analysis Time...: 12:07		
Fluoride	95	Work Order #: ML2CR1AC (90 - 110)	LCS Lot-Sample#: F1H230000-142 MCAWW 300.0A	08/24/11	1235142
		Dilution Factor: 1	Analysis Time...: 12:07		
Nitrate	95	Work Order #: ML2C01AC (90 - 110)	LCS Lot-Sample#: F1H230000-143 MCAWW 300.0A	08/24/11	1235143
		Dilution Factor: 1	Analysis Time...: 12:07		
Nitrite	101	Work Order #: ML2C41AC (90 - 110)	LCS Lot-Sample#: F1H230000-144 MCAWW 300.0A	08/24/11	1235144
		Dilution Factor: 1	Analysis Time...: 12:07		
Phosphate as P, Ortho	96	Work Order #: ML2C81AC (90 - 110)	LCS Lot-Sample#: F1H230000-145 MCAWW 300.0A	08/24/11	1235145
		Dilution Factor: 1	Analysis Time...: 12:07		
Sulfate	96	Work Order #: ML2DC1AC (90 - 110)	LCS Lot-Sample#: F1H230000-146 MCAWW 300.0A	08/24/11	1235146
		Dilution Factor: 1	Analysis Time...: 12:07		
Total Alkalinity	94	Work Order #: ML51P1AC (90 - 110)	LCS Lot-Sample#: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: ML51P1AD (90 - 110)	LCS Lot-Sample#: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	96	Work Order #: ML4AF1AC (90 - 113)	LCS Lot-Sample#: F1H260000-124 MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230407 Work Order #...: MLXMN1C4-MS Matrix.....: WATER
 MS Lot-Sample #: F1H230464-002 MLXMN1C5-MSD
 Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #...: 1237192 Analysis Time...: 01:37
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	96	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.1	(0-20)	SW846 8260B
Dibromochloromethane	105	(60 - 135)			SW846 8260B
	102	(60 - 135)	2.0	(0-20)	SW846 8260B
Vinyl chloride	106	(50 - 145)			SW846 8260B
	110	(50 - 145)	4.4	(0-20)	SW846 8260B
Bromomethane	144	(30 - 145)			SW846 8260B
	137	(30 - 145)	5.1	(0-20)	SW846 8260B
Chloroethane	117	(60 - 135)			SW846 8260B
	120	(60 - 135)	2.1	(0-20)	SW846 8260B
Acetone	103	(40 - 140)			SW846 8260B
	102	(40 - 140)	0.97	(0-20)	SW846 8260B
1,1-Dichloroethene	108	(70 - 130)			SW846 8260B
	106	(70 - 130)	2.0	(0-20)	SW846 8260B
Methylene chloride	93	(55 - 140)			SW846 8260B
	92	(55 - 140)	0.97	(0-20)	SW846 8260B
Carbon disulfide	105	(35 - 160)			SW846 8260B
	104	(35 - 160)	0.57	(0-20)	SW846 8260B
1,1-Dichloroethane	103	(70 - 135)			SW846 8260B
	102	(70 - 135)	1.3	(0-20)	SW846 8260B
2-Butanone	100	(30 - 150)			SW846 8260B
	104	(30 - 150)	4.7	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	99	(85 - 115)			SW846 8260B
	100	(85 - 115)	0.90	(0-20)	SW846 8260B
Chloroform	100	(65 - 135)			SW846 8260B
	102	(65 - 135)	1.9	(0-20)	SW846 8260B
1,1,1-Trichloroethane	100	(65 - 130)			SW846 8260B
	103	(65 - 130)	2.8	(0-20)	SW846 8260B
Carbon tetrachloride	98	(65 - 140)			SW846 8260B
	98	(65 - 140)	0.01	(0-20)	SW846 8260B
1,2-Dichloroethane	100	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.2	(0-20)	SW846 8260B
Benzene	102	(80 - 120)			SW846 8260B
	101	(80 - 120)	0.29	(0-20)	SW846 8260B
Trichloroethene	95	(70 - 125)			SW846 8260B
	97	(70 - 125)	1.4	(0-20)	SW846 8260B
1,2-Dichloropropane	101	(75 - 125)			SW846 8260B
	102	(75 - 125)	0.59	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230407

Work Order #...: MLXMN1C4-MS

Matrix.....: WATER

MS Lot-Sample #: F1H230464-002

MLXMN1C5-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	100	(75 - 120)			SW846 8260B
	100	(75 - 120)	0.19	(0-20)	SW846 8260B
1,1,2-Trichloroethane	105	(75 - 125)			SW846 8260B
	103	(75 - 125)	2.3	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	102	(55 - 140)			SW846 8260B
	103	(55 - 140)	1.5	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	106	(75 - 120)	0.09	(0-20)	SW846 8260B
1,3-Dichlorobenzene	100	(75 - 125)			SW846 8260B
	104	(75 - 125)	3.7	(0-20)	SW846 8260B
1,4-Dichlorobenzene	99	(75 - 125)			SW846 8260B
	100	(75 - 125)	1.9	(0-20)	SW846 8260B
2-Hexanone	101	(55 - 130)			SW846 8260B
	93	(55 - 130)	8.2	(0-20)	SW846 8260B
4-Methyl-2-pentanone	112	(60 - 135)			SW846 8260B
	111	(60 - 135)	0.80	(0-20)	SW846 8260B
Chlorobenzene	101	(80 - 120)			SW846 8260B
	102	(80 - 120)	0.78	(0-20)	SW846 8260B
Bromoform	106	(70 - 130)			SW846 8260B
	104	(70 - 130)	1.9	(0-20)	SW846 8260B
Ethylbenzene	106	(75 - 125)			SW846 8260B
	106	(75 - 125)	0.28	(0-20)	SW846 8260B
Styrene	112	(65 - 135)			SW846 8260B
	112	(65 - 135)	0.17	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	104	(65 - 130)			SW846 8260B
	106	(65 - 130)	1.1	(0-20)	SW846 8260B
Tetrachloroethene	98	(45 - 150)			SW846 8260B
	100	(45 - 150)	1.8	(0-20)	SW846 8260B
1,2-Dichlorobenzene	103	(70 - 120)			SW846 8260B
	105	(70 - 120)	1.6	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
	108	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
	108	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
	106	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H230407

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:05 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H230407-002 Prep Batch #...: 1236076						
Uranium	98	(80 - 120)		SW846 6020A	08/24-08/26/11	MLW8D1CN
	99	(80 - 120)	0.38 (0-20)	SW846 6020A	08/24-08/26/11	MLW8D1CP
		Dilution Factor: 1				
		Analysis Time...: 06:49				
MS Lot-Sample #: F1H230407-002 Prep Batch #...: 1236078						
Aluminum	109	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1CV
	108	(80 - 120)	0.51 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CW
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Antimony	105	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1A9
	104	(80 - 120)	0.51 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CA
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Arsenic	104	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1CQ
	104	(80 - 120)	0.23 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CR
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Barium	109	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1CX
	108	(80 - 120)	0.70 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1C0
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Beryllium	113	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1C1
	114	(80 - 120)	0.70 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1C2
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Cadmium	103	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1C5
	104	(80 - 120)	0.67 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1C6
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Calcium	119	(80 - 120)		SW846 6010C	08/24-08/27/11	MLW8D1C3
	113	(80 - 120)	0.56 (0-20)	SW846 6010C	08/24-08/27/11	MLW8D1C4
		Dilution Factor: 10				
		Analysis Time...: 18:30				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:05 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	102	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1C9
	102	(80 - 120)	0.25	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1DA
Dilution Factor: 1 Analysis Time...: 01:36							
Cobalt	99	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1C7
	99	(80 - 120)	0.07	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1C8
Dilution Factor: 1 Analysis Time...: 01:36							
Copper	104	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1DC
	103	(80 - 120)	0.73	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1DD
Dilution Factor: 1 Analysis Time...: 01:36							
Iron	105	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1DE
	106	(80 - 120)	0.33	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1DF
Dilution Factor: 1 Analysis Time...: 01:36							
Lead	100	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1A7
	100	(80 - 120)	0.74	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1A8
Dilution Factor: 1 Analysis Time...: 01:36							
Magnesium	96	(80 - 120)			SW846 6010C	08/24-08/27/11	MLW8D1DG
	97	(80 - 120)	0.31	(0-20)	SW846 6010C	08/24-08/27/11	MLW8D1DH
Dilution Factor: 1 Analysis Time...: 16:48							
Manganese	104	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1DJ
	104	(80 - 120)	0.12	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1DK
Dilution Factor: 1 Analysis Time...: 01:36							
Nickel	97	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1A5
	98	(80 - 120)	0.49	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1A6
Dilution Factor: 1 Analysis Time...: 01:36							
Selenium	104	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW8D1CC
	105	(80 - 120)	0.63	(0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CD
Dilution Factor: 1 Analysis Time...: 01:36							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:05 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	93	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1CT
	93	(80 - 120)	0.27 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CU
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Sodium	98	(80 - 120)		SW846 6010C	08/24-08/27/11	MLW8D1DL
	99	(80 - 120)	0.25 (0-20)	SW846 6010C	08/24-08/27/11	MLW8D1DM
		Dilution Factor: 1				
		Analysis Time...: 16:48				
Strontium	130 N	(80 - 120)		SW846 6010C	08/24-08/30/11	MLW8D1CE
	132 N	(80 - 120)	1.6 (0-20)	SW846 6010C	08/24-08/30/11	MLW8D1CF
		Dilution Factor: 10				
		Analysis Time...: 13:48				
Vanadium	104	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1CJ
	104	(80 - 120)	0.07 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CK
		Dilution Factor: 1				
		Analysis Time...: 01:36				
Zinc	111	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW8D1CL
	111	(80 - 120)	0.08 (0-20)	SW846 6010C	08/24-08/28/11	MLW8D1CM
		Dilution Factor: 1				
		Analysis Time...: 01:36				

MS Lot-Sample #: F1H230407-002 Prep Batch #...: 1242041

Thallium	99	(80 - 120)		SW846 6010C	08/29-08/31/11	MLW8D1DN
	99	(80 - 120)	0.10 (0-20)	SW846 6010C	08/29-08/31/11	MLW8D1DP
		Dilution Factor: 1				
		Analysis Time...: 17:29				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H230407-007 Prep Batch #...: 1236076							
Uranium	97	(80 - 120)			SW846 6020A	08/24-08/26/11	MLW9L1DD
	96	(80 - 120)	1.5	(0-20)	SW846 6020A	08/24-08/26/11	MLW9L1DE
Dilution Factor: 1							
Analysis Time...: 07:49							
MS Lot-Sample #: F1H230407-007 Prep Batch #...: 1236078							
Aluminum	108	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1DR
	109	(80 - 120)	1.0	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1DT
Dilution Factor: 1							
Analysis Time...: 02:34							
Antimony	103	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1C0
	105	(80 - 120)	1.8	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1C1
Dilution Factor: 1							
Analysis Time...: 02:34							
Arsenic	102	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1DM
	105	(80 - 120)	2.8	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1DN
Dilution Factor: 1							
Analysis Time...: 02:34							
Barium	108	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1DU
	108	(80 - 120)	0.35	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1DV
Dilution Factor: 1							
Analysis Time...: 02:34							
Beryllium	112	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1DW
	114	(80 - 120)	1.6	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1DX
Dilution Factor: 1							
Analysis Time...: 02:34							
Cadmium	102	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1D2
	104	(80 - 120)	2.8	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1D3
Dilution Factor: 1							
Analysis Time...: 02:34							
Calcium	14 N	(80 - 120)			SW846 6010C	08/24-08/27/11	MLW9L1D0
	121 N	(80 - 120)	10	(0-20)	SW846 6010C	08/24-08/27/11	MLW9L1D1
Dilution Factor: 10							
Analysis Time...: 19:28							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	100	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1CF
	102	(80 - 120)	1.8 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1CG
Dilution Factor: 1 Analysis Time...: 02:34						
Cobalt	98	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1D4
	100	(80 - 120)	2.1 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1D5
Dilution Factor: 1 Analysis Time...: 02:34						
Copper	103	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1CH
	103	(80 - 120)	0.24 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1CJ
Dilution Factor: 1 Analysis Time...: 02:34						
Iron	104	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1CK
	107	(80 - 120)	2.1 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1CL
Dilution Factor: 1 Analysis Time...: 02:34						
Lead	98	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1CW
	101	(80 - 120)	2.7 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1CX
Dilution Factor: 1 Analysis Time...: 02:34						
Magnesium	93	(80 - 120)		SW846 6010C	08/24-08/27/11	MLW9L1CM
	96	(80 - 120)	1.0 (0-20)	SW846 6010C	08/24-08/27/11	MLW9L1CN
Dilution Factor: 1 Analysis Time...: 17:46						
Manganese	102	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1CP
	105	(80 - 120)	1.8 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1CQ
Dilution Factor: 1 Analysis Time...: 02:34						
Nickel	95	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1CU
	99	(80 - 120)	2.7 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1CV
Dilution Factor: 1 Analysis Time...: 02:34						
Selenium	102	(80 - 120)		SW846 6010C	08/24-08/28/11	MLW9L1C2
	106	(80 - 120)	3.1 (0-20)	SW846 6010C	08/24-08/28/11	MLW9L1C3
Dilution Factor: 1 Analysis Time...: 02:34						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	92	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1DP
	93	(80 - 120)	0.83	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1DQ
Dilution Factor: 1							
Analysis Time...: 02:34							
Sodium	94	(80 - 120)			SW846 6010C	08/24-08/27/11	MLW9L1CR
	95	(80 - 120)	0.22	(0-20)	SW846 6010C	08/24-08/27/11	MLW9L1CT
Dilution Factor: 1							
Analysis Time...: 17:46							
Strontium	99	(80 - 120)			SW846 6010C	08/24-08/30/11	MLW9L1C4
	97	(80 - 120)	1.6	(0-20)	SW846 6010C	08/24-08/30/11	MLW9L1C5
Dilution Factor: 10							
Analysis Time...: 14:45							
Vanadium	103	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1C8
	104	(80 - 120)	1.2	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1C9
Dilution Factor: 1							
Analysis Time...: 02:34							
Zinc	109	(80 - 120)			SW846 6010C	08/24-08/28/11	MLW9L1DA
	112	(80 - 120)	2.5	(0-20)	SW846 6010C	08/24-08/28/11	MLW9L1DC
Dilution Factor: 1							
Analysis Time...: 02:34							

MS Lot-Sample #: F1H230407-007 Prep Batch #...: 1242041

Thallium	99	(80 - 120)			SW846 6010C	08/29-08/31/11	MLW9L1EK
	99	(80 - 120)	0.06	(0-20)	SW846 6010C	08/29-08/31/11	MLW9L1EL
Dilution Factor: 1							
Analysis Time...: 18:27							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230407

Matrix.....: WATER

Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	107	Work Order #...: MLW9L1DF (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230407-007 08/24/11	1235141
		Dilution Factor: 5		Analysis Time...: 02:02	
Fluoride	103	Work Order #...: MLW9L1DG (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230407-007 08/24/11	1235142
		Dilution Factor: 5		Analysis Time...: 02:02	
Nitrate	106	Work Order #...: MLW9L1DH (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230407-007 08/24/11	1235143
		Dilution Factor: 1		Analysis Time...: 01:46	
Nitrite	55 N	Work Order #...: MLW9L1DJ (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230407-007 08/24/11	1235144
		Dilution Factor: 5		Analysis Time...: 02:02	
Phosphate as P, Ortho	56 N	Work Order #...: MLW9L1DK (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230407-007 08/24/11	1235145
		Dilution Factor: 1		Analysis Time...: 01:46	
Sulfate	104	Work Order #...: MLW9L1D6 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230407-007 08/24/11	1235146
		Dilution Factor: 5		Analysis Time...: 02:02	
Total Alkalinity	98	Work Order #...: MLW9L1EM (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H230407-007 08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F1H230407

Work Order #....: MLW9L-SMP

Matrix.....: WATER

MLW9L-DUP

Date Sampled....: 08/22/11 11:00

Date Received...: 08/23/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: F1H230407-007		
	400	400	mg/L	0.0	(0-15)	MCAWW 160.1	08/26-08/29/11	1238124
			Dilution Factor: 1			Analysis Time...: 00:00		
Chloride						SD Lot-Sample #: F1H230407-007		
	16.6	16.7	mg/L	0.10	(0-20)	MCAWW 300.0A	08/24/11	1235141
			Dilution Factor: 5			Analysis Time...: 02:02		
Fluoride						SD Lot-Sample #: F1H230407-007		
	2.9	3.0	mg/L	1.2	(0-20)	MCAWW 300.0A	08/24/11	1235142
			Dilution Factor: 5			Analysis Time...: 02:02		
Nitrate						SD Lot-Sample #: F1H230407-007		
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/24/11	1235143
			Dilution Factor: 1			Analysis Time...: 01:46		
Nitrite						SD Lot-Sample #: F1H230407-007		
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/24/11	1235144
			Dilution Factor: 5			Analysis Time...: 02:02		
Phosphate as P, Ortho						SD Lot-Sample #: F1H230407-007		
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	08/24/11	1235145
			Dilution Factor: 1			Analysis Time...: 01:46		
Sulfate						SD Lot-Sample #: F1H230407-007		
	73.2	73.7	mg/L	0.73	(0-20)	MCAWW 300.0A	08/24/11	1235146
			Dilution Factor: 5			Analysis Time...: 02:02		
Total Alkalinity						SD Lot-Sample #: F1H230407-007		
	254	254	mg/L	0.16	(0-20)	MCAWW 310.1	08/30/11	1242085
			Dilution Factor: 1			Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc
Client Sample ID: A02MW600D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230407-001
 Work Order: MLW8C
 Matrix: WATER

Date Collected: 08/22/11 0900
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236047	Yld % 63
Uranium 234	1.28		0.26	0.10	0.07	08/24/11	08/29/11
Uranium 235/236	0.050	U	0.053	0.100	0.060	08/24/11	08/29/11
Uranium 238	0.93		0.21	0.10	0.05	08/24/11	08/29/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230407-002
Work Order: MLW8D
Matrix: WATER

Date Collected: 08/22/11 1105
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236047	Yld % 69
Uranium 234	2.40		0.36	0.10	0.06	08/24/11	08/29/11
Uranium 235/236	0.112		0.074	0.100	0.052	08/24/11	08/29/11
Uranium 238	2.21		0.34	0.10	0.04	08/24/11	08/29/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H230407

62 of 83

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230407-003

Date Collected: 08/22/11 1230

Work Order: MLW8E

Date Received: 08/23/11 0905

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236047	Yld % 78
Uranium 234	1.06		0.22	0.10	0.06	08/24/11	08/29/11
Uranium 235/236	0.140		0.082	0.100	0.060	08/24/11	08/29/11
Uranium 238	1.36		0.25	0.10	0.05	08/24/11	08/29/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H230407

63 of 83

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230407-004
 Work Order: MLW8F
 Matrix: WATER

Date Collected: 08/22/11 1345
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1236047		Yld % 72
Uranium 234	1.06		0.22	0.10	0.06	08/24/11	08/29/11
Uranium 235/236	0.012	U	0.024	0.100	0.032	08/24/11	08/29/11
Uranium 238	0.86		0.20	0.10	0.06	08/24/11	08/29/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02M600D0001

Radiochemistry

Lab Sample ID: F1H230407-006

Date Collected: 08/22/11 0900

Work Order: MLW88

Date Received: 08/23/11 0905

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236047	Yld % 66
Uranium 234	0.92		0.21	0.10	0.07	08/24/11	08/29/11
Uranium 235/236	0.032	U	0.046	0.100	0.069	08/24/11	08/29/11
Uranium 238	0.78		0.19	0.10	0.08	08/24/11	08/29/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1H230407** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW50001

Radiochemistry

Lab Sample ID: F1H230407-007
Work Order: MLW9L
Matrix: WATER

Date Collected: 08/22/11 1100
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236047	Yld % 64
Uranium 234	2.36		0.37	0.10	0.07	08/24/11	08/29/11
Uranium 235/236	0.098		0.072	0.100	0.057	08/24/11	08/29/11
Uranium 238	2.06		0.34	0.10	0.06	08/24/11	08/29/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H230407

66 of 83

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW120001

Radiochemistry

Lab Sample ID: F1H230407-008
Work Order: MLW9Q
Matrix: WATER

Date Collected: 08/22/11 1230
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236152	Yld % 76
Uranium 234	1.49		0.26	0.10	0.05	08/24/11	08/29/11
Uranium 235/236	0.136		0.079	0.100	0.031	08/24/11	08/29/11
Uranium 238	1.43		0.26	0.10	0.04	08/24/11	08/29/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1H230407

67 of 83

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW30001

Radiochemistry

Lab Sample ID: F1H230407-009
 Work Order: MLW9X
 Matrix: WATER

Date Collected: 08/22/11 1345
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1236152	Yld % 76
Uranium 234	0.88		0.20	0.10	0.07	08/24/11	08/29/11
Uranium 235/236	0.040	U	0.047	0.100	0.061	08/24/11	08/29/11
Uranium 238	0.92		0.20	0.10	0.05	08/24/11	08/29/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H230407

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1236152	Yld %	73 F1H240000-152B
Uranium 234	-0.0072	U	0.0084	0.100	0.057	08/24/11	08/29/11
Uranium 235/236	0.0	U	0.012	0.100	0.033	08/24/11	08/29/11
Uranium 238	0.01	U	0.036	0.100	0.076	08/24/11	08/29/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1236047	Yld %	82 F1H240000-047B
Uranium 234	0.015	U	0.032	0.100	0.059	08/24/11	08/29/11
Uranium 235/236	-0.0027	U	0.0054	0.100	0.049	08/24/11	08/29/11
Uranium 238	-0.0043	U	0.0061	0.100	0.046	08/24/11	08/29/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F1H230407
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H240000-047C	
Uranium 234	3.26	3.11	0.42	84	95	(76 - 136)	
Spk 2	3.26	3.12	0.41	85	96	(76 - 136)	0.4 %RPD
Uranium 238	3.39	3.47	0.45	84	102	(76 - 134)	
Spk 2	3.39	3.36	0.43	85	99	(76 - 134)	3 %RPD
Batch #:		1236047	Analysis Date: 08/29/11				
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F1H240000-152C	
Uranium 234	3.26	3.26	0.42	87	100	(76 - 136)	
Spk 2	3.26	3.40	0.43	85	104	(76 - 136)	4 %RPD
Uranium 238	3.39	3.40	0.44	87	100	(76 - 134)	
Spk 2	3.39	4.08	0.49	85	120	(76 - 134)	18 %RPD
Batch #:		1236152	Analysis Date: 08/29/11				

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis

Storage Loc:

R4,5

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2011-08-23

Project: Y40415

Guterl Steel

Analytical Due Date:

2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS in LOT: 9

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.0

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A02MW600D0001 DISSOLVED			2011-08-22 / 900	MLW8C	WATER
SAMPLE COMMENTS:						
SB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
ZN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
VX 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
TL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
PB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NI 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
NA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
MG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AS 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CU 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CO 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CD 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
AL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
CA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
BA 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
FE 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
XX 2V	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK 06 LOC
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2: Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK 06 LOC

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A02MW50001 DISSOLVED			2011-08-22 / 1105	MLW8D	WATER
SAMPLE COMMENTS:						
MG 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
PB 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
ZN 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
VX 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
TL 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC
SR 1\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK 06 LOC

F1H230407

71 OF 83

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-23

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 9

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4 X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
D CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4 X	PROT: A	WRK LOC	06

F1H230407

TestAmerica - St. Louis

Logged in by:

WILSONS

2011-08-23

11:17:47

printed on: Wednesday, August 24, 2011 03:35

72 of 83

Page 2 of 11

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84
Date Received: 2011-08-23
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: B Standard Report
EDD Code: 00

Project Manager: LMF
Project: Y40415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guterl Steel
Report to: [REDACTED]

#SMPS in LOT: 9

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

D	CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A02MW120001 DISSOLVED			2011-08-22 / 1230	MLW8E	WATER

SAMPLE COMMENTS:

ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06

F1H230407

73 of 83

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-23

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 9

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	1
4	A02MW30001 DISSOLVED			2011-08-22 / 1345	MLW8F	WATER
SAMPLE COMMENTS:						
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F1H230407

TestAmerica - St. Louis

Logged in by: WILSONS

2011-08-23

11:17:47

printed on: Wednesday, August 24, 2011 03:35

74 of 83

Page 4 of 11

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5

Project Manager: LMF Quote #: 89251 SDG:
 Project: Y40415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 9

Date Received: 2011-08-23
 Analytical Due Date: 2011-08-31
 Report Due Date: 2011-09-02
 Report Type: B Standard Report
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
5	TRIP BLANK #5			2011-08-22 / 0	MLW86	WATER
<u>SAMPLE COMMENTS:</u>						
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
6	A02M600D0001			2011-08-22 / 900	MLW88	WATER
<u>SAMPLE COMMENTS:</u>						
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X PROT: A WRK LOC 06

F1H230407

75 of 83

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84
Date Received: 2011-08-23
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: B Standard Report
EDD Code: 00

Project Manager: LMF
Project: Y40415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guterl Steel
Report to: [REDACTED]

#SMPS in LOT: 9

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
7	A02MW50001			2011-08-22 / 1100	MLW9L	WATER

SAMPLE COMMENTS:

VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230407

TestAmerica - St. Louis

Logged in by:

WILSONS

2011-08-23

11:17:47

printed on: Wednesday, August 24, 2011 03:35

76 of 83

Page 6 of 11

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-23

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 9

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CU I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
UX I&	SW846	6020A	Metals WATER, 6020 Total	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
XX QK	SW846	8260B	Uranium WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK	06	TIC: N
XX ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06	
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06	
XX AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK	06	
XX C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX DO	MCAW	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
D MN I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D ZN I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D VX I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D TL I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D SR I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D SE I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D BA I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D SB I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D PB I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D NI I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D NA I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D AG I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D FE I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D CU I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D CR I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D CO I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D CD I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D BE I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D CA I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D AS I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D AL I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D MG I\$	SW846	6010C	Metals WATER, 6010C	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D UX I&	SW846	6020A	WATER, 6020 Total	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
D XX QK	SW846	8260B	Uranium WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK	06	TIC: N

F1H230407

TestAmerica - St. Louis

Logged in by: WILSONS

2011-08-23

11:17:47

printed on: Wednesday, August 24, 2011 03:35

77 of 83

Page 7 of 11

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-23

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 9

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	MG	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	SR	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	SE	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	SB	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	BE	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	PB	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	ZN	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	NI	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	NA	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	MN	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	TL	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	FE	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	CU	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	CR	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	CO	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	CA	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	BA	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	AS	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	AL	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	AG	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	VX	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	CD	I\$	SW846	6010C	WATER, 6010C	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Metals		HCL				LOC	
S	UX	I&	SW846	6020A	WATER, 6020 Total	GJ	METALS, TOTAL - 2%	D4	DOD QSM V4.X	PROT: A	WRK	06
					Uranium		HCL				LOC	
S	XX	QK	SW846	8260B	WATER, 8260B,	25	PURGE AND TRAP - 25 mL purge	D4	DOD QSM V4.X	PROT: A	WRK	06
					VOC		(Waters)				LOC	TIC: N
S	XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					2of6		PERFORMED / DIRECT				LOC	
S	XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					3of6		PERFORMED / DIRECT				LOC	
S	XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					1of6		PERFORMED / DIRECT				LOC	
S	XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					6of6		PERFORMED / DIRECT				LOC	
S	XX	DO	MCAW	300.0A	WATER,	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					300.0A, Orthophosphate		PERFORMED / DIRECT				LOC	
S	XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					4of6		PERFORMED / DIRECT				LOC	
X	XX	AK	MCAW	160.1	WATER, 160.1,	88	NO SAMPLE PREPARATION	D4	DOD QSM V4.X	PROT: A	WRK	06
					TDS		PERFORMED / DIRECT				LOC	
X	XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					2of6		PERFORMED / DIRECT				LOC	
X	XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					3of6		PERFORMED / DIRECT				LOC	
X	XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					1of6		PERFORMED / DIRECT				LOC	
X	XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					6of6		PERFORMED / DIRECT				LOC	
X	XX	DO	MCAW	300.0A	WATER,	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					300.0A, Orthophosphate		PERFORMED / DIRECT				LOC	
X	XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
					4of6		PERFORMED / DIRECT				LOC	

F1H230407

TestAmerica - St. Louis

Logged in by:

WILSONS

2011-08-23

11:17:47

printed on: Wednesday, August 24, 2011 03:35

78 of 83

Page 8 of 11

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84
Date Received: 2011-08-23
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: B Standard Report
EDD Code: 00

Project Manager: LMF Quote #: 89251 SDG:
Project: Y40415 Guterl Steel
PO#: 697886 Report to: XXXXXXXXXX
Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 9

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

X	XX	VC	MCAW	310.1	W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06
X	XX	VC	MCAW	310.1	W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	
8	A02MW120001			2011-08-22 / 1230	MLW9Q	WATER

SAMPLE COMMENTS:

MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06	
XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK	06	TIC: N
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06	
XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK	06	
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	
XX	DO	MCAW	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK	06	

F1H230407

79 of 83

F1H230407

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R4,5,2-84

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-23

Project: Y40415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 9

Report Type: B Standard Report

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A02MW30001			2011-08-22 / 1345	MLW9X	WATER

SAMPLE COMMENTS:

NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

TestAmerica - F1H230407

Logged in by: WILSONS

2011-08-23

11:17:47

printed on: Wednesday, August 24, 2011 03:35

80 of 83

Page 10 of 11

F1H230407

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R4,5,2-84

Project Manager: LMF Quote #: 89251 SDG:
Project: Y40415 Guterl Steel
PO#: 697886 Report to: XXXXXXXXXX
Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-08-23
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: B Standard Report
EDD Code: 00

#SMPS in LOT: 9

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
		W		4of6		PERFORMED / DIRECT				LOC	
XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity,	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: B	WRK	06
		W		Total		PERFORMED / DIRECT				LOC	

St. Louis, MO 63045
Phone 314.298.8566 fax 314.298.8757

Cell 199

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Karl Van Keuren, PG, PMP		Site Contact: Kevin Cronin		Date: 08/22/2011		COC No: 013													
Shaw Environmental & Infrastructure, Inc.		Tel/Fax: (513) 782-4745 / (513) 782-4807		Lab Contact: Lynn Fussner		Carrier:		1 of 1 COCs													
50 Section Avenue		Analysis Turnaround Time						Job No. 140416.09020100													
Cincinnati, Ohio 45212		Calendar (C) or Work Days (W)						SDG No.													
3) 782-4700 Phone		TAT if different from Below _____																			
3) 782-4807 FAX		<input type="checkbox"/> 2 weeks																			
Project Name: Former Guterl Specialty Steel Corporation FUSRA		<input type="checkbox"/> 1 week																			
Address: Lockport, NY		<input type="checkbox"/> 2 days																			
Job #		<input type="checkbox"/> 1 day																			
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Isotopic Thorium (a-spec)	Isotopic Uranium (a-spec)	Total Uranium	TAL Metals except Mercury	Anions	Alkalinity	Total Dissolved Solids	Volatile Organic Compounds (VOCs)	TCLP Volatiles	TCLP Semi-volatiles	TCLP Metals except Mercury	Mercury	Sample Specific Notes:	
2MW600D0001 <i>label read</i>		8/22/2011	0900	Grab	GW	7	X	X	X	X	X	X	X	X	X						
2MW50001		8/22/2011	1105	Grab	GW	10	X	X	X	X	X	X	X	X	X						2x
3MW50001MS		8/22/2011	1105	Grab	GW	10	X	X	X	X	X	X	X	X	X						3x40, 500P, 4xLP, 250P
3MW50001MSD		8/22/2011	1105	Grab	GW	10	X	X	X	X	X	X	X	X	X						
2MW120001		8/22/2011	1230	Grab	GW	10	X	X	X	X	X	X	X	X	X						KCC
2MW30001		8/22/2011	1345	Grab	GW	10	X	X	X	X	X	X	X	X	X						
Blank #5		8/22/2011	--	TB	--	1									X						1x40
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other 1, 2, and 4																					
Hazard Identification							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)														
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months														
Special Instructions/QC Requirements & Comments:																					

Company: Shaw E & I Inc.	Date/Time: 8/22/11 16:40	Company: BFLC	Date/Time: 08-22-11 16:40
Company: BFLC	Date/Time: 08-22-11 17:00	Company: BFLC	Date/Time: 8-22-11 17:05
Company: BFLC	Date/Time: 8/22/11 17:00	Company: TMSR	Date/Time: 8.23.11 0905

TestAmerica St. Louis

CONDITION UPON RECEIPT FORM

Client:

Shaw

Quote No:

89051

COC/RFA No:

013

Initiated By:

JN

Date:

8.23.11

Time:

0905



Shipping Information

Shipper:

FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

(Y) N

Shipping # (s):*

1. 4485 0258 4877

2. 4866

3. 4855

4.

5.

6.

7.

8.

9.

10.

Sample Temperature (s):**

1. ambient

2. ↓

3.

4.

5.

6.

7.

8.

9.

10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	(Y) N	Are there custody seals present on the cooler?	8.	Y (N)	Are there custody seals present on bottles?
2.	Y (N) N/A	Do custody seals on cooler appear to be tampered with?	9.	Y N (N/A)	Do custody seals on bottles appear to be tampered with?
3.	(Y) N	Were contents of cooler frisked after opening, but before unpacking?	10.	(Y) N N/A	Was sample received with proper pH? (if not, make note below)
4.	(Y) N	Sample received with Chain of Custody?	11.	Y N (N/A)	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5.	Y (N) N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	(Y) N	Sample received in proper containers?
6.	Y (N)	Was sample received broken?	13.	Y (N) N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7.	(Y) N	Is sample volume sufficient for analysis?	14.	Y N (N/A)	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Sample 1: we rec'd. A05BMW600D0001. The QC bottles read "A03" but the sample reads "A02."

A03 should be A02 MS/MSD² please use COC A02(2) LMF 8/23/11

Corrective Action:

☐ Client Contact Name:

Informed by:

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until:

If released, notify:

Project Management Review:

Date:

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

Guterl Steel

Lot #: F1H230464

[REDACTED]
Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.

[REDACTED]
[REDACTED]
September 7, 2011

Case Narrative
LOT NUMBER: F1H230464

This report contains the analytical results for the 14 samples received under chain of custody by TestAmerica in St. Louis on August 23, 2011. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1237192**

The CCV recoveries are outside the upper QC limit (greater than 20% D) for Bromomethane, Chloroethane, Trichlorofluoromethane and 1,2,3-Trichloropropane indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit or were not target analytes in the associated samples.

The LCS recovery for Bromomethane is outside the upper QC limit, indicating a potential positive bias for that analyte. This analyte was not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H230464 (2): A03MW703DD0001

F1H230464 (4): A02MW40001

F1H230464 (6): A04AMW701DD0001

F1H230464 (8): TRIP BLANK #4

Batch: 1244011

The samples were analyzed at a dilution based upon laboratory screening information. The reporting limit has been adjusted for the dilution.

The MS/MSD analysis was not performed with this batch; the associated samples are dilutions only. The MS/MSD was performed with the original analyses. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

The following compounds were removed from the initial calibration lowest point due to poor response. Ethyl ether, Methyl acetate, Acetonitrile, Ethyl acetate, 2-Butanone, Isobutanol, 1,4-dioxane, 2-Nitropropane and Cyclohexanone. Additionally, Acetone was removed from the lowest 2 points.

n-Propylbenzene and sec-Butylbenzene were removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration.

The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

Affected Samples:

F1H230464 (4): A02MW40001

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1236079**

There was insufficient digestate volume for analysis of thallium. Samples have been reprepared and the re-extract batch is 1242042.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

The serial dilution for aluminum is outside the established QC limits, indicating matrix interference.

1236079-F1H230464-002

The MS and MSD recovery for calcium and sodium are outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

1236079-F1H230464-010

The MS and MSD recovery for calcium, magnesium and sodium are outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

The MS and MSD recoveries for strontium are outside the established QC limits. The RPD is within method acceptance criteria indicating matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1H230464 (1): A03MW607D001
 F1H230464 (2): A03MW703DD0001
 F1H230464 (3): A03MW16D0001
 F1H230464 (4): A02MW40001
 F1H230464 (5): A03MW9004
 F1H230464 (6): A04AMW701DD0001
 F1H230464 (9): A03MW607D0001 DISSOLVED
 F1H230464 (10): A03MW703DD0001 DISSOLVED
 F1H230464 (11): A03MW16D0001 DISSOLVED
 F1H230464 (12): A02MW40001 DISSOLVED
 F1H230464 (13): A03MW9004 DISSOLVED
 F1H230464 (14): A04AMW701DD0001 DISSOLVED

The concentration of strontium in the CCB is greater than 2 times the MDL. The samples associated with this CCB exhibit concentrations greater than ten times the concentrations observed in the CCB.

Affected Samples:

F1H230464 (1): A03MW607D001
 F1H230464 (2): A03MW703DD0001
 F1H230464 (6): A04AMW701DD0001
 F1H230464 (9): A03MW607D0001 DISSOLVED
 F1H230464 (10): A03MW703DD0001 DISSOLVED
 F1H230464 (14): A04AMW701DD0001 DISSOLVED

Alkalinity (MCAWW 310.1)

Batch: 1242085

The MS recovery was outside the established QC limits. The analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1H230464 (2): A03MW703DD0001

Chloride (MCAWW 300.0A)**Batch: 1235169**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230464 (1): A03MW607D001

F1H230464 (2): A03MW703DD0001

F1H230464 (3): A03MW16D0001

F1H230464 (4): A02MW40001

F1H230464 (5): A03MW9004

F1H230464 (6): A04AMW701DD0001

F1H230464 (7): A04BMW707DD0001

Sulfate (MCAWW 300.0A)**Batch: 1235174**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230464 (1): A03MW607D001

F1H230464 (2): A03MW703DD0001

F1H230464 (3): A03MW16D0001

F1H230464 (4): A02MW40001

F1H230464 (5): A03MW9004

F1H230464 (6): A04AMW701DD0001

F1H230464 (7): A04BMW707DD0001

Fluoride (MCAWW 300.0A)**Batch: 1235170**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Fluoride are attributed to matrix interference.

Affected Samples:

F1H230464 (1): A03MW607D001

F1H230464 (2): A03MW703DD0001

F1H230464 (3): A03MW16D0001

F1H230464 (4): A02MW40001

F1H230464 (5): A03MW9004

F1H230464 (6): A04AMW701DD0001

F1H230464 (7): A04BMW707DD0001

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230464 (1): A03MW607D001

F1H230464 (3): A03MW16D0001

F1H230464 (5): A03MW9004

The following samples were reported ND at dilution, due to high concentrations of interfering anions, which masked the retention times of these target analytes in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230464 (7): A04BMW707DD0001

Nitrate (MCAWW 300.0A)

Batch: 1235171

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230464 (7): A04BMW707DD0001

Orthophosphate as P (MCAWW 300.0A)

Batch: 1235173

The following samples were reported ND at dilution, due to high concentrations of interfering anions, which masked the retention times of these target analytes in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H230464 (7): A04BMW707DD0001

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H230464 (1): A03MW607D001

F1H230464 (2): A03MW703DD0001

F1H230464 (3): A03MW16D0001

F1H230464 (4): A02MW40001

F1H230464 (5): A03MW9004

F1H230464 (6): A04AMW701DD0001

F1H230464 (7): A04BMW707DD0001

Nitrite (MCAWW 300.0A)**Batch: 1235172**

The following samples were reported ND at dilution, due to high concentrations of interfering anions, which masked the retention times of these target analytes in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrite are attributed to matrix interference.

Affected Samples:

F1H230464 (1): A03MW607D001

F1H230464 (2): A03MW703DD0001

F1H230464 (3): A03MW16D0001

F1H230464 (4): A02MW40001

F1H230464 (5): A03MW9004

F1H230464 (6): A04AMW701DD0001

F1H230464 (7): A04BMW707DD0001

Fiterable Resiue (TDS) (MCAWW 160.1)**Batch: 1236026**

The sample was analyzed at a dilution based on high concentrations of target analytes. The reporting limit has been adjusted accordingly.

Affected Samples:

F1H230464 (7): A04BMW707DD0001

There were no other nonconformances or observations noted with any analysis on this lot.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H230464

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H230464

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MLXMK	001	A03MW607D001	08/19/11	08:45
MLXMN	002	A03MW703DD0001	08/19/11	09:15
MLXM1	003	A03MW16D0001	08/19/11	10:30
MLXM3	004	A02MW40001	08/19/11	12:00
MLXM6	005	A03MW9004	08/19/11	
MLXNA	006	A04AMW701DD0001	08/19/11	13:40
MLXND	007	A04BMW707DD0001	08/19/11	14:05
MLXNE	008	TRIP BLANK #4	08/19/11	
MLXN1	009	A03MW607D0001 DISSOLVED	08/19/11	08:45
MLXN6	010	A03MW703DD0001 DISSOLVED	08/19/11	09:15
MLXN8	011	A03MW16D0001 DISSOLVED	08/19/11	10:30
MLXPA	012	A02MW40001 DISSOLVED	08/19/11	12:00
MLXPC	013	A03MW9004 DISSOLVED	08/19/11	
MLXPD	014	A04AMW701DD0001 DISSOLVED	08/19/11	13:40

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW607D001

TOTAL Metals

Lot-Sample #...: F1H230464-001

Matrix.....: WATER

Date Sampled...: 08/19/11 08:45 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	19.5	1.0	ug/L	SW846 6020A	08/24-08/26/11	MLXMK1AE
		Dilution Factor: 1		Analysis Time...: 03:49		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AQ
		Dilution Factor: 1		Analysis Time...: 22:42		
Aluminum	15200 NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AR
		Dilution Factor: 1		Analysis Time...: 22:42		
Arsenic	9.2 J	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AP
		Dilution Factor: 1		Analysis Time...: 22:42		
Barium	132	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AT
		Dilution Factor: 1		Analysis Time...: 22:42		
Beryllium	0.67 J	5	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AU
		Dilution Factor: 1		Analysis Time...: 22:42		
Calcium	719000 N	20000	ug/L	SW846 6010C	08/24-08/30/11	MLXMK1AV
		Dilution Factor: 20		Analysis Time...: 12:13		
Cadmium	1.0 J	5	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AW
		Dilution Factor: 1		Analysis Time...: 22:42		
Cobalt	6.5 J	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1AX
		Dilution Factor: 1		Analysis Time...: 22:42		
Chromium	17.1	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A0
		Dilution Factor: 1		Analysis Time...: 22:42		
Copper	21.6 J	25	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A1
		Dilution Factor: 1		Analysis Time...: 22:42		
Iron	16200	100	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A2
		Dilution Factor: 1		Analysis Time...: 22:42		
Magnesium	211000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A3
		Dilution Factor: 10		Analysis Time...: 13:55		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW607D001

TOTAL Metals

Lot-Sample #...: F1H230464-001

Matrix.....: WATER

		REPORTING			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Manganese	2380	15	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A4
		Dilution Factor: 1		Analysis Time...: 22:42		
Sodium	61600 N	1000	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A5
		Dilution Factor: 1		Analysis Time...: 11:23		
Nickel	19.3 J	40	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A6
		Dilution Factor: 1		Analysis Time...: 22:42		
Lead	41.8	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A7
		Dilution Factor: 1		Analysis Time...: 22:42		
Antimony	5.8 J	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A8
		Dilution Factor: 1		Analysis Time...: 22:42		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1A9
		Dilution Factor: 1		Analysis Time...: 22:42		
Strontium	830 N	100	ug/L	SW846 6010C	08/24-08/30/11	MLXMK1CA
		Dilution Factor: 20		Analysis Time...: 12:13		
Vanadium	15.3 J	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1CD
		Dilution Factor: 1		Analysis Time...: 22:42		
Zinc	305	20	ug/L	SW846 6010C	08/24-08/27/11	MLXMK1CE
		Dilution Factor: 1		Analysis Time...: 22:42		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXMK2CC
		Dilution Factor: 1		Analysis Time...: 19:06		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW607D001

General Chemistry

Lot-Sample #...: F1H230464-001 Work Order #...: MLXMK Matrix.....: WATER
 Date Sampled...: 08/19/11 08:45 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	101	20.0	mg/L	MCAWW 300.0A	08/20/11	1235169
			Dilution Factor: 100	Analysis Time...: 01:08		
Fluoride	4.9	0.50	mg/L	MCAWW 300.0A	08/20/11	1235170
			Dilution Factor: 5	Analysis Time...: 12:37		
Nitrate	0.042	0.020	mg/L	MCAWW 300.0A	08/20/11	1235171
			Dilution Factor: 1	Analysis Time...: 12:22		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/20/11	1235172
			Dilution Factor: 5	Analysis Time...: 12:37		
Phosphate as P, Ortho	0.077 B,J	0.50	mg/L	MCAWW 300.0A	08/20/11	1235173
			Dilution Factor: 1	Analysis Time...: 12:22		
Sulfate	63.8 J	2.5	mg/L	MCAWW 300.0A	08/20/11	1235174
			Dilution Factor: 5	Analysis Time...: 12:37		
Total Alkalinity	1490	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	754	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
			Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001

GC/MS Volatiles

Lot-Sample #....: F1H230464-002 Work Order #....: MLXMN1AC Matrix.....: WATER
 Date Sampled....: 08/19/11 09:15 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #....: 1237192 Analysis Time...: 01:10
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001

GC/MS Volatiles

Lot-Sample #....: F1H230464-002 Work Order #....: MLXMN1AC Matrix.....: WATER

<u>SURROGATE</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
Toluene-d8	111	(85 - 120)
Dibromofluoromethane	107	(85 - 115)
1,2-Dichloroethane-d4	107	(70 - 120)
4-Bromofluorobenzene	100	(75 - 120)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001

TOTAL Metals

Lot-Sample #...: F1H230464-002

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	0.28 J	1	ug/L	SW846 6020A	08/24-08/26/11	MLXMN1A5
		Dilution Factor: 1		Analysis Time...: 03:56		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AF
		Dilution Factor: 1		Analysis Time...: 22:49		
Aluminum	2010 NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AG
		Dilution Factor: 1		Analysis Time...: 22:49		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AE
		Dilution Factor: 1		Analysis Time...: 22:49		
Barium	55.0	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AH
		Dilution Factor: 1		Analysis Time...: 22:49		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AJ
		Dilution Factor: 1		Analysis Time...: 22:49		
Calcium	382000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AK
		Dilution Factor: 10		Analysis Time...: 14:02		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AL
		Dilution Factor: 1		Analysis Time...: 22:49		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AM
		Dilution Factor: 1		Analysis Time...: 22:49		
Chromium	11.5	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AN
		Dilution Factor: 1		Analysis Time...: 22:49		
Copper	11.4 J	25	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AP
		Dilution Factor: 1		Analysis Time...: 22:49		
Iron	4210	100	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AQ
		Dilution Factor: 1		Analysis Time...: 22:49		
Magnesium	110000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AR
		Dilution Factor: 10		Analysis Time...: 14:02		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001

TOTAL Metals

Lot-Sample #...: F1H230464-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	462	15	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AT
		Dilution Factor: 1		Analysis Time...: 22:49		
Sodium	191000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AU
		Dilution Factor: 10		Analysis Time...: 14:02		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AV
		Dilution Factor: 1		Analysis Time...: 22:49		
Lead	10.8	10	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1AW
		Dilution Factor: 1		Analysis Time...: 22:49		
Antimony	ND	50	ug/L	SW846 6010C	08/24-08/30/11	MLXMN1AX
		Dilution Factor: 5		Analysis Time...: 12:23		
Selenium	ND	75	ug/L	SW846 6010C	08/24-08/30/11	MLXMN1A0
		Dilution Factor: 5		Analysis Time...: 12:23		
Strontium	15200 N	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1A1
		Dilution Factor: 10		Analysis Time...: 14:02		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1A3
		Dilution Factor: 1		Analysis Time...: 22:49		
Zinc	41.9	20	ug/L	SW846 6010C	08/24-08/27/11	MLXMN1A4
		Dilution Factor: 1		Analysis Time...: 22:49		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXMN2A2
		Dilution Factor: 1		Analysis Time...: 19:12		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001

General Chemistry

Lot-Sample #...: F1H230464-002 Work Order #...: MLXMN Matrix.....: WATER
 Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	455	40.0	mg/L	MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 200		Analysis Time...: 07:18		
Fluoride	0.64	0.10	mg/L	MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 1		Analysis Time...: 06:32		
Nitrate	0.018 B	0.020	mg/L	MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 1		Analysis Time...: 06:32		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 10		Analysis Time...: 07:03		
Phosphate as P, Ortho	0.087 B,J	0.50	mg/L	MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 1		Analysis Time...: 06:32		
Sulfate	413 J	100	mg/L	MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 200		Analysis Time...: 07:18		
Total Alkalinity	382	5.0	mg/L	MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1940	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001

TOTAL Metals

Lot-Sample #...: F1H230464-003

Matrix.....: WATER

Date Sampled...: 08/19/11 10:30 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	29.3	1	ug/L	SW846 6020A	08/24-08/26/11	MLXM11AP
		Dilution Factor: 1		Analysis Time...: 04:23		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A2
		Dilution Factor: 1		Analysis Time...: 23:14		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A3
		Dilution Factor: 1		Analysis Time...: 23:14		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A1
		Dilution Factor: 1		Analysis Time...: 23:14		
Barium	118	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A4
		Dilution Factor: 1		Analysis Time...: 23:14		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A5
		Dilution Factor: 1		Analysis Time...: 23:14		
Calcium	58400 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A6
		Dilution Factor: 10		Analysis Time...: 14:27		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A7
		Dilution Factor: 1		Analysis Time...: 23:14		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM11A8
		Dilution Factor: 1		Analysis Time...: 23:14		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AA
		Dilution Factor: 1		Analysis Time...: 23:14		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AC
		Dilution Factor: 1		Analysis Time...: 23:14		
Iron	1590	100	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AD
		Dilution Factor: 1		Analysis Time...: 23:14		
Magnesium	63800 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AE
		Dilution Factor: 10		Analysis Time...: 14:27		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001

TOTAL Metals

Lot-Sample #...: F1H230464-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	808	15	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AF
		Dilution Factor: 1		Analysis Time...: 23:14		
Sodium	154000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AG
		Dilution Factor: 10		Analysis Time...: 14:27		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AH
		Dilution Factor: 1		Analysis Time...: 23:14		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AJ
		Dilution Factor: 1		Analysis Time...: 23:14		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AK
		Dilution Factor: 1		Analysis Time...: 23:14		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/27/11	MLXM11AL
		Dilution Factor: 1		Analysis Time...: 23:14		
Strontium	264 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLXM11A9
		Dilution Factor: 10		Analysis Time...: 12:20		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM11CC
		Dilution Factor: 1		Analysis Time...: 23:14		
Zinc	24.3	20	ug/L	SW846 6010C	08/24-08/27/11	MLXM11CD
		Dilution Factor: 1		Analysis Time...: 23:14		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXM12CA
		Dilution Factor: 1		Analysis Time...: 19:51		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001

General Chemistry

Lot-Sample #...: F1H230464-003 Work Order #...: MLXM1 Matrix.....: WATER
 Date Sampled...: 08/19/11 10:30 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	96.0	20.0	mg/L	MCAWW 300.0A	08/20/11	1235169
			Dilution Factor: 100	Analysis Time...: 04:44		
Fluoride	7.1	0.50	mg/L	MCAWW 300.0A	08/20/11	1235170
			Dilution Factor: 5	Analysis Time...: 04:13		
Nitrate	0.0064 B	0.020	mg/L	MCAWW 300.0A	08/20/11	1235171
			Dilution Factor: 1	Analysis Time...: 03:58		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/20/11	1235172
			Dilution Factor: 5	Analysis Time...: 04:13		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/20/11	1235173
			Dilution Factor: 1	Analysis Time...: 03:58		
Sulfate	53.5 J	2.5	mg/L	MCAWW 300.0A	08/20/11	1235174
			Dilution Factor: 5	Analysis Time...: 04:13		
Total Alkalinity	512	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
			Dilution Factor: 1	Analysis Time...: 00:00		
Total Dissolved Solids	744	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
			Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

GC/MS Volatiles

Lot-Sample #...: F1H230464-004 Work Order #...: MLXM31AC Matrix.....: WATER
 Date Sampled...: 08/19/11 12:00 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #...: 1237192 Analysis Time...: 02:30
 Dilution Factor: 10
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1-Dichloroethene	51 D	10	ug/L
1,2-Dichloroethene	26 D	20	ug/L
(total)			
1,2-Dichloropropane	ND	10	ug/L
Acetone	ND	20	ug/L
Benzene	ND	10	ug/L
Bromodichloromethane	ND	10	ug/L
Bromoform	ND	10	ug/L
Bromomethane	ND	20	ug/L
2-Butanone	ND	50	ug/L
Carbon disulfide	ND	20	ug/L
Carbon tetrachloride	ND	10	ug/L
Chlorobenzene	ND	20	ug/L
Dibromochloromethane	ND	10	ug/L
Chloroethane	ND	20	ug/L
Chloroform	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,1-Dichloroethane	110 D	10	ug/L
1,2-Dichloroethane	ND	10	ug/L
cis-1,3-Dichloropropene	ND	10	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	10	ug/L
2-Hexanone	ND	50	ug/L
Methylene chloride	ND	10	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Styrene	ND	10	ug/L
1,1,2,2-Tetrachloroethane	ND	10	ug/L
Tetrachloroethene	ND	10	ug/L
Toluene	ND	10	ug/L
1,1,2-Trichloroethane	ND	10	ug/L
Trichloroethene	80 D	10	ug/L
Vinyl chloride	1.1 J,D	20	ug/L
Xylenes (total)	ND	50	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

GC/MS Volatiles

Lot-Sample #...: F1H230464-004 Work Order #...: MLXM31AC Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	109	(85 - 120)
Dibromofluoromethane	107	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
4-Bromofluorobenzene	101	(75 - 120)

NOTE(S) :

D Result was obtained from the analysis of a dilution.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

GC/MS Volatiles

Lot-Sample #...: F1H230464-004 Work Order #...: MLXM32AC Matrix.....: WATER
Date Sampled...: 08/19/11 12:00 Date Received...: 08/23/11
Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
Prep Batch #...: 1244011 Analysis Time...: 21:28
Dilution Factor: 20
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,1-Trichloroethane	500 D	20	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Toluene-d8	93	(85 - 120)	
Dibromofluoromethane	95	(85 - 115)	
1,2-Dichloroethane-d4	99	(70 - 120)	
4-Bromofluorobenzene	95	(75 - 120)	

NOTE(S) :

D Result was obtained from the analysis of a dilution.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

TOTAL Metals

Lot-Sample #...: F1H230464-004

Matrix.....: WATER

Date Sampled...: 08/19/11 12:00 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	48.0	1	ug/L	SW846 6020A	08/24-08/26/11	MLXM31A5
		Dilution Factor: 1		Analysis Time...: 04:36		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AF
		Dilution Factor: 1		Analysis Time...: 23:27		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AG
		Dilution Factor: 1		Analysis Time...: 23:27		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AE
		Dilution Factor: 1		Analysis Time...: 23:27		
Barium	39.4 J	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AH
		Dilution Factor: 1		Analysis Time...: 23:27		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AJ
		Dilution Factor: 1		Analysis Time...: 23:27		
Calcium	61900 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AK
		Dilution Factor: 10		Analysis Time...: 14:40		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AL
		Dilution Factor: 1		Analysis Time...: 23:27		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AM
		Dilution Factor: 1		Analysis Time...: 23:27		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AN
		Dilution Factor: 1		Analysis Time...: 23:27		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AP
		Dilution Factor: 1		Analysis Time...: 23:27		
Iron	ND	100	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AQ
		Dilution Factor: 1		Analysis Time...: 23:27		
Magnesium	23000 N	1000	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AR
		Dilution Factor: 1		Analysis Time...: 12:20		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

TOTAL Metals

Lot-Sample #...: F1H230464-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	172	15	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AT
		Dilution Factor: 1		Analysis Time...: 23:27		
Sodium	25500 N	1000	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AU
		Dilution Factor: 1		Analysis Time...: 12:20		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AV
		Dilution Factor: 1		Analysis Time...: 23:27		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AW
		Dilution Factor: 1		Analysis Time...: 23:27		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM31AX
		Dilution Factor: 1		Analysis Time...: 23:27		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/27/11	MLXM31A0
		Dilution Factor: 1		Analysis Time...: 23:27		
Strontium	169 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLXM31A1
		Dilution Factor: 10		Analysis Time...: 12:32		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM31A3
		Dilution Factor: 1		Analysis Time...: 23:27		
Zinc	83.7	20	ug/L	SW846 6010C	08/24-08/27/11	MLXM31A4
		Dilution Factor: 1		Analysis Time...: 23:27		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXM32A2
		Dilution Factor: 1		Analysis Time...: 20:04		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

General Chemistry

Lot-Sample #...: F1H230464-004 Work Order #...: MLXM3 Matrix.....: WATER
 Date Sampled...: 08/19/11 12:00 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	43.3	2.0	mg/L	MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 10		Analysis Time...: 03:27		
Fluoride	1.2	0.10	mg/L	MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 1		Analysis Time...: 02:25		
Nitrate	0.14	0.020	mg/L	MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 1		Analysis Time...: 02:25		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 5		Analysis Time...: 02:40		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 1		Analysis Time...: 02:25		
Sulfate	44.4 J	2.5	mg/L	MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 5		Analysis Time...: 02:40		
Total Alkalinity	202	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	352	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004

TOTAL Metals

Lot-Sample #...: F1H230464-005

Matrix.....: WATER

Date Sampled...: 08/19/11

Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	28.4	1	ug/L	SW846 6020A	08/24-08/26/11	MLXM61AP
		Dilution Factor: 1		Analysis Time...: 04:56		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A2
		Dilution Factor: 1		Analysis Time...: 23:34		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A3
		Dilution Factor: 1		Analysis Time...: 23:34		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A1
		Dilution Factor: 1		Analysis Time...: 23:34		
Barium	119	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A4
		Dilution Factor: 1		Analysis Time...: 23:34		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A5
		Dilution Factor: 1		Analysis Time...: 23:34		
Calcium	54900 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A6
		Dilution Factor: 10		Analysis Time...: 14:46		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A7
		Dilution Factor: 1		Analysis Time...: 23:34		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM61A8
		Dilution Factor: 1		Analysis Time...: 23:34		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AA
		Dilution Factor: 1		Analysis Time...: 23:34		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AC
		Dilution Factor: 1		Analysis Time...: 23:34		
Iron	1590	100	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AD
		Dilution Factor: 1		Analysis Time...: 23:34		
Magnesium	62400 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AE
		Dilution Factor: 10		Analysis Time...: 14:46		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004

TOTAL Metals

Lot-Sample #...: F1H230464-005

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	811	15	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AF
		Dilution Factor: 1		Analysis Time...: 23:34		
Sodium	153000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AG
		Dilution Factor: 10		Analysis Time...: 14:46		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AH
		Dilution Factor: 1		Analysis Time...: 23:34		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AJ
		Dilution Factor: 1		Analysis Time...: 23:34		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AK
		Dilution Factor: 1		Analysis Time...: 23:34		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/27/11	MLXM61AL
		Dilution Factor: 1		Analysis Time...: 23:34		
Strontium	162 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLXM61A9
		Dilution Factor: 10		Analysis Time...: 12:39		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXM61CC
		Dilution Factor: 1		Analysis Time...: 23:34		
Zinc	24.0	20	ug/L	SW846 6010C	08/24-08/27/11	MLXM61CD
		Dilution Factor: 1		Analysis Time...: 23:34		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXM62CA
		Dilution Factor: 1		Analysis Time...: 20:10		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004

General Chemistry

Lot-Sample #...: F1H230464-005 Work Order #...: MLXM6 Matrix.....: WATER
 Date Sampled...: 08/19/11 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	95.4	20.0	mg/L	MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 100		Analysis Time...: 02:10		
Fluoride	7.1	0.50	mg/L	MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 5		Analysis Time...: 01:39		
Nitrate	0.10	0.020	mg/L	MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 1		Analysis Time...: 01:23		
Nitrite	ND	0.10	mg/L	MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 5		Analysis Time...: 01:39		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 1		Analysis Time...: 01:23		
Sulfate	53.5 J	2.5	mg/L	MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 5		Analysis Time...: 01:39		
Total Alkalinity	503	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	747	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001

GC/MS Volatiles

Lot-Sample #...: F1H230464-006 Work Order #...: MLXNA1AN Matrix.....: WATER
 Date Sampled...: 08/19/11 13:40 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #...: 1237192 Analysis Time...: 02:56
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.40 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.42 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001

GC/MS Volatiles

Lot-Sample #...: F1H230464-006 Work Order #...: MLXNA1AN Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	103	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001

TOTAL Metals

Lot-Sample #...: F1H230464-006

Matrix.....: WATER

Date Sampled...: 08/19/11 13:40 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	1.4	1	ug/L	SW846 6020A	08/24-08/26/11	MLXNA1AG
		Dilution Factor: 1		Analysis Time...: 05:03		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AR
		Dilution Factor: 1		Analysis Time...: 23:40		
Aluminum	236 NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AT
		Dilution Factor: 1		Analysis Time...: 23:40		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AQ
		Dilution Factor: 1		Analysis Time...: 23:40		
Barium	26.1 J	50	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AU
		Dilution Factor: 1		Analysis Time...: 23:40		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AV
		Dilution Factor: 1		Analysis Time...: 23:40		
Calcium	141000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AW
		Dilution Factor: 10		Analysis Time...: 14:53		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AX
		Dilution Factor: 1		Analysis Time...: 23:40		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A0
		Dilution Factor: 1		Analysis Time...: 23:40		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A1
		Dilution Factor: 1		Analysis Time...: 23:40		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A2
		Dilution Factor: 1		Analysis Time...: 23:40		
Iron	275	100	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A3
		Dilution Factor: 1		Analysis Time...: 23:40		
Magnesium	60700 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A4
		Dilution Factor: 10		Analysis Time...: 14:53		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001

TOTAL Metals

Lot-Sample #...: F1H230464-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	20.6	15	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A5
		Dilution Factor: 1		Analysis Time...: 23:40		
Sodium	254000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A6
		Dilution Factor: 10		Analysis Time...: 14:53		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A7
		Dilution Factor: 1		Analysis Time...: 23:40		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A8
		Dilution Factor: 1		Analysis Time...: 23:40		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1A9
		Dilution Factor: 1		Analysis Time...: 23:40		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AA
		Dilution Factor: 1		Analysis Time...: 23:40		
Strontium	2650 N	50	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AC
		Dilution Factor: 10		Analysis Time...: 14:53		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AE
		Dilution Factor: 1		Analysis Time...: 23:40		
Zinc	ND	20	ug/L	SW846 6010C	08/24-08/27/11	MLXNA1AF
		Dilution Factor: 1		Analysis Time...: 23:40		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXNA2AD
		Dilution Factor: 1		Analysis Time...: 20:17		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001

General Chemistry

Lot-Sample #....: F1H230464-006 Work Order #....: MLXNA Matrix.....: WATER
 Date Sampled....: 08/19/11 13:40 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	488	40.0	mg/L	MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 200		Analysis Time...: 05:46		
Fluoride	0.56	0.10	mg/L	MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 1		Analysis Time...: 04:59		
Nitrate	0.018 B	0.020	mg/L	MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 1		Analysis Time...: 04:59		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 10		Analysis Time...: 05:30		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 1		Analysis Time...: 04:59		
Sulfate	185 J	5.0	mg/L	MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 10		Analysis Time...: 05:30		
Total Alkalinity	257	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1430	10.0	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001

General Chemistry

Lot-Sample #...: F1H230464-007 Work Order #...: MLXND Matrix.....: WATER
 Date Sampled...: 08/19/11 14:05 Date Received...: 08/23/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	5750	400	mg/L	MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 2000		Analysis Time...: 10:54		
Fluoride	0.40 B	2.0	mg/L	MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 20		Analysis Time...: 10:23		
Nitrate	0.44	0.040	mg/L	MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 2		Analysis Time...: 10:08		
Nitrite	ND	4.0	mg/L	MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 200		Analysis Time...: 10:39		
Phosphate as P, Ortho	0.63 B,J	1.0	mg/L	MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 2		Analysis Time...: 10:08		
Sulfate	1860 J	100	mg/L	MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 200		Analysis Time...: 10:39		
Total Alkalinity	1750	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	13500	1000	mg/L	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 100		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #4

GC/MS Volatiles

Lot-Sample #....: F1H230464-008 Work Order #....: MLXNE1AA Matrix.....: WATER
 Date Sampled....: 08/19/11 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #....: 1237192 Analysis Time...: 03:22
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
4-Methyl-2-pentanone	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	3.0	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Acetone	9.9	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	0.16 J	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	0.13 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #4

GC/MS Volatiles

Lot-Sample #....: F1H230464-008 Work Order #....: MLXNE1AA Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	108	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	100	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW607D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-009

Matrix.....: WATER

Date Sampled...: 08/19/11 08:45 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	12.3	1	ug/L	SW846 6020A	08/24-08/26/11	MLXN11A2
		Dilution Factor: 1		Analysis Time...: 05:09		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AC
		Dilution Factor: 1		Analysis Time...: 23:59		
Aluminum	2580 NE	200	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AD
		Dilution Factor: 1		Analysis Time...: 23:59		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AA
		Dilution Factor: 1		Analysis Time...: 23:59		
Barium	64.1	50	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AE
		Dilution Factor: 1		Analysis Time...: 23:59		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AF
		Dilution Factor: 1		Analysis Time...: 23:59		
Calcium	159000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AG
		Dilution Factor: 10		Analysis Time...: 15:12		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AH
		Dilution Factor: 1		Analysis Time...: 23:59		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AJ
		Dilution Factor: 1		Analysis Time...: 23:59		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AK
		Dilution Factor: 1		Analysis Time...: 23:59		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AL
		Dilution Factor: 1		Analysis Time...: 23:59		
Iron	2440	100	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AM
		Dilution Factor: 1		Analysis Time...: 23:59		
Magnesium	101000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN11AN
		Dilution Factor: 10		Analysis Time...: 15:12		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW607D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-009

Matrix.....: WATER

		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD		ANALYSIS DATE	ORDER #
Manganese	561	15	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AP
		Dilution Factor: 1		Analysis Time...: 23:59			
Sodium	60200 N	1000	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AQ
		Dilution Factor: 1		Analysis Time...: 12:51			
Nickel	ND	40	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AR
		Dilution Factor: 1		Analysis Time...: 23:59			
Lead	6.0 J	10	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AT
		Dilution Factor: 1		Analysis Time...: 23:59			
Antimony	4.4 J	10	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AU
		Dilution Factor: 1		Analysis Time...: 23:59			
Selenium	ND	15	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AV
		Dilution Factor: 1		Analysis Time...: 23:59			
Strontium	412 N	50	ug/L	SW846 6010C		08/24-08/27/11	MLXN11AW
		Dilution Factor: 10		Analysis Time...: 15:12			
Vanadium	ND	50	ug/L	SW846 6010C		08/24-08/27/11	MLXN11A0
		Dilution Factor: 1		Analysis Time...: 23:59			
Zinc	47.7	20	ug/L	SW846 6010C		08/24-08/27/11	MLXN11A1
		Dilution Factor: 1		Analysis Time...: 23:59			
Prep Batch #...: 1242042							
Thallium	ND	20.0	ug/L	SW846 6010C		08/29-08/31/11	MLXN12AX
		Dilution Factor: 1		Analysis Time...: 20:23			

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-010

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	ND	1	ug/L	SW846 6020A	08/24-08/26/11	MLXN61AD
		Dilution Factor: 1		Analysis Time...: 05:16		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AG
		Dilution Factor: 1		Analysis Time...: 00:06		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AH
		Dilution Factor: 1		Analysis Time...: 00:06		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AF
		Dilution Factor: 1		Analysis Time...: 00:06		
Barium	45.7 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AJ
		Dilution Factor: 1		Analysis Time...: 00:06		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AK
		Dilution Factor: 1		Analysis Time...: 00:06		
Calcium	265000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN61AL
		Dilution Factor: 10		Analysis Time...: 15:19		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AM
		Dilution Factor: 1		Analysis Time...: 00:06		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AN
		Dilution Factor: 1		Analysis Time...: 00:06		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AP
		Dilution Factor: 1		Analysis Time...: 00:06		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AQ
		Dilution Factor: 1		Analysis Time...: 00:06		
Iron	521	100	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AR
		Dilution Factor: 1		Analysis Time...: 00:06		
Magnesium	76000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN61AT
		Dilution Factor: 10		Analysis Time...: 15:19		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	18.7	15	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AU
		Dilution Factor: 1		Analysis Time...: 00:06		
Sodium	187000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN61AV
		Dilution Factor: 10		Analysis Time...: 15:19		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AW
		Dilution Factor: 1		Analysis Time...: 00:06		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AX
		Dilution Factor: 1		Analysis Time...: 00:06		
Antimony	ND	50	ug/L	SW846 6010C	08/24-08/30/11	MLXN61A0
		Dilution Factor: 5		Analysis Time...: 12:49		
Selenium	ND	75	ug/L	SW846 6010C	08/24-08/30/11	MLXN61A1
		Dilution Factor: 5		Analysis Time...: 12:49		
Strontium	15300 N	50	ug/L	SW846 6010C	08/24-08/27/11	MLXN61A2
		Dilution Factor: 10		Analysis Time...: 15:19		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AA
		Dilution Factor: 1		Analysis Time...: 00:06		
Zinc	ND	20	ug/L	SW846 6010C	08/24-08/28/11	MLXN61AC
		Dilution Factor: 1		Analysis Time...: 00:06		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXN62A3
		Dilution Factor: 1		Analysis Time...: 20:30		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-011

Matrix.....: WATER

Date Sampled...: 08/19/11 10:30 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	27.7	1	ug/L	SW846 6020A	08/24-08/26/11	MLXN81AD
		Dilution Factor: 1		Analysis Time...: 05:36		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AG
		Dilution Factor: 1		Analysis Time...: 00:25		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AH
		Dilution Factor: 1		Analysis Time...: 00:25		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AF
		Dilution Factor: 1		Analysis Time...: 00:25		
Barium	116	50	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AJ
		Dilution Factor: 1		Analysis Time...: 00:25		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AK
		Dilution Factor: 1		Analysis Time...: 00:25		
Calcium	52800 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN81AL
		Dilution Factor: 10		Analysis Time...: 15:38		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AM
		Dilution Factor: 1		Analysis Time...: 00:25		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AN
		Dilution Factor: 1		Analysis Time...: 00:25		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AP
		Dilution Factor: 1		Analysis Time...: 00:25		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AQ
		Dilution Factor: 1		Analysis Time...: 00:25		
Iron	1490	100	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AR
		Dilution Factor: 1		Analysis Time...: 00:25		
Magnesium	59400 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN81AT
		Dilution Factor: 10		Analysis Time...: 15:38		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-011

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Manganese	774	15	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AU
		Dilution Factor: 1		Analysis Time...: 00:25		
Sodium	147000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXN81AV
		Dilution Factor: 10		Analysis Time...: 15:38		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AW
		Dilution Factor: 1		Analysis Time...: 00:25		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AX
		Dilution Factor: 1		Analysis Time...: 00:25		
Antimony	4.1 J	10	ug/L	SW846 6010C	08/24-08/28/11	MLXN81A0
		Dilution Factor: 1		Analysis Time...: 00:25		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLXN81A1
		Dilution Factor: 1		Analysis Time...: 00:25		
Strontium	207 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLXN81A2
		Dilution Factor: 10		Analysis Time...: 12:45		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AA
		Dilution Factor: 1		Analysis Time...: 00:25		
Zinc	22.8	20	ug/L	SW846 6010C	08/24-08/28/11	MLXN81AC
		Dilution Factor: 1		Analysis Time...: 00:25		
Prep Batch #...: 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXN82A3
		Dilution Factor: 1		Analysis Time...: 21:02		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-012

Matrix.....: WATER

Date Sampled...: 08/19/11 12:00 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	46.0	1	ug/L	SW846 6020A	08/24-08/26/11	MLXPA1AD
		Dilution Factor: 1		Analysis Time...: 05:42		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AG
		Dilution Factor: 1		Analysis Time...: 00:32		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AH
		Dilution Factor: 1		Analysis Time...: 00:32		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AF
		Dilution Factor: 1		Analysis Time...: 00:32		
Barium	34.3 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AJ
		Dilution Factor: 1		Analysis Time...: 00:32		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AK
		Dilution Factor: 1		Analysis Time...: 00:32		
Calcium	66000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPA1AL
		Dilution Factor: 10		Analysis Time...: 15:44		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AM
		Dilution Factor: 1		Analysis Time...: 00:32		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AN
		Dilution Factor: 1		Analysis Time...: 00:32		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AP
		Dilution Factor: 1		Analysis Time...: 00:32		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AQ
		Dilution Factor: 1		Analysis Time...: 00:32		
Iron	ND	100	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AR
		Dilution Factor: 1		Analysis Time...: 00:32		
Magnesium	22800 N	1000	ug/L	SW846 6010C	08/24-08/27/11	MLXPA1AT
		Dilution Factor: 1		Analysis Time...: 13:23		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-012

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	79.8	15	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AU
		Dilution Factor: 1		Analysis Time...: 00:32		
Sodium	25400 N	1000	ug/L	SW846 6010C	08/24-08/27/11	MLXPA1AV
		Dilution Factor: 1		Analysis Time...: 13:23		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AW
		Dilution Factor: 1		Analysis Time...: 00:32		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AX
		Dilution Factor: 1		Analysis Time...: 00:32		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1A0
		Dilution Factor: 1		Analysis Time...: 00:32		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1A1
		Dilution Factor: 1		Analysis Time...: 00:32		
Strontium	207 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLXPA1A2
		Dilution Factor: 10		Analysis Time...: 12:51		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AA
		Dilution Factor: 1		Analysis Time...: 00:32		
Zinc	73.0	20	ug/L	SW846 6010C	08/24-08/28/11	MLXPA1AC
		Dilution Factor: 1		Analysis Time...: 00:32		

Prep Batch #...: 1242042

Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXPA2A3
		Dilution Factor: 1		Analysis Time...: 21:08		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-013

Matrix.....: WATER

Date Sampled...: 08/19/11

Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	28.2	1	ug/L	SW846 6020A	08/24-08/26/11	MLXPC1AD
		Dilution Factor: 1		Analysis Time...: 05:49		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AG
		Dilution Factor: 1		Analysis Time...: 00:38		
Aluminum	ND NE	200	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AH
		Dilution Factor: 1		Analysis Time...: 00:38		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AF
		Dilution Factor: 1		Analysis Time...: 00:38		
Barium	119	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AJ
		Dilution Factor: 1		Analysis Time...: 00:38		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AK
		Dilution Factor: 1		Analysis Time...: 00:38		
Calcium	56000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPC1AL
		Dilution Factor: 10		Analysis Time...: 15:50		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AM
		Dilution Factor: 1		Analysis Time...: 00:38		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AN
		Dilution Factor: 1		Analysis Time...: 00:38		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AP
		Dilution Factor: 1		Analysis Time...: 00:38		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AQ
		Dilution Factor: 1		Analysis Time...: 00:38		
Iron	1540	100	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AR
		Dilution Factor: 1		Analysis Time...: 00:38		
Magnesium	63100 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPC1AT
		Dilution Factor: 10		Analysis Time...: 15:50		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-013

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	796	15	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AU
		Dilution Factor: 1		Analysis Time...: 00:38		
Sodium	155000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPC1AV
		Dilution Factor: 10		Analysis Time...: 15:50		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AW
		Dilution Factor: 1		Analysis Time...: 00:38		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AX
		Dilution Factor: 1		Analysis Time...: 00:38		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1A0
		Dilution Factor: 1		Analysis Time...: 00:38		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1A1
		Dilution Factor: 1		Analysis Time...: 00:38		
Strontium	202 N	50	ug/L	SW846 6010C	08/24-08/30/11	MLXPC1A2
		Dilution Factor: 10		Analysis Time...: 12:57		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AA
		Dilution Factor: 1		Analysis Time...: 00:38		
Zinc	23.3	20	ug/L	SW846 6010C	08/24-08/28/11	MLXPC1AC
		Dilution Factor: 1		Analysis Time...: 00:38		

Prep Batch #...: 1242042

Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXPC2A3
		Dilution Factor: 1		Analysis Time...: 21:15		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-014

Matrix.....: WATER

Date Sampled...: 08/19/11 13:40 Date Received...: 08/23/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1236077						
Uranium	1.5	1	ug/L	SW846 6020A	08/24-08/26/11	MLXPD1AD
		Dilution Factor: 1		Analysis Time...: 05:56		
Prep Batch #...: 1236079						
Silver	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AG
		Dilution Factor: 1		Analysis Time...: 00:45		
Aluminum	80.8 BNE	200	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AH
		Dilution Factor: 1		Analysis Time...: 00:45		
Arsenic	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AF
		Dilution Factor: 1		Analysis Time...: 00:45		
Barium	23.1 J	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AJ
		Dilution Factor: 1		Analysis Time...: 00:45		
Beryllium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AK
		Dilution Factor: 1		Analysis Time...: 00:45		
Calcium	141000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPD1AL
		Dilution Factor: 10		Analysis Time...: 15:57		
Cadmium	ND	5	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AM
		Dilution Factor: 1		Analysis Time...: 00:45		
Cobalt	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AN
		Dilution Factor: 1		Analysis Time...: 00:45		
Chromium	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AP
		Dilution Factor: 1		Analysis Time...: 00:45		
Copper	ND	25	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AQ
		Dilution Factor: 1		Analysis Time...: 00:45		
Iron	75.2 J	100	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AR
		Dilution Factor: 1		Analysis Time...: 00:45		
Magnesium	58100 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPD1AT
		Dilution Factor: 10		Analysis Time...: 15:57		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H230464-014

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	12.5 J	15	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AU
		Dilution Factor: 1		Analysis Time...: 00:45		
Sodium	252000 N	10000	ug/L	SW846 6010C	08/24-08/27/11	MLXPD1AV
		Dilution Factor: 10		Analysis Time...: 15:57		
Nickel	ND	40	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AW
		Dilution Factor: 1		Analysis Time...: 00:45		
Lead	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AX
		Dilution Factor: 1		Analysis Time...: 00:45		
Antimony	ND	10	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1A0
		Dilution Factor: 1		Analysis Time...: 00:45		
Selenium	ND	15	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1A1
		Dilution Factor: 1		Analysis Time...: 00:45		
Strontium	2590 N	50	ug/L	SW846 6010C	08/24-08/27/11	MLXPD1A2
		Dilution Factor: 10		Analysis Time...: 15:57		
Vanadium	ND	50	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AA
		Dilution Factor: 1		Analysis Time...: 00:45		
Zinc	7.1 J	20	ug/L	SW846 6010C	08/24-08/28/11	MLXPD1AC
		Dilution Factor: 1		Analysis Time...: 00:45		

Prep Batch #...: 1242042

Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	MLXPD2A3
		Dilution Factor: 1		Analysis Time...: 21:21		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H230464
 MB Lot-Sample #: F1H250000-192

Work Order #...: ML3581AA

Matrix.....: WATER

Analysis Date...: 08/25/11

Prep Date.....: 08/25/11

Analysis Time...: 22:13

Dilution Factor: 1

Prep Batch #...: 1237192

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	2.0	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	2.0	ug/L	SW846	8260B
2-Butanone	ND	5.0	ug/L	SW846	8260B
Carbon disulfide	ND	2.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	2.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	2.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846	8260B
(total)					
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
***** INVALID DATA ON FOLLOWING LINE *****					
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	5.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	2.0	ug/L	SW846	8260B
Xylenes (total)	ND	5.0	ug/L	SW846	8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	106	(85 - 120)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H230464

Work Order #...: ML3581AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Dibromofluoromethane	102	(85 - 115)		
1,2-Dichloroethane-d4	102	(70 - 120)		
4-Bromofluorobenzene	99	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H230464 Work Order #...: ML7GA1AA Matrix.....: WATER
MB Lot-Sample #: F1I010000-011 Prep Date.....: 08/31/11 Analysis Time...: 19:26
Analysis Date...: 08/31/11 Prep Batch #...: 1244011
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Toluene-d8	98	(85 - 120)
Dibromofluoromethane	99	(85 - 115)
1,2-Dichloroethane-d4	104	(70 - 120)
4-Bromofluorobenzene	97	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H240000-077 Prep Batch #...: 1236077						
Uranium	ND	1.0	ug/L	SW846 6020A	08/24-08/26/11	ML0JJ1AA
		Dilution Factor: 1				
		Analysis Time...: 03:36				
MB Lot-Sample #: F1H240000-079 Prep Batch #...: 1236079						
Aluminum	ND	200	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AD
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Antimony	ND	10.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AU
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AA
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Barium	ND	50.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AE
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AF
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AH
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Calcium	ND	1000	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AG
		Dilution Factor: 1				
		Analysis Time...: 11:10				
Chromium	ND	10.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AK
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AJ
		Dilution Factor: 1				
		Analysis Time...: 22:16				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AL
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Iron	ND	100	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AM
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Lead	ND	10.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AT
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Magnesium	ND	1000	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AN
		Dilution Factor: 1				
		Analysis Time...: 11:10				
Manganese	ND	15.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AP
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Nickel	ND	40.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AR
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Selenium	ND	15.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AV
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Silver	ND	10.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AC
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Sodium	ND	1000	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AQ
		Dilution Factor: 1				
		Analysis Time...: 11:10				
Strontium	1.0 J	5.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1AW
		Dilution Factor: 1				
		Analysis Time...: 11:10				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1A0
		Dilution Factor: 1				
		Analysis Time...: 22:16				
Zinc	ND	20.0	ug/L	SW846 6010C	08/24-08/27/11	ML0JQ1A1
		Dilution Factor: 1				
		Analysis Time...: 22:16				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H300000-042 Prep Batch #... 1242042						
Thallium	ND	20.0	ug/L	SW846 6010C	08/29-08/31/11	ML43Q1AA
		Dilution Factor: 1				
		Analysis Time...: 18:53				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result, Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H230464

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: ML2HP1AA 0.20	mg/L	MB Lot-Sample #: F1H230000-169 MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 1 Analysis Time...: 12:06				
Fluoride	ND	Work Order #: ML2HR1AA 0.10	mg/L	MB Lot-Sample #: F1H230000-170 MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 1 Analysis Time...: 12:06				
Nitrate	ND	Work Order #: ML2HV1AA 0.020	mg/L	MB Lot-Sample #: F1H230000-171 MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 1 Analysis Time...: 12:06				
Nitrite	ND	Work Order #: ML2HX1AA 0.020	mg/L	MB Lot-Sample #: F1H230000-172 MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 1 Analysis Time...: 12:06				
Phosphate as P, Ortho	0.24 B	Work Order #: ML2H11AA 0.50	mg/L	MB Lot-Sample #: F1H230000-173 MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 1 Analysis Time...: 12:06				
Sulfate	0.052 B	Work Order #: ML2H21AA 0.50	mg/L	MB Lot-Sample #: F1H230000-174 MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 1 Analysis Time...: 12:06				
Total Alkalinity	ND	Work Order #: ML3DL1AA 5.0	mg/L	MB Lot-Sample #: F1H260000-032 MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Alkalinity	ND	Work Order #: ML51P1AA 5.0	mg/L	MB Lot-Sample #: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: ML0CP1AA 10.0	mg/L	MB Lot-Sample #: F1H240000-026 MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1 Analysis Time...: 00:00				

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H230464

Matrix.....: WATER

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230464 Work Order #...: ML3581AC Matrix.....: WATER
 LCS Lot-Sample#: F1H250000-192
 Prep Date.....: 08/25/11 Analysis Date...: 08/25/11
 Prep Batch #...: 1237192 Analysis Time...: 21:20
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
cis-1,3-Dichloropropene	104	(70 - 130)	SW846 8260B
Dibromochloromethane	102	(60 - 135)	SW846 8260B
Vinyl chloride	116	(50 - 145)	SW846 8260B
Bromomethane	153 a	(30 - 145)	SW846 8260B
Chloroethane	120	(60 - 135)	SW846 8260B
Acetone	105	(40 - 140)	SW846 8260B
1,1-Dichloroethene	100	(70 - 130)	SW846 8260B
Methylene chloride	90	(55 - 140)	SW846 8260B
Carbon disulfide	95	(35 - 160)	SW846 8260B
1,1-Dichloroethane	100	(70 - 135)	SW846 8260B
2-Butanone	105	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	98	(85 - 115)	SW846 8260B
Chloroform	99	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	101	(65 - 130)	SW846 8260B
Carbon tetrachloride	101	(65 - 140)	SW846 8260B
1,2-Dichloroethane	97	(70 - 130)	SW846 8260B
Benzene	99	(80 - 120)	SW846 8260B
Trichloroethene	95	(70 - 125)	SW846 8260B
1,2-Dichloropropane	97	(75 - 125)	SW846 8260B
Bromodichloromethane	100	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	100	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)	SW846 8260B
Toluene	107	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	104	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	100	(75 - 125)	SW846 8260B
2-Hexanone	96	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	110	(60 - 135)	SW846 8260B
Chlorobenzene	100	(80 - 120)	SW846 8260B
Bromoform	106	(70 - 130)	SW846 8260B
Ethylbenzene	106	(75 - 125)	SW846 8260B
Styrene	110	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	106	(65 - 130)	SW846 8260B
Tetrachloroethene	99	(45 - 150)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230464 Work Order #...: ML3581AC Matrix.....: WATER
LCS Lot-Sample#: F1H250000-192

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,2-Dichlorobenzene	102	(70 - 120)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	110	(85 - 120)
Dibromofluoromethane	105	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230464 Work Order #...: ML7GA1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1I010000-011 ML7GA1AD-LCSD
 Prep Date.....: 08/31/11 Analysis Date...: 09/01/11
 Prep Batch #...: 1244011 Analysis Time...: 04:21
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1,1-Trichloroethane	107	(65 - 130)			SW846 8260B
	110	(65 - 130)	2.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	96	(85 - 120)
	102	(85 - 120)
Dibromofluoromethane	98	(85 - 115)
	95	(85 - 115)
1,2-Dichloroethane-d4	96	(70 - 120)
	91	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	103	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H240000-077 Prep Batch #... : 1236077					
Uranium	107	(80 - 120)	SW846 6020A	08/24-08/26/11	ML0JJ1AC
		Dilution Factor: 1	Analysis Time...	03:43	
LCS Lot-Sample#: F1H240000-079 Prep Batch #... : 1236079					
Arsenic	102	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A2
		Dilution Factor: 1	Analysis Time...	22:23	
Silver	92	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A3
		Dilution Factor: 1	Analysis Time...	22:23	
Aluminum	106	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A4
		Dilution Factor: 1	Analysis Time...	22:23	
Barium	107	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A5
		Dilution Factor: 1	Analysis Time...	22:23	
Beryllium	115	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A6
		Dilution Factor: 1	Analysis Time...	22:23	
Calcium	106	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A7
		Dilution Factor: 1	Analysis Time...	11:16	
Cadmium	106	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A8
		Dilution Factor: 1	Analysis Time...	22:23	
Cobalt	102	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1A9
		Dilution Factor: 1	Analysis Time...	22:23	
Chromium	103	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CA
		Dilution Factor: 1	Analysis Time...	22:23	
Copper	102	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CC
		Dilution Factor: 1	Analysis Time...	22:23	
Iron	108	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CD
		Dilution Factor: 1	Analysis Time...	22:23	
Magnesium	100	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CE
		Dilution Factor: 1	Analysis Time...	11:16	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	106	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CF
		Dilution Factor: 1		Analysis Time...: 22:23	
Sodium	104	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CG
		Dilution Factor: 1		Analysis Time...: 11:16	
Nickel	103	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CH
		Dilution Factor: 1		Analysis Time...: 22:23	
Lead	102	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CJ
		Dilution Factor: 1		Analysis Time...: 22:23	
Antimony	104	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CK
		Dilution Factor: 1		Analysis Time...: 22:23	
Selenium	104	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CL
		Dilution Factor: 1		Analysis Time...: 22:23	
Strontium	99	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CM
		Dilution Factor: 1		Analysis Time...: 11:16	
Vanadium	104	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CP
		Dilution Factor: 1		Analysis Time...: 22:23	
Zinc	112	(80 - 120)	SW846 6010C	08/24-08/27/11	ML0JQ1CQ
		Dilution Factor: 1		Analysis Time...: 22:23	
LCS Lot-Sample#: F1H300000-042 Prep Batch #...: 1242042					
Thallium	102	(80 - 120)	SW846 6010C	08/29-08/31/11	ML43Q1AC
		Dilution Factor: 1		Analysis Time...: 18:59	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230464

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	96	Work Order #: ML2HP1AC (90 - 110)	LCS Lot-Sample#: F1H230000-169 MCAWW 300.0A	08/20/11	1235169
		Dilution Factor: 1	Analysis Time...: 11:51		
Fluoride	98	Work Order #: ML2HR1AC (90 - 110)	LCS Lot-Sample#: F1H230000-170 MCAWW 300.0A	08/20/11	1235170
		Dilution Factor: 1	Analysis Time...: 11:51		
Nitrate	100	Work Order #: ML2HV1AC (90 - 110)	LCS Lot-Sample#: F1H230000-171 MCAWW 300.0A	08/20/11	1235171
		Dilution Factor: 1	Analysis Time...: 11:51		
Nitrite	99	Work Order #: ML2HX1AC (90 - 110)	LCS Lot-Sample#: F1H230000-172 MCAWW 300.0A	08/20/11	1235172
		Dilution Factor: 1	Analysis Time...: 11:51		
Phosphate as P, Ortho	98	Work Order #: ML2H11AC (90 - 110)	LCS Lot-Sample#: F1H230000-173 MCAWW 300.0A	08/20/11	1235173
		Dilution Factor: 1	Analysis Time...: 11:51		
Sulfate	96	Work Order #: ML2H21AC (90 - 110)	LCS Lot-Sample#: F1H230000-174 MCAWW 300.0A	08/20/11	1235174
		Dilution Factor: 1	Analysis Time...: 11:51		
Total Alkalinity	94	Work Order #: ML3DL1AC (90 - 110)	LCS Lot-Sample#: F1H260000-032 MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: ML3DL1AD (90 - 110)	LCS Lot-Sample#: F1H260000-032 MCAWW 310.1	08/26/11	1238032
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: ML51P1AC (90 - 110)	LCS Lot-Sample#: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1	Analysis Time...: 00:00		
Total Alkalinity	94	Work Order #: ML51P1AD (90 - 110)	LCS Lot-Sample#: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1	Analysis Time...: 00:00		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230464

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Dissolved Solids	98	(90 - 113)	MCAWW 160.1	08/24-08/25/11	1236026
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230464 Work Order #...: MLXMN1C4-MS Matrix.....: WATER
 MS Lot-Sample #: F1H230464-002 MLXMN1C5-MSD
 Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11
 Prep Date.....: 08/25/11 Analysis Date...: 08/26/11
 Prep Batch #...: 1237192 Analysis Time...: 01:37
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	96	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.1	(0-20)	SW846 8260B
Dibromochloromethane	105	(60 - 135)			SW846 8260B
	102	(60 - 135)	2.0	(0-20)	SW846 8260B
Vinyl chloride	106	(50 - 145)			SW846 8260B
	110	(50 - 145)	4.4	(0-20)	SW846 8260B
Bromomethane	144	(30 - 145)			SW846 8260B
	137	(30 - 145)	5.1	(0-20)	SW846 8260B
Chloroethane	117	(60 - 135)			SW846 8260B
	120	(60 - 135)	2.1	(0-20)	SW846 8260B
Acetone	103	(40 - 140)			SW846 8260B
	102	(40 - 140)	0.97	(0-20)	SW846 8260B
1,1-Dichloroethene	108	(70 - 130)			SW846 8260B
	106	(70 - 130)	2.0	(0-20)	SW846 8260B
Methylene chloride	93	(55 - 140)			SW846 8260B
	92	(55 - 140)	0.97	(0-20)	SW846 8260B
Carbon disulfide	105	(35 - 160)			SW846 8260B
	104	(35 - 160)	0.57	(0-20)	SW846 8260B
1,1-Dichloroethane	103	(70 - 135)			SW846 8260B
	102	(70 - 135)	1.3	(0-20)	SW846 8260B
2-Butanone	100	(30 - 150)			SW846 8260B
	104	(30 - 150)	4.7	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	99	(85 - 115)			SW846 8260B
	100	(85 - 115)	0.90	(0-20)	SW846 8260B
Chloroform	100	(65 - 135)			SW846 8260B
	102	(65 - 135)	1.9	(0-20)	SW846 8260B
1,1,1-Trichloroethane	100	(65 - 130)			SW846 8260B
	103	(65 - 130)	2.8	(0-20)	SW846 8260B
Carbon tetrachloride	98	(65 - 140)			SW846 8260B
	98	(65 - 140)	0.01	(0-20)	SW846 8260B
1,2-Dichloroethane	100	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.2	(0-20)	SW846 8260B
Benzene	102	(80 - 120)			SW846 8260B
	101	(80 - 120)	0.29	(0-20)	SW846 8260B
Trichloroethene	95	(70 - 125)			SW846 8260B
	97	(70 - 125)	1.4	(0-20)	SW846 8260B
1,2-Dichloropropane	101	(75 - 125)			SW846 8260B
	102	(75 - 125)	0.59	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H230464 Work Order #...: MLXMN1C4-MS Matrix.....: WATER
 MS Lot-Sample #: F1H230464-002 MLXMN1C5-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	100	(75 - 120)			SW846 8260B
	100	(75 - 120)	0.19	(0-20)	SW846 8260B
1,1,2-Trichloroethane	105	(75 - 125)			SW846 8260B
	103	(75 - 125)	2.3	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	102	(55 - 140)			SW846 8260B
	103	(55 - 140)	1.5	(0-20)	SW846 8260B
Toluene	106	(75 - 120)			SW846 8260B
	106	(75 - 120)	0.09	(0-20)	SW846 8260B
1,3-Dichlorobenzene	100	(75 - 125)			SW846 8260B
	104	(75 - 125)	3.7	(0-20)	SW846 8260B
1,4-Dichlorobenzene	99	(75 - 125)			SW846 8260B
	100	(75 - 125)	1.9	(0-20)	SW846 8260B
2-Hexanone	101	(55 - 130)			SW846 8260B
	93	(55 - 130)	8.2	(0-20)	SW846 8260B
4-Methyl-2-pentanone	112	(60 - 135)			SW846 8260B
	111	(60 - 135)	0.80	(0-20)	SW846 8260B
Chlorobenzene	101	(80 - 120)			SW846 8260B
	102	(80 - 120)	0.78	(0-20)	SW846 8260B
Bromoform	106	(70 - 130)			SW846 8260B
	104	(70 - 130)	1.9	(0-20)	SW846 8260B
Ethylbenzene	106	(75 - 125)			SW846 8260B
	106	(75 - 125)	0.28	(0-20)	SW846 8260B
Styrene	112	(65 - 135)			SW846 8260B
	112	(65 - 135)	0.17	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	104	(65 - 130)			SW846 8260B
	106	(65 - 130)	1.1	(0-20)	SW846 8260B
Tetrachloroethene	98	(45 - 150)			SW846 8260B
	100	(45 - 150)	1.8	(0-20)	SW846 8260B
1,2-Dichlorobenzene	103	(70 - 120)			SW846 8260B
	105	(70 - 120)	1.6	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	108	(85 - 120)
	108	(85 - 120)
Dibromofluoromethane	106	(85 - 115)
	108	(85 - 115)
1,2-Dichloroethane-d4	102	(70 - 120)
	106	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)
	100	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H230464

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H230464-002 Prep Batch #...: 1236077						
Uranium	109	(80 - 120)		SW846 6020A	08/24-08/26/11	MLXMN1CR
	109	(80 - 120)	0.45 (0-20)	SW846 6020A	08/24-08/26/11	MLXMN1CT
			Dilution Factor: 1			
			Analysis Time...: 04:09			
MS Lot-Sample #: F1H230464-002 Prep Batch #...: 1236079						
Aluminum	121 N	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXMN1DD
	124 N	(80 - 120)	2.5 (0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DE
			Dilution Factor: 1			
			Analysis Time...: 23:02			
Antimony	107	(80 - 120)		SW846 6010C	08/24-08/30/11	MLXMN1EA
	103	(80 - 120)	3.3 (0-20)	SW846 6010C	08/24-08/30/11	MLXMN1EC
			Dilution Factor: 5			
			Analysis Time...: 12:36			
Arsenic	101	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXMN1C8
	103	(80 - 120)	1.6 (0-20)	SW846 6010C	08/24-08/27/11	MLXMN1C9
			Dilution Factor: 1			
			Analysis Time...: 23:02			
Barium	103	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXMN1DF
	104	(80 - 120)	0.35 (0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DG
			Dilution Factor: 1			
			Analysis Time...: 23:02			
Beryllium	107	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXMN1DH
	108	(80 - 120)	0.89 (0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DJ
			Dilution Factor: 1			
			Analysis Time...: 23:02			
Cadmium	96	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXMN1DM
	98	(80 - 120)	1.7 (0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DN
			Dilution Factor: 1			
			Analysis Time...: 23:02			
Calcium	176 N	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXMN1DK
	184 N	(80 - 120)	0.19 (0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DL
			Dilution Factor: 10			
			Analysis Time...: 14:15			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	95	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1DR
	96	(80 - 120)	1.4	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DT
Dilution Factor: 1 Analysis Time...: 23:02							
Cobalt	92	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1DP
	93	(80 - 120)	1.6	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DQ
Dilution Factor: 1 Analysis Time...: 23:02							
Copper	98	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1DU
	99	(80 - 120)	1.0	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DV
Dilution Factor: 1 Analysis Time...: 23:02							
Iron	100	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1DW
	103	(80 - 120)	2.1	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DX
Dilution Factor: 1 Analysis Time...: 23:02							
Lead	92	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1D8
	93	(80 - 120)	1.7	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1D9
Dilution Factor: 1 Analysis Time...: 23:02							
Magnesium	111	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1D0
	115	(80 - 120)	0.37	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1D1
Dilution Factor: 10 Analysis Time...: 14:15							
Manganese	97	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1D2
	99	(80 - 120)	1.4	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1D3
Dilution Factor: 1 Analysis Time...: 23:02							
Nickel	92	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1D6
	94	(80 - 120)	1.7	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1D7
Dilution Factor: 1 Analysis Time...: 23:02							
Selenium	108	(80 - 120)			SW846 6010C	08/24-08/30/11	MLXMN1CF
	104	(80 - 120)	3.4	(0-20)	SW846 6010C	08/24-08/30/11	MLXMN1CG
Dilution Factor: 5 Analysis Time...: 12:36							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	90	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1DA
	91	(80 - 120)	1.1	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1DC
			Dilution Factor: 1				
			Analysis Time...: 23:02				
Sodium	137 N	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1D4
	140 N	(80 - 120)	0.16	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1D5
			Dilution Factor: 10				
			Analysis Time...: 14:15				
Strontium	115	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1CH
	105	(80 - 120)	0.62	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1CJ
			Dilution Factor: 10				
			Analysis Time...: 14:15				
Vanadium	98	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1CM
	99	(80 - 120)	1.1	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1CN
			Dilution Factor: 1				
			Analysis Time...: 23:02				
Zinc	106	(80 - 120)			SW846 6010C	08/24-08/27/11	MLXMN1CP
	107	(80 - 120)	1.4	(0-20)	SW846 6010C	08/24-08/27/11	MLXMN1CQ
			Dilution Factor: 1				
			Analysis Time...: 23:02				

MS Lot-Sample #: F1H230464-002 Prep Batch #...: 1242042

Thallium	90	(80 - 120)			SW846 6010C	08/29-08/31/11	MLXMN1E3
	92	(80 - 120)	1.2	(0-20)	SW846 6010C	08/29-08/31/11	MLXMN1E4
			Dilution Factor: 1				
			Analysis Time...: 19:38				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H230464-010 Prep Batch #...: 1236077						
Uranium	103	(80 - 120)		SW846 6020A	08/24-08/26/11	MLXN61CH
	101	(80 - 120) 1.3	(0-20)	SW846 6020A	08/24-08/26/11	MLXN61CJ
Dilution Factor: 1						
Analysis Time...: 05:23						
MS Lot-Sample #: F1H230464-010 Prep Batch #...: 1236079						
Aluminum	108	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CR
	107	(80 - 120) 1.3	(0-20)	SW846 6010C	08/24-08/28/11	MLXN61CT
Dilution Factor: 1						
Analysis Time...: 00:12						
Antimony	104	(80 - 120)		SW846 6010C	08/24-08/30/11	MLXN61A4
	106	(80 - 120) 2.0	(0-20)	SW846 6010C	08/24-08/30/11	MLXN61A5
Dilution Factor: 5						
Analysis Time...: 12:55						
Arsenic	104	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CM
	103	(80 - 120) 0.86	(0-20)	SW846 6010C	08/24-08/28/11	MLXN61CN
Dilution Factor: 1						
Analysis Time...: 00:12						
Barium	106	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CU
	105	(80 - 120) 0.88	(0-20)	SW846 6010C	08/24-08/28/11	MLXN61CV
Dilution Factor: 1						
Analysis Time...: 00:12						
Beryllium	111	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CW
	110	(80 - 120) 0.62	(0-20)	SW846 6010C	08/24-08/28/11	MLXN61CX
Dilution Factor: 1						
Analysis Time...: 00:12						
Cadmium	100	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61C2
	99	(80 - 120) 0.81	(0-20)	SW846 6010C	08/24-08/28/11	MLXN61C3
Dilution Factor: 1						
Analysis Time...: 00:12						
Calcium	8.7 N	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXN61C0
	0 N	(80 - 120) 0.0	(0-20)	SW846 6010C	08/24-08/27/11	MLXN61C1
Dilution Factor: 10						
Analysis Time...: 15:25						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	98	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61C6
	97	(80 - 120)	0.94 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61C7
Dilution Factor: 1 Analysis Time...: 00:12						
Cobalt	96	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61C4
	95	(80 - 120)	1.1 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61C5
Dilution Factor: 1 Analysis Time...: 00:12						
Copper	101	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61C8
	100	(80 - 120)	1.2 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61C9
Dilution Factor: 1 Analysis Time...: 00:12						
Iron	102	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61DA
	101	(80 - 120)	0.73 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61DC
Dilution Factor: 1 Analysis Time...: 00:12						
Lead	96	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61DM
	95	(80 - 120)	1.6 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61DN
Dilution Factor: 1 Analysis Time...: 00:12						
Magnesium	67 N	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXN61DD
	70 N	(80 - 120)	0.34 (0-20)	SW846 6010C	08/24-08/27/11	MLXN61DE
Dilution Factor: 10 Analysis Time...: 15:25						
Manganese	101	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61DF
	100	(80 - 120)	0.85 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61DG
Dilution Factor: 1 Analysis Time...: 00:12						
Nickel	95	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61DK
	94	(80 - 120)	1.2 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61DL
Dilution Factor: 1 Analysis Time...: 00:12						
Selenium	105	(80 - 120)		SW846 6010C	08/24-08/30/11	MLXN61A6
	105	(80 - 120)	0.11 (0-20)	SW846 6010C	08/24-08/30/11	MLXN61A7
Dilution Factor: 5 Analysis Time...: 12:55						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	92	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CP
	91	(80 - 120)	0.90 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61CQ
Dilution Factor: 1 Analysis Time...: 00:12						
Sodium	35 N	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXN61DH
	25 N	(80 - 120)	0.54 (0-20)	SW846 6010C	08/24-08/27/11	MLXN61DJ
Dilution Factor: 10 Analysis Time...: 15:25						
Strontium	35 N	(80 - 120)		SW846 6010C	08/24-08/27/11	MLXN61A8
	35 N	(80 - 120)	0.0 (0-20)	SW846 6010C	08/24-08/27/11	MLXN61A9
Dilution Factor: 10 Analysis Time...: 15:25						
Vanadium	101	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CD
	100	(80 - 120)	0.83 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61CE
Dilution Factor: 1 Analysis Time...: 00:12						
Zinc	110	(80 - 120)		SW846 6010C	08/24-08/28/11	MLXN61CF
	109	(80 - 120)	1.2 (0-20)	SW846 6010C	08/24-08/28/11	MLXN61CG
Dilution Factor: 1 Analysis Time...: 00:12						
MS Lot-Sample #: F1H230464-010 Prep Batch #...: 1242042						
Thallium	94	(80 - 120)		SW846 6010C	08/29-08/31/11	MLXN61DQ
	93	(80 - 120)	0.22 (0-20)	SW846 6010C	08/29-08/31/11	MLXN61DR
Dilution Factor: 1 Analysis Time...: 20:49						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230464

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	103	Work Order #...: MLXMN1EM (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230464-002 08/20/11	1235169
		Dilution Factor: 200		Analysis Time...: 07:18	
Fluoride	78 N	Work Order #...: MLXMN1EP (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230464-002 08/20/11	1235170
		Dilution Factor: 1		Analysis Time...: 06:32	
Nitrate	94	Work Order #...: MLXMN1ER (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230464-002 08/20/11	1235171
		Dilution Factor: 1		Analysis Time...: 06:32	
Nitrite	54 N	Work Order #...: MLXMN1EU (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230464-002 08/20/11	1235172
		Dilution Factor: 10		Analysis Time...: 07:03	
Phosphate as P, Ortho	11 N	Work Order #...: MLXMN1EW (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230464-002 08/20/11	1235173
		Dilution Factor: 1		Analysis Time...: 06:32	
Sulfate	95	Work Order #...: MLXMN1E0 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H230464-002 08/20/11	1235174
		Dilution Factor: 200		Analysis Time...: 07:18	
Total Alkalinity	98	Work Order #...: MLW9L1EM (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H230407-007 08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00	
Total Alkalinity	144 N	Work Order #...: MLXMN1EH (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H230464-002 08/26/11	1238032
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230464

Work Order #...: MLXMN-SMP
MLXMN-DUP

Matrix.....: WATER

Date Sampled...: 08/19/11 09:15 Date Received...: 08/23/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	455	459	mg/L	0.81	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 300.0A	08/20/11	1235169
						Dilution Factor: 200	Analysis Time...: 07:18	
Fluoride	0.64	0.62	mg/L	2.2	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 300.0A	08/20/11	1235170
						Dilution Factor: 1	Analysis Time...: 06:32	
Nitrate	0.018 B	0.022	mg/L	21	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 300.0A	08/20/11	1235171
						Dilution Factor: 1	Analysis Time...: 06:32	
Nitrite	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 300.0A	08/20/11	1235172
						Dilution Factor: 10	Analysis Time...: 07:03	
Phosphate as P, Ortho	0.087 B,J	ND	mg/L	200	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 300.0A	08/20/11	1235173
						Dilution Factor: 1	Analysis Time...: 06:32	
Sulfate	413 J	414	mg/L	0.13	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 300.0A	08/20/11	1235174
						Dilution Factor: 200	Analysis Time...: 07:18	
Total Alkalinity	382	388	mg/L	1.5	(0-20)	SD Lot-Sample #: F1H230464-002 MCAWW 310.1	08/26/11	1238032
						Dilution Factor: 1	Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230464 Work Order #...: MLT47-SMP Matrix.....: WATER
MLT47-DUP
Date Sampled...: 08/18/11 08:25 Date Received...: 08/19/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: F1H190431-007		
	1340	1380	mg/L	2.4	(0-0.0)	MCAWW 160.1	08/24-08/25/11	1236026
			Dilution Factor: 1			Analysis Time...: 00:00		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H230464 Work Order #...: MLW9L-SMP Matrix.....: WATER
MLW9L-DUP
Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Total Alkalinity	254	254	mg/L	0.16	(0-20)	MCAWW 310.1	08/30/11	1242085
Dilution Factor: 1						Analysis Time...: 00:00		

SD Lot-Sample #: F1H230407-007

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW607D001

Radiochemistry

Lab Sample ID: F1H230464-001
Work Order: MLXMK
Matrix: WATER

Date Collected: 08/19/11 0845
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238042	Yld % 45
Uranium 234	5.35		0.74	0.10	0.09	08/26/11	08/30/11
Uranium 235/236	0.24		0.14	0.10	0.05	08/26/11	08/30/11
Uranium 238	4.99		0.70	0.10	0.12	08/26/11	08/30/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW703DD0001

Radiochemistry

Lab Sample ID: F1H230464-002
 Work Order: MLXMN
 Matrix: WATER

Date Collected: 08/19/11 0915
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1238042		Yld % 71
Uranium 234	0.097		0.069	0.100	0.077	08/26/11	08/30/11
Uranium 235/236	0.015	U	0.036	0.100	0.071	08/26/11	08/30/11
Uranium 238	0.070		0.056	0.100	0.057	08/26/11	08/30/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result F1H230464 is greater than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001

Radiochemistry

Lab Sample ID: F1H230464-003
Work Order: MLXM1
Matrix: WATER

Date Collected: 08/19/11 1030
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238042	Yld % 51
Uranium 234	8.8		1.0	0.1	0.09	08/26/11	09/01/11
Uranium 235/236	0.44		0.18	0.10	0.08	08/26/11	09/01/11
Uranium 238	9.7		1.1	0.1	0.07	08/26/11	09/01/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001

Radiochemistry

Lab Sample ID: F1H230464-004
Work Order: MLXM3
Matrix: WATER

Date Collected: 08/19/11 1200
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238042	Yld % 73
Uranium 234	14.9		1.4	0.1	0.06	08/26/11	08/30/11
Uranium 235/236	0.87		0.21	0.10	0.05	08/26/11	08/30/11
Uranium 238	14.4		1.4	0.1	0.04	08/26/11	08/30/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004

Radiochemistry

Lab Sample ID: F1H230464-005
Work Order: MLXM6
Matrix: WATER

Date Collected: 08/19/11 0000
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238042	Yld % 58
Uranium 234	8.38		0.95	0.10	0.08	08/26/11	08/30/11
Uranium 235/236	0.42		0.16	0.10	0.08	08/26/11	08/30/11
Uranium 238	8.88		0.99	0.10	0.06	08/26/11	08/30/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001

Radiochemistry

Lab Sample ID: F1H230464-006
Work Order: MLXNA
Matrix: WATER

Date Collected: 08/19/11 1340
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238042	Yld % 62
Uranium 234	0.89		0.21	0.10	0.07	08/26/11	08/30/11
Uranium 235/236	0.041		0.047	0.100	0.037	08/26/11	08/30/11
Uranium 238	0.39		0.14	0.10	0.06	08/26/11	08/30/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW607D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230464-009
 Work Order: MLXN1
 Matrix: WATER

Date Collected: 08/19/11 0845
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238042	Yld % 61
Uranium 234	3.88		0.53	0.10	0.08	08/26/11	08/30/11
Uranium 235/236	0.119		0.085	0.100	0.074	08/26/11	08/30/11
Uranium 238	4.04		0.55	0.10	0.08	08/26/11	08/30/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A03MW703DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230464-010
 Work Order: MLXN6
 Matrix: WATER

Date Collected: 08/19/11 0915
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 65
Uranium 234	0.023	U	0.037	0.100	0.061	08/26/11	08/31/11
Uranium 235/236	0.0	U	0.013	0.100	0.035	08/26/11	08/31/11
Uranium 238	0.028	U	0.036	0.100	0.047	08/26/11	08/31/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW16D0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230464-011

Date Collected: 08/19/11 1030

Work Order: MLXN8

Date Received: 08/23/11 0905

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 51
Uranium 234	8.9		1.0	0.1	0.06	08/26/11	08/31/11
Uranium 235/236	0.45		0.18	0.10	0.05	08/26/11	08/31/11
Uranium 238	10.2		1.1	0.1	0.04	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW40001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230464-012
Work Order: MLXPA
Matrix: WATER

Date Collected: 08/19/11 1200
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 63
Uranium 234	16.1		1.6	0.1	0.07	08/26/11	08/31/11
Uranium 235/236	0.80		0.22	0.10	0.06	08/26/11	08/31/11
Uranium 238	16.7		1.6	0.1	0.05	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A03MW9004 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230464-013
Work Order: MLXPC
Matrix: WATER

Date Collected: 08/19/11 0000
Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 52
Uranium 234	9.2		1.0	0.1	0.06	08/26/11	08/31/11
Uranium 235/236	0.58		0.20	0.10	0.04	08/26/11	08/31/11
Uranium 238	10.1		1.1	0.1	0.08	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04AMW701DD0001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H230464-014
 Work Order: MLXPD
 Matrix: WATER

Date Collected: 08/19/11 1340
 Date Received: 08/23/11 0905

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1238069		Yld % 72
Uranium 234	0.77		0.18	0.10	0.05	08/26/11	08/31/11
Uranium 235/236	0.036		0.041	0.100	0.032	08/26/11	08/31/11
Uranium 238	0.46		0.14	0.10	0.04	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H230464
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1238042	Yld %	74 F1H260000-042B
Uranium 234	0.007	U	0.027	0.100	0.060	08/26/11	08/30/11
Uranium 235/236	-0.0027	U	0.0055	0.100	0.050	08/26/11	08/30/11
Uranium 238	0.009	U	0.026	0.100	0.056	08/26/11	08/30/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1238069	Yld %	100 F1H260000-069B
Uranium 234	0.021	U	0.029	0.100	0.045	08/26/11	08/31/11
Uranium 235/236	0.004	U	0.019	0.100	0.047	08/26/11	08/31/11
Uranium 238	0.004	U	0.015	0.100	0.038	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U F1H230464
 Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H230464
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID		
					% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H260000-042C
Uranium 234	3.26	3.17	0.41	0.05	94	97	(76 - 136)
Uranium 238	3.39	3.20	0.41	0.04	94	95	(76 - 134)
Batch #:		1238042		Analysis Date:		08/30/11	
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H260000-069C
Uranium 234	3.26	3.06	0.40	0.05	92	94	(76 - 136)
Uranium 238	3.39	3.36	0.42	0.04	92	99	(76 - 134)
Batch #:		1238069		Analysis Date:		08/31/11	

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F1H230464
 Matrix: WATER

Date Sampled: 08/19/11 0915
 Date Received: 08/23/11 0905

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID		
							% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD				F1H230464-002
Uranium 234	3.26	3.12	0.43	73	0.097	0.069	71	93	(65 - 146)
Spk2	3.26	3.59	0.50	62	0.097	0.069	71	107	(65 - 146)
						Precision:	14	%RPD	
Uranium 238	3.39	3.14	0.43	73	0.070	0.056	71	90	(68 - 143)
Spk2	3.39	3.34	0.47	62	0.070	0.056	71	96	(68 - 143)
						Precision:	6	%RPD	
Batch #: 1238042			Analysis date: 08/30/11						
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD				F1H230464-010
Uranium 234	3.26	2.71	0.40	69	0.023 U	0.037	65	82	(65 - 146)
Spk2	3.26	3.11	0.45	65	0.023 U	0.037	65	95	(65 - 146)
						Precision:	14	%RPD	
Uranium 238	3.39	2.84	0.41	69	0.028 U	0.036	65	83	(68 - 143)
Spk2	3.39	3.18	0.46	65	0.028 U	0.036	65	93	(68 - 143)
						Precision:	11	%RPD	
Batch #: 1238069			Analysis date: 08/31/11						

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

U Result is less than the sample detection limit.

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R16,2-98,METS
 Date Received: 2011-08-20
 Analytical Due Date: 2011-08-31
 Report Due Date: 2011-09-02
 Report Type: D Expanded Deliverable
 EDD Code: 00

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED] n

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A03MW607D001			2011-08-19 / 845	MLXMK	WATER
SAMPLE COMMENTS:						
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW W 160.1	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW W 300.0A	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW W 300.0A	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW W 300.0A	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW W 300.0A	WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW W 300.0A	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW W 300.0A	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX VC	MCAW W 310.1	WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H230464

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R16,2-98,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A03MW703DD0001			2011-08-19 / 915	MLXMN	WATER
<u>SAMPLE COMMENTS:</u>						
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R16,2-98,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
D	TL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	MN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	ZN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	VX	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	TL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	SR	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	SE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	SB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	PB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	NI	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	NA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	AL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	FE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CU	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CR	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CO	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CD	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	CA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	BE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	AG	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	BA	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	AS	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	MG	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	UX	I& SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
D	XX	QK SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
D	XX	2M EML A-01-R MOD	WATER, A-01-R MOD, Iso U (CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
S	MN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	ZN	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	VX	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	TL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	TL	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	SR	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	SE	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	SB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	PB	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	NI	I\$ SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R16,2-98,METS,V

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
S	XX	QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
S	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
S	XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
S	XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
X	XX	VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A03MW16D0001			2011-08-19 / 1030	MLXM1	WATER

SAMPLE COMMENTS:

MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: **R16,2-98,METS**
 Date Received: 2011-08-20
 Analytical Due Date: 2011-08-31
 Report Due Date: 2011-09-02
 Report Type: D Expanded Deliverable
 EDD Code: 00

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A02MW40001			2011-08-19 / 1200	MLXM3	WATER

SAMPLE COMMENTS:

CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R16,2-98,METS,V

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 14

Report Type: D Expanded Deliverable
EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX QK	SW846	8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW	160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW	300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW	300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW	300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW	300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW	300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW	300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW	310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A03MW9004			2011-08-19 / 0	MLXM6	WATER

SAMPLE COMMENTS:

VX I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: **R16,2-98,METS**
 Date Received: 2011-08-20
 Analytical Due Date: 2011-08-31
 Report Due Date: 2011-09-02
 Report Type: D Expanded Deliverable
 EDD Code: 00

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV		RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !
 6 A04AMW701DD0001 2011-08-19 / 1340 MLXNA WATER

SAMPLE COMMENTS:

MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R16,2-98,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06	

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	A04BMW707DD0001			2011-08-19/ 1405	MLXND	WATER

SAMPLE COMMENTS:

XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
-------	------------	--	----	---------------------	----	-------------------	---------	---------	----

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: 2-98Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706Quote #: 89251 SDG:
Guterl Steel
Report to: XXXXXXXXXX
Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 14

Date Received: 2011-08-20
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: D Expanded Deliverable
EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX	AK	MCAW	160.1	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	C8	MCAW	300.0A	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CX	MCAW	300.0A	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	DO	MCAW	300.0A	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	VC	MCAW	310.1	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	TRIP BLANK #4			2011-08-19 / 0	MLXNE	WATER
SAMPLE COMMENTS:						
XX	QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A WRK LOC 06 TIC: N

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A03MW607D0001 DISSOLVED			2011-08-19 / 845	MLXN1	WATER
SAMPLE COMMENTS:						
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
 Storage Loc: R16,METS
 Date Received: 2011-08-20
 Analytical Due Date: 2011-08-31
 Report Due Date: 2011-09-02
 Report Type: D Expanded Deliverable
 EDD Code: 00

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	A03MW703DD0001 DISSOLVED			2011-08-19/ 915	MLXN6	WATER

SAMPLE COMMENTS:

BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
D MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230464

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R16,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

D	SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
D	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06
S	SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
S	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06

F1H230464

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R16,METS

Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
 SDG:
 Guterl Steel
 Report to: [REDACTED]

Date Received: 2011-08-20
 Analytical Due Date: 2011-08-31
 Report Due Date: 2011-09-02
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
11	A03MW16D0001 DISSOLVED			2011-08-19/ 1030	MLXN8	WATER

SAMPLE COMMENTS:

ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
----------	------------------	---------	---------------	-------------------	-----------	---

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R16,METS
Date Received: 2011-08-20
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: D Expanded Deliverable
EDD Code: 00

Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guterl Steel
Report to: [REDACTED]

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

12 A02MW40001 DISSOLVED 2011-08-19/ 1200 MLXPA WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I

13 A03MW9004 DISSOLVED 2011-08-19/ 0 MLXPC WATER

SAMPLE COMMENTS:

ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H230464

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: R16,METS

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-20

Project: 140415

Guterl Steel

Analytical Due Date: 2011-08-31

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-02

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
14	A04AMW701DD0001 DISSOLVED			2011-08-19 / 1340	MLXPD	WATER
SAMPLE COMMENTS:						
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X

F1H230464

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: **R16,METS**
Date Received: 2011-08-20
Analytical Due Date: 2011-08-31
Report Due Date: 2011-09-02
Report Type: D Expanded Deliverable
EDD Code: 00

Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guterl Steel
Report to: [REDACTED]

SDG:

#SMPS in LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

/15 Rider Trail North

th City, MO 63045
one 314.298.8566 fax 314.298.8757

Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Karl Van Keuren, PG, PMP		Site Contact: Kevin Cronin		Date: 08/19/2011		COC No: 012												
Law Environmental & Infrastructure, Inc.		Tel/Fax: (513) 782-4745 / (513) 782-4807		Lab Contact: Lynn Fussner		Carrier:		1 of 1 COCs												
50 Section Avenue		Analysis Turnaround Time		<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day </div> <div> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day </div> </div>		<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Isotopic Thorium (a-spec) <input type="checkbox"/> Isotopic Uranium (a-spec) <input type="checkbox"/> Total Uranium <input type="checkbox"/> T/L Metals except Mercury <input type="checkbox"/> Anions <input type="checkbox"/> Alkalinity <input type="checkbox"/> Total Dissolved Solids <input type="checkbox"/> Volatile Organic Compounds (VOCs) </div> <div> <input type="checkbox"/> TCLP Volatiles <input type="checkbox"/> TCLP Semi-volatiles <input type="checkbox"/> TCLP Metals except Mercury <input type="checkbox"/> Mercury </div> </div>		Job No. 140416.09020100												
Cincinnati, Ohio 45212		SDG No.																		
3) 782-4700 Phone																				
3) 782-4807 FAX																				
Project Name: Former Guterl Specialty Steel Corporation FUSRA																				
Site: Lockport, NY																				
Job #																				
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Isotopic Thorium (a-spec)	Isotopic Uranium (a-spec)	Total Uranium	T/L Metals except Mercury	Anions	Alkalinity	Total Dissolved Solids	Volatile Organic Compounds (VOCs)	TCLP Volatiles	TCLP Semi-volatiles	TCLP Metals except Mercury	Mercury	Sample Specific Notes:
3MW607D0001	8/19/2011	0845	Grab	GW	7	X	X	X	X	X	X	X	X	X	X					
3MW703DD0001	8/19/2011	0915	Grab	GW	10	X	X	X	X	X	X	X	X	X	X					
3MW703DD0001MS	8/19/2011	0915	Grab	GW	10	X	X	X	X	X	X	X	X	X	X					
3MW703DD0001MSD	8/19/2011	0915	Grab	GW	10	X	X	X	X	X	X	X	X	X	X					
3MW16D0001	8/19/2011	1030	Grab	GW	7	X	X	X	X	X	X	X	X	X	X					
2MW40001	8/19/2011	1200	Grab	GW	10	X	X	X	X	X	X	X	X	X	X					
3MW9004	8/19/2011	--	Grab	GW	7	X	X	X	X	X	X	X	X	X	X					
4AMW701DD0001	8/19/2011	1340	Grab	GW	10	X	X	X	X	X	X	X	X	X	X					
4BMW707DD0001	8/19/2011	1405	Grab	GW	1							X	X	X	X					
Blank #4	8/19/2011	--	TB	--	1										X					
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1, 2, and 4							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
Visible Hazard Identification							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown																				
Special Instructions/QC Requirements & Comments:																				
<div style="display: flex; justify-content: space-between;"> <div> <div>Company: Shaw E & I. Inc.</div> <div>Date/Time: 8/19/11 16:00</div> </div> <div> <div>Company: TA Buffalo</div> <div>Date/Time: 8/19/11 17:00</div> </div> </div>																				
<div style="display: flex; justify-content: space-between;"> <div> <div>Company: TA Buffalo</div> <div>Date/Time: 8/19/11 17:00</div> </div> <div> <div>Company: TA STL</div> <div>Date/Time: 8/20/11 0830</div> </div> </div>																				

CONDITION UPON RECEIPT FORM

Client: SHAW

Quote No: 89251

COC/RFA No: 012

Initiated By: NVO TAB

Date: 8/20/11

Time: 0830



Shipping Information

Shipper: ☒ FedEx ☐ UPS ☐ DHL ☐ Courier ☐ Client Other:

Multiple Packages: Y ☒ N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 4752

1. 2

2. 4598 9397 657 mps - received 8-23-11 @ 0905

2. ambient

3. _____

3. ↓

4. _____

4. _____

5. _____

5. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (if not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input type="radio"/> Y <input checked="" type="radio"/> N	Is sample volume sufficient for analysis?	14. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

ONLY REC'D 1 COOLER WHICH CONTAINED 1X500P (ANIONS) FOR EACH SAMPLE ID. ALSO ALL VOA EXCEPT FOR SAMPLE ID A04BMW707D0001 - Please log w/o sample. LMF 8/25/11
 Received rest of sample on 8-23-11 @ 0905 - except VOA A04BMW707D0001. In
 Received following w/ pH ~ 7 - added HNO₃ from lot K11059
 A03mw707D0001 (2XLP) unfiltered
 A03mw703D0001 (1XLP) filtered
 Per LF ms/msD on COC = ms/msD, not SOP
 Sample #3 COC & sample do not match
 COC = A03mw100001 Sample = A03mw100001
 FIH 1004

Corrective Action:

☐ Client Contact Name:

Informed by:

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until:

If released, notify:

Project Management Review

Date: 8/25/11

THIS FORM MUST BE COMPLETED BY THE PERSON INITIATING THE TEST OR THE DATE NEXT TO THAT ITEM.

IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THE DATE NEXT TO THAT ITEM.


TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

Guterl Steel

Lot #: F1H240450


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

September 7, 2011

Case Narrative
LOT NUMBER: F1H240450

This report contains the analytical results for the eight samples received under chain of custody by TestAmerica in St. Louis on August 24, 2011. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1243089**

Acetonitrile and Tetrahydrofuran were removed from the initial calibration lowest point due to poor response. Additionally, Acetone, Methyl acetate, n-Butanol and 1,4-Dioxane were removed from the lowest 2 points.

Isobutanol was removed from the initial calibration highest point due to elevated response. Additionally, the surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene) were not spiked at the initial calibration highest point because the recoveries do not warrant the high concentration.

The initial calibration still meets the minimum number of points and the reporting limits required. The compounds were removed within TestAmerica's selection of points policy.

The minimum RRF for 1,1,2,2-Tetrachloroethane is below the QC limit.

The CCV recovery was outside the upper QC limit (greater than 20% D) for Bromomethane, Trichlorofluoromethane and Chloroethane indicating a potential high bias for those analytes in the samples associated with this CCV. Bromomethane and Trichlorofluoromethane were not detected above the reporting limit and so this excursion does not affect the results. Chloroethane was detected above the reporting limit in samples F1H240450-001 and 003. Sample F1H240450-003 will be re-analyzed.

The LCS recovery for Bromomethane is outside the upper QC limit, indicating a potential positive bias for that analyte. This analyte was not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1H240450 (1): A02MW9005

F1H240450 (3): A02MW020001

F1H240450 (5): TRIP BLANK#6

Batch: 1244139

The CCV %D for 1,4-Dioxane, 2-Hexanone, Cyclohexanone and n-Butylbenzene is outside the established QC limits. The analytes are not part of the -re-analysis request and thus this excursion does not affect the data.

There was insufficient sample volume to perform an MS/MSD analysis. An LCS/LCSD was performed to demonstrate accuracy and replicate precision.

The sample and method blank surrogate recovery is outside established QC limits. The sample target analyte (Chloroethane) is not associated with this surrogate excursion.

Affected Samples:

F1H240450 (3): A02MW020001

ICP-MS (SW846-6020)**Batch: 1237036**

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes causing internal standard and QC failures when run at a lesser dilution. The reporting limit has been adjusted for the dilution.

Affected Samples:

F1H240450 (4): A04BMW707DD0001

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1237037**

The MS and MSD recovery for calcium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

The concentration of strontium in the CCB is greater than 3 times the MDL. The samples associated with this CCB exhibit concentrations greater than ten times the concentrations observed in the CCB.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H240450 (1): A02MW9005

F1H240450 (2): A02MW010001

F1H240450 (3): A02MW020001

F1H240450 (6): A02MW9005 DISSOLVED

F1H240450 (7): A02MW010001 DISSOLVED

F1H240450 (8): A02MW020001 DISSOLVED

Chloride (MCAWW 300.0A)**Batch: 1236153**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H240450 (1): A02MW9005

F1H240450 (2): A02MW010001

F1H240450 (3): A02MW020001

Sulfate (MCAWW 300.0A)**Batch: 1236158**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H240450 (1): A02MW9005
F1H240450 (2): A02MW010001
F1H240450 (3): A02MW020001

Fluoride (MCAWW 300.0A)**Batch: 1236154**

The following samples were analyzed at dilution, due to high concentrations of the target analytes. The reporting limit has been adjusted only for those targets reported from the dilution run.

Affected Samples:

F1H240450 (1): A02MW9005
F1H240450 (2): A02MW010001

Nitrite (MCAWW 300.0A)**Batch: 1236156**

The following samples were reported ND at dilution for Nitrite, due to high concentrations of Chloride, which masked the Nitrite retention time in the undiluted analyses. The reporting limit has been adjusted only for those targets reported from the dilution run.

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrate are attributed to matrix interference.

The closing CCV recovery was outside the upper QC limit (110.85%), indicating a potential high bias for Nitrite in the samples associated with this CCV (F1H240450-001 & 003). However, Nitrite was not detected above the reporting limit in the associated samples.

Affected Samples:

F1H240450 (1): A02MW9005
F1H240450 (2): A02MW010001
F1H240450 (3): A02MW020001

Orthophosphate as P (MCAWW300.0A)**Batch: 1236157**

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recoveries for Nitrate are attributed to matrix interference.

Affected Samples:

F1H240450 (1): A02MW9005
F1H240450 (2): A02MW010001
F1H240450 (3): A02MW020001

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1H240450

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

- EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1H240450

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ML0TA	001	A02MW9005	08/23/11	
ML0TF	002	A02MW010001	08/23/11	08:50
ML0TH	003	A02MW020001	08/23/11	09:30
ML0TJ	004	A04BMW707DD0001	08/23/11	
ML0TV	005	TRIP BLANK#6	08/23/11	
ML0T1	006	A02MW9005 DISSOLVED	08/23/11	
ML0T4	007	A02MW010001 DISSOLVED	08/23/11	08:50
ML0T8	008	A02MW020001 DISSOLVED	08/23/11	09:30

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005

GC/MS Volatiles

Lot-Sample #....: F1H240450-001 Work Order #....: MLOTA1AC Matrix.....: WATER
 Date Sampled....: 08/23/11 Date Received...: 08/24/11
 Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
 Prep Batch #....: 1243089 Analysis Time...: 16:02
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	12	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	0.21 J	1.0	ug/L
1,4-Dichlorobenzene	0.21 J	1.0	ug/L
1,1-Dichloroethane	5.7	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	1.5	1.0	ug/L
1,2-Dichloroethene	4.5	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	8.4	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005

GC/MS Volatiles

Lot-Sample #....: F1H240450-001 Work Order #....: ML0TA1AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	99	(85 - 120)
Dibromofluoromethane	99	(85 - 115)
1,2-Dichloroethane-d4	96	(70 - 120)
4-Bromofluorobenzene	98	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005

TOTAL Metals

Lot-Sample #...: F1H240450-001

Matrix.....: WATER

Date Sampled...: 08/23/11

Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1237036						
Uranium	40.1	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML0TA1A5
		Dilution Factor: 1		Analysis Time...: 05:41		
Prep Batch #...: 1237037						
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AF
		Dilution Factor: 1		Analysis Time...: 14:53		
Aluminum	82.7 J	200	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AG
		Dilution Factor: 1		Analysis Time...: 14:10		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AE
		Dilution Factor: 1		Analysis Time...: 14:53		
Barium	55.5	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AH
		Dilution Factor: 1		Analysis Time...: 14:53		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AJ
		Dilution Factor: 1		Analysis Time...: 14:53		
Calcium	93700	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AK
		Dilution Factor: 10		Analysis Time...: 15:26		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AL
		Dilution Factor: 1		Analysis Time...: 14:53		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AM
		Dilution Factor: 1		Analysis Time...: 14:53		
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AN
		Dilution Factor: 1		Analysis Time...: 14:53		
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AP
		Dilution Factor: 1		Analysis Time...: 14:53		
Iron	ND	100	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AQ
		Dilution Factor: 1		Analysis Time...: 14:53		
Magnesium	20000	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AR
		Dilution Factor: 1		Analysis Time...: 14:53		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005

TOTAL Metals

Lot-Sample #...: F1H240450-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	152	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AT
	/	Dilution Factor: 1		Analysis Time...: 14:53		
Sodium	20600	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AU
		Dilution Factor: 1		Analysis Time...: 14:10		
Nickel	ND	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AV
		Dilution Factor: 1		Analysis Time...: 14:53		
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AW
		Dilution Factor: 1		Analysis Time...: 14:53		
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1AX
		Dilution Factor: 1		Analysis Time...: 14:53		
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1A0
		Dilution Factor: 1		Analysis Time...: 14:53		
Strontium	374	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1A1
		Dilution Factor: 10		Analysis Time...: 15:26		
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1A2
		Dilution Factor: 1		Analysis Time...: 14:53		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1A3
		Dilution Factor: 1		Analysis Time...: 14:53		
Zinc	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TA1A4
		Dilution Factor: 1		Analysis Time...: 14:53		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005

General Chemistry

Lot-Sample #...: F1H240450-001

Work Order #...: MLOTA

Matrix.....: WATER

Date Sampled...: 08/23/11

Date Received...: 08/24/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	24.8	2.0	mg/L	MCAWW 300.0A	08/24/11	1236153
		Dilution Factor: 10		Analysis Time...: 07:27		
Fluoride	1.2	0.10	mg/L	MCAWW 300.0A	08/24/11	1236154
		Dilution Factor: 1		Analysis Time...: 06:54		
Nitrate	0.19	0.020	mg/L	MCAWW 300.0A	08/24/11	1236155
		Dilution Factor: 1		Analysis Time...: 06:54		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/24/11	1236156
		Dilution Factor: 10		Analysis Time...: 07:27		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1236157
		Dilution Factor: 1		Analysis Time...: 06:54		
Sulfate	35.6	5.0	mg/L	MCAWW 300.0A	08/24/11	1236158
		Dilution Factor: 10		Analysis Time...: 07:27		
Total Alkalinity	229	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	344	10.0	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW010001

TOTAL Metals

Lot-Sample #...: F1H240450-002

Matrix.....: WATER

Date Sampled...: 08/23/11 08:50 Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1237036						
Uranium	4.0	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML0TF1AE
		Dilution Factor: 1		Analysis Time...: 06:08		
Prep Batch #...: 1237037						
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AQ
		Dilution Factor: 1		Analysis Time...: 15:19		
Aluminum	113 J	200	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AR
		Dilution Factor: 1		Analysis Time...: 14:35		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AP
		Dilution Factor: 1		Analysis Time...: 15:19		
Barium	64.4	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AT
		Dilution Factor: 1		Analysis Time...: 15:19		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AU
		Dilution Factor: 1		Analysis Time...: 15:19		
Calcium	216000	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AV
		Dilution Factor: 10		Analysis Time...: 15:51		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AW
		Dilution Factor: 1		Analysis Time...: 15:19		
Cobalt	5.3 J	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1AX
		Dilution Factor: 1		Analysis Time...: 15:19		
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A0
		Dilution Factor: 1		Analysis Time...: 15:19		
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A1
		Dilution Factor: 1		Analysis Time...: 15:19		
Iron	1450	100	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A2
		Dilution Factor: 1		Analysis Time...: 15:19		
Magnesium	35800	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A3
		Dilution Factor: 1		Analysis Time...: 15:19		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW010001

TOTAL Metals

Lot-Sample #....: F1H240450-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	348	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A4
		Dilution Factor: 1		Analysis Time...: 15:19		
Sodium	445000	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A5
		Dilution Factor: 10		Analysis Time...: 15:51		
Nickel	118	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A6
		Dilution Factor: 1		Analysis Time...: 15:19		
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A7
		Dilution Factor: 1		Analysis Time...: 15:19		
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A8
		Dilution Factor: 1		Analysis Time...: 15:19		
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1A9
		Dilution Factor: 1		Analysis Time...: 15:19		
Strontium	750	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1CA
		Dilution Factor: 10		Analysis Time...: 15:51		
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1CC
		Dilution Factor: 1		Analysis Time...: 15:19		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1CD
		Dilution Factor: 1		Analysis Time...: 15:19		
Zinc	410	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TF1CE
		Dilution Factor: 1		Analysis Time...: 15:19		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW010001

General Chemistry

Lot-Sample #....: F1H240450-002 Work Order #....: ML0TF Matrix.....: WATER
 Date Sampled....: 08/23/11 08:50 Date Received...: 08/24/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	495	40.0	mg/L	MCAWW 300.0A	08/24/11	1236153
		Dilution Factor: 200		Analysis Time...: 03:21		
Fluoride	0.77	0.50	mg/L	MCAWW 300.0A	08/24/11	1236154
		Dilution Factor: 5		Analysis Time...: 02:48		
Nitrate	0.038	0.020	mg/L	MCAWW 300.0A	08/24/11	1236155
		Dilution Factor: 1		Analysis Time...: 02:32		
Nitrite	ND	4.0	mg/L	MCAWW 300.0A	08/24/11	1236156
		Dilution Factor: 200		Analysis Time...: 03:21		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1236157
		Dilution Factor: 1		Analysis Time...: 02:32		
Sulfate	192	10.0	mg/L	MCAWW 300.0A	08/24/11	1236158
		Dilution Factor: 20		Analysis Time...: 03:04		
Total Alkalinity	346	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	1540	10.0	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

GC/MS Volatiles

Lot-Sample #....: F1H240450-003 Work Order #....: ML0TH1AN Matrix.....: WATER
 Date Sampled....: 08/23/11 09:30 Date Received...: 08/24/11
 Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
 Prep Batch #....: 1243089 Analysis Time...: 16:28
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Butanone	ND	5.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	0.21 J	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	6.1	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	1.5	1.0	ug/L
1,2-Dichloroethene	4.8	2.0	ug/L
(total)			
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	9.2	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

GC/MS Volatiles

Lot-Sample #....: F1H240450-003 Work Order #....: MLOTHIAN Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	103	(85 - 120)
Dibromofluoromethane	104	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

GC/MS Volatiles

Lot-Sample #....: F1H240450-003 Work Order #....: ML0TH2AN Matrix.....: WATER
Date Sampled....: 08/23/11 09:30 Date Received...: 08/24/11
Prep Date.....: 09/01/11 Analysis Date...: 09/01/11
Prep Batch #....: 1244139 Analysis Time...: 13:17
Dilution Factor: 1
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Chloroethane	24	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	124 *	(85 - 120)
Dibromofluoromethane	108	(85 - 115)
1,2-Dichloroethane-d4	123 *	(70 - 120)
4-Bromofluorobenzene	126 *	(75 - 120)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

TOTAL Metals

Lot-Sample #...: F1H240450-003

Matrix.....: WATER

Date Sampled...: 08/23/11 09:30 Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1237036						
Uranium	41.3	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML0TH1AG
		Dilution Factor: 1		Analysis Time...: 06:21		
Prep Batch #...: 1237037						
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AR
		Dilution Factor: 1		Analysis Time...: 15:32		
Aluminum	93.6 J	200	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AT
		Dilution Factor: 1		Analysis Time...: 14:48		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AQ
		Dilution Factor: 1		Analysis Time...: 15:32		
Barium	56.5	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AU
		Dilution Factor: 1		Analysis Time...: 15:32		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AV
		Dilution Factor: 1		Analysis Time...: 15:32		
Calcium	91600	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AW
		Dilution Factor: 10		Analysis Time...: 16:03		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AX
		Dilution Factor: 1		Analysis Time...: 15:32		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A0
		Dilution Factor: 1		Analysis Time...: 15:32		
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A1
		Dilution Factor: 1		Analysis Time...: 15:32		
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A2
		Dilution Factor: 1		Analysis Time...: 15:32		
Iron	ND	100	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A3
		Dilution Factor: 1		Analysis Time...: 15:32		
Magnesium	20200	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A4
		Dilution Factor: 1		Analysis Time...: 15:32		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

TOTAL Metals

Lot-Sample #...: F1H240450-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	155	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A5
		Dilution Factor: 1		Analysis Time...: 15:32		
Sodium	20800	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A6
		Dilution Factor: 1		Analysis Time...: 14:48		
Nickel	ND	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A7
		Dilution Factor: 1		Analysis Time...: 15:32		
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A8
		Dilution Factor: 1		Analysis Time...: 15:32		
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1A9
		Dilution Factor: 1		Analysis Time...: 15:32		
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AA
		Dilution Factor: 1		Analysis Time...: 15:32		
Strontium	356	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AC
		Dilution Factor: 10		Analysis Time...: 16:03		
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AD
		Dilution Factor: 1		Analysis Time...: 15:32		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AE
		Dilution Factor: 1		Analysis Time...: 15:32		
Zinc	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0TH1AF
		Dilution Factor: 1		Analysis Time...: 15:32		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

General Chemistry

Lot-Sample #...: F1H240450-003 Work Order #...: ML0TH Matrix.....: WATER
 Date Sampled...: 08/23/11 09:30 Date Received...: 08/24/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	24.4	2.0	mg/L	MCAWW 300.0A	08/24/11	1236153
		Dilution Factor: 10		Analysis Time...: 04:10		
Fluoride	1.2	0.50	mg/L	MCAWW 300.0A	08/24/11	1236154
		Dilution Factor: 5		Analysis Time...: 03:54		
Nitrate	0.010 B	0.020	mg/L	MCAWW 300.0A	08/24/11	1236155
		Dilution Factor: 1		Analysis Time...: 03:37		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	08/24/11	1236156
		Dilution Factor: 10		Analysis Time...: 04:10		
Phosphate as P, Ortho	ND	0.50	mg/L	MCAWW 300.0A	08/24/11	1236157
		Dilution Factor: 1		Analysis Time...: 03:37		
Sulfate	36.6	2.5	mg/L	MCAWW 300.0A	08/24/11	1236158
		Dilution Factor: 5		Analysis Time...: 03:54		
Total Alkalinity	229	5.0	mg/L	MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00		
Total Dissolved Solids	342	10.0	mg/L	MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1		Analysis Time...: 00:00		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001

TOTAL Metals

Lot-Sample #...: F1H240450-004

Matrix.....: WATER

Date Sampled...: 08/23/11

Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...:	1237036					
Uranium	31.9	5.0	ug/L	SW846 6020A	08/25-08/31/11	ML0TJ1AC
		Dilution Factor: 5		Analysis Time...: 17:20		

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK#6

GC/MS Volatiles

Lot-Sample #....: F1H240450-005 Work Order #....: ML0TV1AA Matrix.....: WATER
 Date Sampled....: 08/23/11 Date Received...: 08/24/11
 Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
 Prep Batch #....: 1243089 Analysis Time...: 15:09
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK#6

GC/MS Volatiles

Lot-Sample #...: F1H240450-005 Work Order #...: ML0TV1AA Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	104	(85 - 120)
Dibromofluoromethane	101	(85 - 115)
1,2-Dichloroethane-d4	97	(70 - 120)
4-Bromofluorobenzene	100	(75 - 120)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H240450-006

Matrix.....: WATER

Date Sampled...: 08/23/11

Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1237036						
Uranium	39.5	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML0T11A2
		Dilution Factor: 1		Analysis Time...: 06:48		
Prep Batch #...: 1237037						
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AC
		Dilution Factor: 1		Analysis Time...: 15:51		
Aluminum	93.3 J	200	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AD
		Dilution Factor: 1		Analysis Time...: 14:54		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AA
		Dilution Factor: 1		Analysis Time...: 15:51		
Barium	55.3	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AE
		Dilution Factor: 1		Analysis Time...: 15:51		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AF
		Dilution Factor: 1		Analysis Time...: 15:51		
Calcium	89500	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AG
		Dilution Factor: 10		Analysis Time...: 16:10		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AH
		Dilution Factor: 1		Analysis Time...: 15:51		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AJ
		Dilution Factor: 1		Analysis Time...: 15:51		
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AK
		Dilution Factor: 1		Analysis Time...: 15:51		
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AL
		Dilution Factor: 1		Analysis Time...: 15:51		
Iron	ND	100	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AM
		Dilution Factor: 1		Analysis Time...: 15:51		
Magnesium	20000	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AN
		Dilution Factor: 1		Analysis Time...: 15:51		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H240450-006

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	152	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AP
		Dilution Factor: 1		Analysis Time...: 15:51		
Sodium	21000	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AQ
		Dilution Factor: 1		Analysis Time...: 14:54		
Nickel	ND	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AR
		Dilution Factor: 1		Analysis Time...: 15:51		
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AT
		Dilution Factor: 1		Analysis Time...: 15:51		
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AU
		Dilution Factor: 1		Analysis Time...: 15:51		
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AV
		Dilution Factor: 1		Analysis Time...: 15:51		
Strontium	344	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AW
		Dilution Factor: 10		Analysis Time...: 16:10		
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11AX
		Dilution Factor: 1		Analysis Time...: 15:51		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11A0
		Dilution Factor: 1		Analysis Time...: 15:51		
Zinc	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T11A1
		Dilution Factor: 1		Analysis Time...: 15:51		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW010001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H240450-007

Matrix.....: WATER

Date Sampled...: 08/23/11 08:50 Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1237036						
Uranium	3.5	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML0T41AD
		Dilution Factor: 1		Analysis Time...: 06:55		
Prep Batch #...: 1237037						
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AG
		Dilution Factor: 1		Analysis Time...: 15:58		
Aluminum	194 J	200	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AH
		Dilution Factor: 1		Analysis Time...: 15:13		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AF
		Dilution Factor: 1		Analysis Time...: 15:58		
Barium	60.9	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AJ
		Dilution Factor: 1		Analysis Time...: 15:58		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AK
		Dilution Factor: 1		Analysis Time...: 15:58		
Calcium	206000	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AL
		Dilution Factor: 10		Analysis Time...: 16:29		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AM
		Dilution Factor: 1		Analysis Time...: 15:58		
Cobalt	4.6 J	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AN
		Dilution Factor: 1		Analysis Time...: 15:58		
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AP
		Dilution Factor: 1		Analysis Time...: 15:58		
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AQ
		Dilution Factor: 1		Analysis Time...: 15:58		
Iron	126	100	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AR
		Dilution Factor: 1		Analysis Time...: 15:58		
Magnesium	35500	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AT
		Dilution Factor: 1		Analysis Time...: 15:58		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW010001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H240450-007

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	317	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AU
		Dilution Factor: 1		Analysis Time...: 15:58		
Sodium	424000	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AV
		Dilution Factor: 10		Analysis Time...: 16:29		
Nickel	107	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AW
		Dilution Factor: 1		Analysis Time...: 15:58		
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AX
		Dilution Factor: 1		Analysis Time...: 15:58		
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41A0
		Dilution Factor: 1		Analysis Time...: 15:58		
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41A1
		Dilution Factor: 1		Analysis Time...: 15:58		
Strontium	708	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41A2
		Dilution Factor: 10		Analysis Time...: 16:29		
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41A3
		Dilution Factor: 1		Analysis Time...: 15:58		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AA
		Dilution Factor: 1		Analysis Time...: 15:58		
Zinc	348	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T41AC
		Dilution Factor: 1		Analysis Time...: 15:58		

NOTE(S) :

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H240450-008

Matrix.....: WATER

Date Sampled...: 08/23/11 09:30 Date Received...: 08/24/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1237036						
Uranium	39.7	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML0T81AH
		Dilution Factor: 1		Analysis Time...: 07:01		
Prep Batch #...: 1237037						
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AL
		Dilution Factor: 1		Analysis Time...: 16:04		
Aluminum	139 J	200	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AM
		Dilution Factor: 1		Analysis Time...: 15:19		
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AK
		Dilution Factor: 1		Analysis Time...: 16:04		
Barium	55.1	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AN
		Dilution Factor: 1		Analysis Time...: 16:04		
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AP
		Dilution Factor: 1		Analysis Time...: 16:04		
Calcium	87400	10000	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AQ
		Dilution Factor: 10		Analysis Time...: 16:35		
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AR
		Dilution Factor: 1		Analysis Time...: 16:04		
Cobalt	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AT
		Dilution Factor: 1		Analysis Time...: 16:04		
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AU
		Dilution Factor: 1		Analysis Time...: 16:04		
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AV
		Dilution Factor: 1		Analysis Time...: 16:04		
Iron	ND	100	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AW
		Dilution Factor: 1		Analysis Time...: 16:04		
Magnesium	19800	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AX
		Dilution Factor: 1		Analysis Time...: 16:04		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1H240450-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	151	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81A0
		Dilution Factor: 1		Analysis Time...: 16:04		
Sodium	20900	1000	ug/L	SW846 6010C	08/25-08/31/11	ML0T81A1
		Dilution Factor: 1		Analysis Time...: 15:19		
Nickel	ND	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81A2
		Dilution Factor: 1		Analysis Time...: 16:04		
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81A3
		Dilution Factor: 1		Analysis Time...: 16:04		
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AA
		Dilution Factor: 1		Analysis Time...: 16:04		
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AC
		Dilution Factor: 1		Analysis Time...: 16:04		
Strontium	330	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AD
		Dilution Factor: 10		Analysis Time...: 16:35		
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AE
		Dilution Factor: 1		Analysis Time...: 16:04		
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AF
		Dilution Factor: 1		Analysis Time...: 16:04		
Zinc	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML0T81AG
		Dilution Factor: 1		Analysis Time...: 16:04		

NOTE (S) :

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H240450
 MB Lot-Sample #: F1H310000-089

Work Order #....: ML58K1AA

Matrix.....: WATER

Analysis Date...: 08/31/11

Prep Date.....: 08/31/11

Analysis Time...: 08:19

Dilution Factor: 1

Prep Batch #....: 1243089

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acetone	ND	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	107	(85 - 120)
Dibromofluoromethane	104	(85 - 115)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H240450

Work Order #...: ML58K1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dichloroethane-d4	98	(70 - 120)		
4-Bromofluorobenzene	97	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1H240450
MB Lot-Sample #: F1I010000-139

Work Order #...: ML7EQ1AA

Matrix.....: WATER

Analysis Date...: 09/01/11

Prep Date.....: 09/01/11

Analysis Time...: 09:51

Dilution Factor: 1

Prep Batch #...: 1244139

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Chloroethane	ND	2.0	ug/L	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Toluene-d8	132 *	(85 - 120)
Dibromofluoromethane	101	(85 - 115)
1,2-Dichloroethane-d4	109	(70 - 120)
4-Bromofluorobenzene	116	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H240450

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1H250000-036 Prep Batch #...: 1237036						
Uranium	ND	1.0	ug/L	SW846 6020A	08/25-08/31/11	ML1V91AA
		Dilution Factor: 1				
		Analysis Time...: 05:28				
MB Lot-Sample #: F1H250000-037 Prep Batch #...: 1237037						
Aluminum	ND	200	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AD
		Dilution Factor: 1				
		Analysis Time...: 13:57				
Antimony	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AU
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Arsenic	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AA
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Barium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AE
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Beryllium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AF
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Cadmium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AH
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Calcium	ND	1000	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AG
		Dilution Factor: 1				
		Analysis Time...: 13:57				
Chromium	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AK
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Cobalt	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AJ
		Dilution Factor: 1				
		Analysis Time...: 14:41				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: F1H240450

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AL
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Iron	ND	100	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AM
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Lead	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AT
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Magnesium	ND	1000	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AN
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Manganese	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AP
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Nickel	ND	40.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AR
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Selenium	ND	15.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AV
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Silver	ND	10.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AC
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Sodium	ND	1000	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AQ
		Dilution Factor: 1				
		Analysis Time...: 13:57				
Strontium	ND	5.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AW
		Dilution Factor: 1				
		Analysis Time...: 13:57				
Thallium	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1AX
		Dilution Factor: 1				
		Analysis Time...: 14:41				
Vanadium	ND	50.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1A0
		Dilution Factor: 1				
		Analysis Time...: 14:41				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1H240450

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Zinc	ND	20.0	ug/L	SW846 6010C	08/25-08/31/11	ML1WC1A1
		Dilution Factor: 1				
		Analysis Time.: 14:41				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F1H240450

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: ML2331AA 0.20	mg/L	MB Lot-Sample #: F1H240000-153 MCAWW 300.0A	08/24/11	1236153
		Dilution Factor: 1 Analysis Time...: 02:15				
Fluoride	ND	Work Order #: ML2361AA 0.10	mg/L	MB Lot-Sample #: F1H240000-154 MCAWW 300.0A	08/24/11	1236154
		Dilution Factor: 1 Analysis Time...: 02:15				
Nitrate	ND	Work Order #: ML2371AA 0.020	mg/L	MB Lot-Sample #: F1H240000-155 MCAWW 300.0A	08/24/11	1236155
		Dilution Factor: 1 Analysis Time...: 02:15				
Nitrite	ND	Work Order #: ML2381AA 0.020	mg/L	MB Lot-Sample #: F1H240000-156 MCAWW 300.0A	08/24/11	1236156
		Dilution Factor: 1 Analysis Time...: 02:15				
Phosphate as P, Ortho	ND	Work Order #: ML24H1AA 0.50	mg/L	MB Lot-Sample #: F1H240000-157 MCAWW 300.0A	08/24/11	1236157
		Dilution Factor: 1 Analysis Time...: 02:15				
Sulfate	ND	Work Order #: ML24L1AA 0.50	mg/L	MB Lot-Sample #: F1H240000-158 MCAWW 300.0A	08/24/11	1236158
		Dilution Factor: 1 Analysis Time...: 02:15				
Total Alkalinity	ND	Work Order #: ML51P1AA 5.0	mg/L	MB Lot-Sample #: F1H300000-085 MCAWW 310.1	08/30/11	1242085
		Dilution Factor: 1 Analysis Time...: 00:00				
Total Dissolved Solids	ND	Work Order #: ML4AF1AA 10.0	mg/L	MB Lot-Sample #: F1H260000-124 MCAWW 160.1	08/26-08/29/11	1238124
		Dilution Factor: 1 Analysis Time...: 00:00				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: F1H240450 Work Order #....: ML58K1AC Matrix.....: WATER
 LCS Lot-Sample#: F1H310000-089
 Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
 Prep Batch #....: 1243089 Analysis Time...: 07:26
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
cis-1,3-Dichloropropene	108	(70 - 130)	SW846 8260B
Dibromochloromethane	101	(60 - 135)	SW846 8260B
Vinyl chloride	110	(50 - 145)	SW846 8260B
Bromomethane	165 a	(30 - 145)	SW846 8260B
Chloroethane	117	(60 - 135)	SW846 8260B
Acetone	86	(40 - 140)	SW846 8260B
1,1-Dichloroethene	96	(70 - 130)	SW846 8260B
Methylene chloride	87	(55 - 140)	SW846 8260B
Carbon disulfide	93	(35 - 160)	SW846 8260B
1,1-Dichloroethane	101	(70 - 135)	SW846 8260B
2-Butanone	95	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	97	(85 - 115)	SW846 8260B
Chloroform	98	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	102	(65 - 130)	SW846 8260B
Carbon tetrachloride	99	(65 - 140)	SW846 8260B
1,2-Dichloroethane	100	(70 - 130)	SW846 8260B
Benzene	102	(80 - 120)	SW846 8260B
Trichloroethene	99	(70 - 125)	SW846 8260B
1,2-Dichloropropane	102	(75 - 125)	SW846 8260B
Bromodichloromethane	102	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	102	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropene	106	(55 - 140)	SW846 8260B
Toluene	106	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	101	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	98	(75 - 125)	SW846 8260B
2-Hexanone	87	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	98	(60 - 135)	SW846 8260B
Chlorobenzene	101	(80 - 120)	SW846 8260B
Bromoform	99	(70 - 130)	SW846 8260B
Ethylbenzene	108	(75 - 125)	SW846 8260B
Styrene	112	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	94	(65 - 130)	SW846 8260B
Tetrachloroethene	98	(45 - 150)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H240450 Work Order #...: ML58K1AC Matrix.....: WATER
LCS Lot-Sample#: F1H310000-089

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,2-Dichlorobenzene	101	(70 - 120)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	103	(85 - 120)
Dibromofluoromethane	102	(85 - 115)
1,2-Dichloroethane-d4	99	(70 - 120)
4-Bromofluorobenzene	95	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H240450 Work Order #...: ML7EQ1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F1I010000-139 ML7EQ1AD-LCSD
 Prep Date.....: 09/01/11 Analysis Date...: 09/01/11
 Prep Batch #...: 1244139 Analysis Time...: 08:53
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroethane	98	(60 - 135)			SW846 8260B
	116	(60 - 135)	17	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(85 - 120)
	110	(85 - 120)
Dibromofluoromethane	99	(85 - 115)
	94	(85 - 115)
1,2-Dichloroethane-d4	96	(70 - 120)
	108	(70 - 120)
4-Bromofluorobenzene	102	(75 - 120)
	116	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H240450

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1H250000-036 Prep Batch #... 1237036					
Uranium	106	(80 - 120)	SW846 6020A	08/25-08/31/11	ML1V91AC
		Dilution Factor: 1		Analysis Time...: 05:35	
LCS Lot-Sample#: F1H250000-037 Prep Batch #... 1237037					
Arsenic	106	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A2
		Dilution Factor: 1		Analysis Time...: 14:47	
Silver	90	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A3
		Dilution Factor: 1		Analysis Time...: 14:47	
Aluminum	108	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A4
		Dilution Factor: 1		Analysis Time...: 14:04	
Barium	107	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A5
		Dilution Factor: 1		Analysis Time...: 14:47	
Beryllium	115	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A6
		Dilution Factor: 1		Analysis Time...: 14:47	
Calcium	106	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A7
		Dilution Factor: 1		Analysis Time...: 14:04	
Cadmium	109	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A8
		Dilution Factor: 1		Analysis Time...: 14:47	
Cobalt	105	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1A9
		Dilution Factor: 1		Analysis Time...: 14:47	
Chromium	105	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CA
		Dilution Factor: 1		Analysis Time...: 14:47	
Copper	103	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CC
		Dilution Factor: 1		Analysis Time...: 14:47	
Iron	109	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CD
		Dilution Factor: 1		Analysis Time...: 14:47	
Magnesium	107	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CE
		Dilution Factor: 1		Analysis Time...: 14:47	

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H240450

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Manganese	108	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CF
		Dilution Factor: 1		Analysis Time...: 14:47	
Sodium	106	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CG
		Dilution Factor: 1		Analysis Time...: 14:04	
Nickel	105	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CH
		Dilution Factor: 1		Analysis Time...: 14:47	
Lead	105	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CJ
		Dilution Factor: 1		Analysis Time...: 14:47	
Antimony	107	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CK
		Dilution Factor: 1		Analysis Time...: 14:47	
Selenium	106	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CL
		Dilution Factor: 1		Analysis Time...: 14:47	
Strontium	102	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CM
		Dilution Factor: 1		Analysis Time...: 14:04	
Thallium	103	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CN
		Dilution Factor: 1		Analysis Time...: 14:47	
Vanadium	105	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CP
		Dilution Factor: 1		Analysis Time...: 14:47	
Zinc	113	(80 - 120)	SW846 6010C	08/25-08/31/11	ML1WC1CQ
		Dilution Factor: 1		Analysis Time...: 14:47	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H240450

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	94	(90 - 110)	Work Order #: ML2331AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H240000-153 08/24/11 Analysis Time...: 01:59	1236153
Fluoride	96	(90 - 110)	Work Order #: ML2361AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H240000-154 08/24/11 Analysis Time...: 01:59	1236154
Nitrate	97	(90 - 110)	Work Order #: ML2371AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H240000-155 08/24/11 Analysis Time...: 01:59	1236155
Nitrite	101	(90 - 110)	Work Order #: ML2381AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H240000-156 08/24/11 Analysis Time...: 01:59	1236156
Phosphate as P, Ortho	95	(90 - 110)	Work Order #: ML24H1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H240000-157 08/24/11 Analysis Time...: 01:59	1236157
Sulfate	97	(90 - 110)	Work Order #: ML24L1AC MCAWW 300.0A Dilution Factor: 1	LCS Lot-Sample#: F1H240000-158 08/24/11 Analysis Time...: 01:59	1236158
Total Alkalinity	94	(90 - 110)	Work Order #: ML51P1AC MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H300000-085 08/30/11 Analysis Time...: 00:00	1242085
Total Alkalinity	94	(90 - 110)	Work Order #: ML51P1AD MCAWW 310.1 Dilution Factor: 1	LCS Lot-Sample#: F1H300000-085 08/30/11 Analysis Time...: 00:00	1242085
Total Dissolved Solids	96	(90 - 113)	Work Order #: ML4AF1AC MCAWW 160.1 Dilution Factor: 1	LCS Lot-Sample#: F1H260000-124 08/26-08/29/11 Analysis Time...: 00:00	1238124

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H240450 Work Order #...: ML0TA1D0-MS Matrix.....: WATER
 MS Lot-Sample #: F1H240450-001 ML0TA1D1-MSD
 Date Sampled...: 08/23/11 Date Received...: 08/24/11
 Prep Date.....: 08/31/11 Analysis Date...: 08/31/11
 Prep Batch #...: 1243089 Analysis Time...: 13:23
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Vinyl chloride	110	(50 - 145)			SW846 8260B
	107	(50 - 145)	1.9	(0-20)	SW846 8260B
Bromomethane	118	(30 - 145)			SW846 8260B
	106	(30 - 145)	10	(0-20)	SW846 8260B
Chloroethane	116	(60 - 135)			SW846 8260B
	120	(60 - 135)	1.4	(0-20)	SW846 8260B
Bromoform	102	(70 - 130)			SW846 8260B
	106	(70 - 130)	4.1	(0-20)	SW846 8260B
Ethylbenzene	106	(75 - 125)			SW846 8260B
	108	(75 - 125)	2.3	(0-20)	SW846 8260B
Styrene	109	(65 - 135)			SW846 8260B
	114	(65 - 135)	4.9	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	103	(65 - 130)			SW846 8260B
	104	(65 - 130)	1.5	(0-20)	SW846 8260B
Tetrachloroethene	99	(45 - 150)			SW846 8260B
	101	(45 - 150)	1.5	(0-20)	SW846 8260B
1,2-Dichlorobenzene	102	(70 - 120)			SW846 8260B
	104	(70 - 120)	2.0	(0-20)	SW846 8260B
Acetone	88	(40 - 140)			SW846 8260B
	88	(40 - 140)	0.79	(0-20)	SW846 8260B
1,1-Dichloroethene	108	(70 - 130)			SW846 8260B
	99	(70 - 130)	7.9	(0-20)	SW846 8260B
Methylene chloride	91	(55 - 140)			SW846 8260B
	92	(55 - 140)	0.57	(0-20)	SW846 8260B
Carbon disulfide	103	(35 - 160)			SW846 8260B
	102	(35 - 160)	0.39	(0-20)	SW846 8260B
1,1-Dichloroethane	101	(70 - 135)			SW846 8260B
	106	(70 - 135)	2.6	(0-20)	SW846 8260B
2-Butanone	93	(30 - 150)			SW846 8260B
	96	(30 - 150)	4.0	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	101	(85 - 115)			SW846 8260B
	104	(85 - 115)	2.2	(0-20)	SW846 8260B
Chloroform	101	(65 - 135)			SW846 8260B
	101	(65 - 135)	0.19	(0-20)	SW846 8260B
1,1,1-Trichloroethane	102	(65 - 130)			SW846 8260B
	103	(65 - 130)	0.78	(0-20)	SW846 8260B
Carbon tetrachloride	96	(65 - 140)			SW846 8260B
	98	(65 - 140)	1.5	(0-20)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1H240450 Work Order #...: ML0TA1D0-MS Matrix.....: WATER
 MS Lot-Sample #: F1H240450-001 ML0TA1D1-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	101	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.09	(0-20)	SW846 8260B
Benzene	103	(80 - 120)			SW846 8260B
	105	(80 - 120)	2.3	(0-20)	SW846 8260B
Trichloroethene	99	(70 - 125)			SW846 8260B
	101	(70 - 125)	1.6	(0-20)	SW846 8260B
1,2-Dichloropropane	102	(75 - 125)			SW846 8260B
	103	(75 - 125)	0.87	(0-20)	SW846 8260B
Bromodichloromethane	101	(75 - 120)			SW846 8260B
	103	(75 - 120)	1.8	(0-20)	SW846 8260B
1,1,2-Trichloroethane	102	(75 - 125)			SW846 8260B
	103	(75 - 125)	0.88	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	100	(55 - 140)			SW846 8260B
	105	(55 - 140)	5.4	(0-20)	SW846 8260B
Toluene	105	(75 - 120)			SW846 8260B
	108	(75 - 120)	2.6	(0-20)	SW846 8260B
1,3-Dichlorobenzene	103	(75 - 125)			SW846 8260B
	104	(75 - 125)	0.37	(0-20)	SW846 8260B
1,4-Dichlorobenzene	97	(75 - 125)			SW846 8260B
	100	(75 - 125)	2.8	(0-20)	SW846 8260B
2-Hexanone	86	(55 - 130)			SW846 8260B
	96	(55 - 130)	11	(0-20)	SW846 8260B
4-Methyl-2-pentanone	98	(60 - 135)			SW846 8260B
	104	(60 - 135)	5.7	(0-20)	SW846 8260B
Chlorobenzene	102	(80 - 120)			SW846 8260B
	104	(80 - 120)	1.6	(0-20)	SW846 8260B
cis-1,3-Dichloropropene	94	(70 - 130)			SW846 8260B
	100	(70 - 130)	6.4	(0-20)	SW846 8260B
Dibromochloromethane	95	(60 - 135)			SW846 8260B
	99	(60 - 135)	4.0	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	100	(85 - 120)
	105	(85 - 120)
Dibromofluoromethane	99	(85 - 115)
	102	(85 - 115)
1,2-Dichloroethane-d4	96	(70 - 120)
	97	(70 - 120)
4-Bromofluorobenzene	94	(75 - 120)
	99	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

F1H240450

46 of 70

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H240450

Matrix.....: WATER

Date Sampled...: 08/23/11

Date Received...: 08/24/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1H240450-001 Prep Batch #...: 1237036						
Uranium	109	(80 - 120)		SW846 6020A	08/25-08/31/11	ML0TA1CF
	107	(80 - 120)	2.0 (0-20)	SW846 6020A	08/25-08/31/11	ML0TA1CG
		Dilution Factor: 1				
		Analysis Time...: 05:55				
MS Lot-Sample #: F1H240450-001 Prep Batch #...: 1237037						
Aluminum	108	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CM
	108	(80 - 120)	0.01 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CN
		Dilution Factor: 1				
		Analysis Time...: 14:23				
Antimony	106	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DK
	107	(80 - 120)	1.0 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DL
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Arsenic	106	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CH
	107	(80 - 120)	0.62 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CJ
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Barium	105	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CP
	105	(80 - 120)	0.40 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CQ
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Beryllium	114	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CR
	114	(80 - 120)	0.47 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CT
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Cadmium	106	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CW
	106	(80 - 120)	0.72 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CX
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Calcium	27 N	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CU
	38 N	(80 - 120)	1.2 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CV
		Dilution Factor: 10				
		Analysis Time...: 15:38				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1H240450

Matrix.....: WATER

Date Sampled...: 08/23/11

Date Received...: 08/24/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	103	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1C2
	103	(80 - 120)	0.61 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1C3
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Cobalt	102	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1C0
	102	(80 - 120)	0.60 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1C1
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Copper	101	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1C4
	101	(80 - 120)	0.38 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1C5
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Iron	107	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1C6
	107	(80 - 120)	0.57 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1C7
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Lead	102	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DH
	102	(80 - 120)	0.35 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DJ
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Magnesium	103	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1C8
	105	(80 - 120)	0.57 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1C9
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Manganese	105	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DA
	106	(80 - 120)	0.59 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DC
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Nickel	101	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DF
	102	(80 - 120)	0.68 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DG
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Selenium	81	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DM
	81	(80 - 120)	0.17 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DN
		Dilution Factor: 1				
		Analysis Time...: 15:06				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F1H240450

Matrix.....: WATER

Date Sampled....: 08/23/11

Date Received...: 08/24/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	90	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1CK
	90	(80 - 120)	0.52 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1CL
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Sodium	104	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DD
	104	(80 - 120)	0.12 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DE
		Dilution Factor: 1				
		Analysis Time...: 14:23				
Strontium	111	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DP
	113	(80 - 120)	1.1 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DQ
		Dilution Factor: 10				
		Analysis Time...: 15:38				
Thallium	100	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DR
	101	(80 - 120)	0.98 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DT
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Vanadium	103	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DU
	104	(80 - 120)	0.51 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DV
		Dilution Factor: 1				
		Analysis Time...: 15:06				
Zinc	111	(80 - 120)		SW846 6010C	08/25-08/31/11	ML0TA1DW
	111	(80 - 120)	0.56 (0-20)	SW846 6010C	08/25-08/31/11	ML0TA1DX
		Dilution Factor: 1				
		Analysis Time...: 15:06				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H240450

Matrix.....: WATER

Date Sampled...: 08/23/11 09:30 Date Received...: 08/24/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	105	Work Order #...: ML0TH1CF (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H240450-003 08/24/11	1236153
		Dilution Factor: 10		Analysis Time...: 04:10	
Fluoride	108	Work Order #...: ML0TH1CH (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H240450-003 08/24/11	1236154
		Dilution Factor: 5		Analysis Time...: 03:54	
Nitrate	113 N	Work Order #...: ML0TH1CK (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H240450-003 08/24/11	1236155
		Dilution Factor: 1		Analysis Time...: 03:37	
Nitrite	72 N	Work Order #...: ML0TH1CM (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H240450-003 08/24/11	1236156
		Dilution Factor: 10		Analysis Time...: 04:10	
Phosphate as P, Ortho	75 N	Work Order #...: ML0TH1CP (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H240450-003 08/24/11	1236157
		Dilution Factor: 1		Analysis Time...: 03:37	
Sulfate	101	Work Order #...: ML0TH1CR (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F1H240450-003 08/24/11	1236158
		Dilution Factor: 5		Analysis Time...: 03:54	
Total Alkalinity	98	Work Order #...: MLW9L1EM (80 - 120)	MCAWW 310.1	MS Lot-Sample #: F1H230407-007 08/30/11	1242085
		Dilution Factor: 1		Analysis Time...: 00:00	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F1H240450

Work Order #....: ML0TH-SMP
ML0TH-DUP

Matrix.....: WATER

Date Sampled....: 08/23/11 09:30 Date Received...: 08/24/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	24.4	22.7	mg/L	7.2	(0-20)	SD Lot-Sample #: F1H240450-003 MCAWW 300.0A Dilution Factor: 10 Analysis Time...: 04:10	08/24/11	1236153
Fluoride	1.2	1.3	mg/L	6.3	(0-20)	SD Lot-Sample #: F1H240450-003 MCAWW 300.0A Dilution Factor: 5 Analysis Time...: 03:54	08/24/11	1236154
Nitrate	0.010 B	0.016 B	mg/L	43	(0-20)	SD Lot-Sample #: F1H240450-003 MCAWW 300.0A Dilution Factor: 1 Analysis Time...: 03:37	08/24/11	1236155
Nitrite	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H240450-003 MCAWW 300.0A Dilution Factor: 10 Analysis Time...: 04:10	08/24/11	1236156
Phosphate as P, Ortho	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F1H240450-003 MCAWW 300.0A Dilution Factor: 1 Analysis Time...: 03:37	08/24/11	1236157
Sulfate	36.6	36.7	mg/L	0.082	(0-20)	SD Lot-Sample #: F1H240450-003 MCAWW 300.0A Dilution Factor: 5 Analysis Time...: 03:54	08/24/11	1236158

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1H240450

Work Order #...: MLW9L-SMP
MLW9L-DUP

Matrix.....: WATER

Date Sampled...: 08/22/11 11:00 Date Received...: 08/23/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: F1H230407-007		
	400	400	mg/L	0.0	(0-15)	MCAWW 160.1	08/26-08/29/11	1238124
				Dilution Factor: 1		Analysis Time...: 00:00		
Total Alkalinity						SD Lot-Sample #: F1H230407-007		
	254	254	mg/L	0.16	(0-20)	MCAWW 310.1	08/30/11	1242085
				Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005

Radiochemistry

Lab Sample ID: F1H240450-001
Work Order: MLOTA
Matrix: WATER

Date Collected: 08/23/11 0000
Date Received: 08/24/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 67
Uranium 234	10.9		1.1	0.1	0.08	08/26/11	08/31/11
Uranium 235/236	0.58		0.18	0.10	0.07	08/26/11	08/31/11
Uranium 238	12.0		1.2	0.1	0.06	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW010001

Radiochemistry

Lab Sample ID: F1H240450-002
 Work Order: MLOTF
 Matrix: WATER

Date Collected: 08/23/11 0850
 Date Received: 08/24/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1238069		Yld % 43
Uranium 234	1.86		0.38	0.10	0.1	08/26/11	08/31/11
Uranium 235/236	0.020	U	0.041	0.100	0.055	08/26/11	08/31/11
Uranium 238	1.22		0.30	0.10	0.13	08/26/11	08/31/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result F1H240450 is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001

Radiochemistry

Lab Sample ID: F1H240450-003
Work Order: MLOTH
Matrix: WATER

Date Collected: 08/23/11 0930
Date Received: 08/24/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 63
Uranium 234	12.0		1.2	0.1	0.09	08/26/11	08/31/11
Uranium 235/236	0.62		0.19	0.10	0.08	08/26/11	08/31/11
Uranium 238	12.9		1.3	0.1	0.06	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW9005 DISSOLVED

Radiochemistry

Lab Sample ID: F1H240450-006
Work Order: ML0T1
Matrix: WATER

Date Collected: 08/23/11 0000
Date Received: 08/24/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 66
Uranium 234	10.3		1.1	0.1	0.06	08/26/11	08/31/11
Uranium 235/236	0.49		0.16	0.10	0.06	08/26/11	08/31/11
Uranium 238	10.8		1.1	0.1	0.03	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc
Client Sample ID: A02MW010001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H240450-007
 Work Order: MLOT4
 Matrix: WATER

Date Collected: 08/23/11 0850
 Date Received: 08/24/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 50
Uranium 234	1.32		0.29	0.10	0.1	08/26/11	08/31/11
Uranium 235/236	-0.008	U	0.012	0.100	0.087	08/26/11	08/31/11
Uranium 238	1.24		0.28	0.10	0.09	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is **1.32** greater than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A02MW020001 DISSOLVED

Radiochemistry

Lab Sample ID: F1H240450-008
Work Order: ML0T8
Matrix: WATER

Date Collected: 08/23/11 0930
Date Received: 08/24/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1238069	Yld % 77
Uranium 234	9.68		0.99	0.10	0.05	08/26/11	08/31/11
Uranium 235/236	0.36		0.13	0.10	0.05	08/26/11	08/31/11
Uranium 238	10.4		1.1	0.1	0.04	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1H240450

Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Prep	Lab Sample ID
			(2 σ+/-)			Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	1238069	Yld % 100	F1H260000-069B
Uranium 234	0.021	U	0.029	0.100	0.045	08/26/11	08/31/11
Uranium 235/236	0.004	U	0.019	0.100	0.047	08/26/11	08/31/11
Uranium 238	0.004	U	0.015	0.100	0.038	08/26/11	08/31/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1H240450
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1H260000-069C
Uranium 234	3.26	3.06	0.40	0.05	92	94	(76 - 136)
Uranium 238	3.39	3.36	0.42	0.04	92	99	(76 - 134)
	Batch #:	1238069		Analysis Date:	08/31/11		

NOTE(S)

F1H240450
 MDC is determined by instrument performance only
 Calculations are performed before rounding to avoid round-off error in calculated results

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F1H230464
 Matrix: WATER

Date Sampled: 08/19/11 0915
 Date Received: 08/23/11 0905

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID			QC Control Limits
							% Yld	% Rec		
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD					F1H230464-010
Uranium 234	3.26	2.71	0.40	69	0.023 U	0.037	65	82		(65 - 146)
Spk2	3.26	3.11	0.45	65	0.023 U	0.037	65	95		(65 - 146)
						Precision:		14	%RPD	
Uranium 238	3.39	2.84	0.41	69	0.028 U	0.036	65	83		(68 - 143)
Spk2	3.39	3.18	0.46	65	0.028 U	0.036	65	93		(68 - 143)
						Precision:		11	%RPD	
Batch #: 1238069			Analysis date: 08/31/11							

NOTE(S)

Data are incomplete without the case narrative.

Calculations performed before rounding to avoid round-off error in calculated results

U Result is less than the sample detection limit.

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc: R21,2-106,METS,

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A02MW9005			2011-08-23 / 0	ML0TA	WATER
SAMPLE COMMENTS:						
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 5of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: B	WRK LOC 06

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc: R21,2-106,METS,

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS in LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 8020 for total uranium instead of 200.8

D	SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	UX	I\$	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc: R21,2-106,METS,

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS In LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A02MW010001			2011-08-23 / 850	ML0TF	WATER

SAMPLE COMMENTS:

PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV			WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc: R21,2-106,METS,

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS In LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX AK	MCAW 160.1 W	WATER, 100.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 6of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A02MW020001			2011-08-23 / 930	ML0TH	WATER
<u>SAMPLE COMMENTS:</u>						
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8280B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN A-01-R MOD	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc: R21,2-106,METS,

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B Standard Report

#SMPS In LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX AK	MCAW 160.1 W	WATER, 160.1, TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	WATER, 300.0A, Fluoride 2of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX C9	MCAW 300.0A W	WATER, 300.0A, Nitrate as N 3of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CX	MCAW 300.0A W	WATER, 300.0A, Chloride 1of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX CY	MCAW 300.0A W	WATER, 300.0A, Sulfate 8of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX DO	MCAW 300.0A W	WATER, 300.0A, Orthophosphate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as N 4of6	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX VC	MCAW 310.1 W	WATER, 310.1, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: B	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 4 A04BMW707DD0001 2011-08-23 / 0 ML0TJ WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 5 TRIP BLANK#6 2011-08-23 / 0 ML0TV WATER

SAMPLE COMMENTS:

XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06 TIC: N
-------	-------------	-------------------	----	---------------------------------------	----	--------------	---------	---------	-----------

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 6 A02MW9005 DISSOLVED 2011-08-23 / 0 ML0T1 WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

TestAmerica - St. Louis

Logged In by:

BRUNSONA

2011-08-24

12:42:05

printed on: Thursday, August 25, 2011 08:51 A

Page 5 of 7

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc:

R21,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS In LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.0

BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 7 A02MW010001 DISSOLVED 2011-08-23 / 850 ML0T4 WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 8 A02MW020001 DISSOLVED 2011-08-23 / 930 ML0T8 WATER

SAMPLE COMMENTS:

TestAmerica - St. Louis

Logged In by:

BRUNSONA

2011-08-24

12:42:05

printed on: Thursday, August 25, 2011 08:51 A

Page 6 of 7

F1H240450

67 of 70

F1H240450

CLIENT ANALYSIS SUMMARY

Storage Loc:

R21,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2011-08-24

Project: 140415

Guterl Steel

Analytical Due Date: 2011-09-01

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2011-09-06

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: B

Standard Report

#SMPS In LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

MG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD 1\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX 1\$	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

13715 Rider Trail North:

Earth City, MO 63045

phone 314.298.8566 fax 314.298.8757

Cul 205

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

[illegible]

Company: Shaw E & I. Inc.	Date/Time: 8/23/11 16:15	Company: BFL0	Date/Time: 08-23-11 16:15
Company: BFL0	Date/Time: 08/23/11 16:42	Company: BFL0	Date/Time: 8/23-11 16:25
Company: BFL0	Date/Time: 8-23-11 15:54	Company: TA-STZ	Date/Time: 8/23/11 09:20

St. Louis, Missouri

Lot #(s): F1H240450

TestAmerica St. Louis

CUR Form #: 2 0 5

CONDITION UPON RECEIPT FORM

Client: SHAW

Quote No: 89251

COC/RFA No: 014

Initiated By: NVO

Date: 8/24/11

Time: 0920

Shipping Information

Shipper: ☒ FedEx

☐ UPS

☐ DHL

☐ Courier

☐ Client

☐ Other:

Multiple Packages: ☒ Y

☐ N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 4958
2. ↓ ↓ 4969
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 3
2. Ambient
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

SAMPLE ID A04BMW707DNO001 WAS REC'D WITH IMPROPER P.H
WHICH WAS CORRECTED BY ADDING NITRIC ACID LOT # K11059 WHICH
WAS OK'D BY P.M (L.F)

Corrective Action:

☐ Client Contact Name: _____

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until: _____

Project Management Review

THIS FORM MUST BE COMPLETED
THAT PERSON IS REQUIRED TO APP

Informed by: _____

If released, notify: _____

Date: 8/26/11

ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN
AND THE DATE NEXT TO THAT ITEM.

v13, REVISED 05/27/11 \SIsrv01\QA\FORMS\ST-LOUIS\ADMIN\Admin-0004 CUR.doc

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

Guterl Steel

Lot #: F1I010435

[REDACTED]
Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.

[REDACTED]
Project Manager

September 20, 2011

F1I010435

1 of 64

Case Narrative
LOT NUMBER: F1I010435

This report contains the analytical results for the five samples received under chain of custody by TestAmerica in St. Louis on September 1, 2011. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Volatile Organics by GC/MS (SW-846 8260)**Batch: 1255150**

The CCV %Ds for Ethyl acetate and Nonanal are outside the established QC limits. These analytes are not part of the analysis request and thus this excursion does not affect the data.

The LCS recovery for Bromoform is outside the upper QC limit, indicating a potential positive bias for these analytes. These analytes were not observed above the reporting limit or are not targets for the associated samples; therefore the sample data was not adversely affected by this excursion.

Affected Samples:

F1I010435 (1): AQUEOUS IDW

F1I010435 (5): TRIP BLANK #7

Volatile Organics by GC/MS (SW-846 8260)-TCLP**Batch: 1251207**

The CCV recovery was outside the upper QC limit (greater than 20% D) for Vinyl chloride indicating a potential high bias for this analyte in the samples associated with this CCV. This analyte was not detected above the reporting limit in the associated samples.

Affected Samples:

F1I010435 (2): NON-AQUEOUS IDW

Mercury in Solid Waste (Manual Cold-Vapor) (SW846 7471)-TCLP**Batch: 1256029**

The MS (MSD) recovery for mercury is outside the established QC limits. The RPD is within method acceptance criteria indicating matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F1I010435 (2): NON-AQUEOUS IDW

ICP-MS (SW846-6020)**Batch: 1249123**

The sample was analyzed at a dilution due to the presence of matrix interferences. The digestates were cloudy. The reporting limit has been adjusted for the dilution.

Affected Samples:

F1I010435 (3): A04BMW707DD0001

F1I010435 (4): A04BMW707DD0001 DISSOLVED

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)**Batch: 1249124**

The MSD recovery for sodium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

The serial dilution for calcium, sodium and strontium are outside the established QC limits, indicating matrix interference.

Affected Samples:

F1I010435 (1): AQUEOUS IDW

F1I010435 (3): A04BMW707DD0001

F1I010435 (4): A04BMW707DD0001 DISSOLVED

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)-TCLP

Batch: 1249119

The CCV recovery was outside the upper QC limit (greater than 110%) for silver indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples or were not target analytes for the associated samples.

Affected Samples:

F1I010435 (2): NON-AQUEOUS IDW

Manual Integration:

Manual integration may have been performed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

METHODS SUMMARY

F1I010435

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 1311/3010
Isotopic Thorium by Alpha Spectroscopy	EML A-01-R MOD	
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 1311/3510
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	
Volatile Organics by GC/MS	SW846 8260B	SW846 1311/5030
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F1I010435

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ML648	001	AQUEOUS IDW	08/31/11	09:30
ML649	002	NON-AQUEOUS IDW	08/31/11	10:20
ML65D	003	A04BMW707DD0001	08/31/11	11:50
ML65F	004	A04BMW707DD0001 DISSOLVED	08/31/11	11:50
ML65G	005	TRIP BLANK #7	08/31/11	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: AQUEOUS IDW

GC/MS Volatiles

Lot-Sample #...: F1I010435-001 Work Order #...: ML6481AC Matrix.....: WATER
 Date Sampled...: 08/31/11 09:30 Date Received...: 09/01/11
 Prep Date.....: 09/11/11 Analysis Date...: 09/11/11
 Prep Batch #...: 1255150 Analysis Time...: 19:11
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloro-propylene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Acetone	5.2 B	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	0.10 J	2.0	ug/L
Chloroform	0.20 J	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	2.8	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	0.11 J	1.0	ug/L
1,2-Dichloroethene	1.5 J	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.26 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: AQUEOUS IDW

GC/MS Volatiles

Lot-Sample #....: F1I010435-001 Work Order #....: ML6481AC Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	99	(85 - 120)
Dibromofluoromethane	98	(85 - 115)
1,2-Dichloroethane-d4	103	(70 - 120)
4-Bromofluorobenzene	100	(75 - 120)

NOTE(S) :

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: AQUEOUS IDW

TOTAL Metals

Lot-Sample #...: F1I010435-001

Matrix.....: WATER

Date Sampled...: 08/31/11 09:30 Date Received...: 09/01/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1249123						
Uranium	0.28 J	1	ug/L	SW846 6020A	09/06-09/13/11	ML6481A5
		Dilution Factor: 1		Analysis Time...: 23:40		
Prep Batch #...: 1249124						
Silver	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML6481AF
		Dilution Factor: 1		Analysis Time...: 19:55		
Aluminum	437	200	ug/L	SW846 6010C	09/12-09/13/11	ML6481AG
		Dilution Factor: 1		Analysis Time...: 19:55		
Arsenic	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML6481AE
		Dilution Factor: 1		Analysis Time...: 19:55		
Barium	168	50	ug/L	SW846 6010C	09/12-09/13/11	ML6481AH
		Dilution Factor: 1		Analysis Time...: 19:55		
Beryllium	ND	5	ug/L	SW846 6010C	09/12-09/14/11	ML6481AJ
		Dilution Factor: 1		Analysis Time...: 09:26		
Calcium	154000 E	10000	ug/L	SW846 6010C	09/12-09/13/11	ML6481AK
		Dilution Factor: 10		Analysis Time...: 19:55		
Cadmium	ND	5	ug/L	SW846 6010C	09/12-09/13/11	ML6481AL
		Dilution Factor: 1		Analysis Time...: 19:55		
Cobalt	ND	50	ug/L	SW846 6010C	09/12-09/13/11	ML6481AM
		Dilution Factor: 1		Analysis Time...: 19:55		
Chromium	ND	10	ug/L	SW846 6010C	09/12-09/14/11	ML6481AN
		Dilution Factor: 1		Analysis Time...: 09:26		
Copper	ND	25	ug/L	SW846 6010C	09/12-09/13/11	ML6481AP
		Dilution Factor: 1		Analysis Time...: 19:55		
Iron	4040	100	ug/L	SW846 6010C	09/12-09/13/11	ML6481AQ
		Dilution Factor: 1		Analysis Time...: 19:55		
Magnesium	53600	10000	ug/L	SW846 6010C	09/12-09/13/11	ML6481AR
		Dilution Factor: 10		Analysis Time...: 19:55		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: AQUEOUS IDW

TOTAL Metals

Lot-Sample #...: F1I010435-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	124	15	ug/L	SW846 6010C	09/12-09/13/11	ML6481AT
		Dilution Factor: 1		Analysis Time...: 19:55		
Sodium	160000 NE	10000	ug/L	SW846 6010C	09/12-09/13/11	ML6481AU
		Dilution Factor: 10		Analysis Time...: 19:55		
Nickel	ND	40	ug/L	SW846 6010C	09/12-09/13/11	ML6481AV
		Dilution Factor: 1		Analysis Time...: 19:55		
Lead	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML6481AW
		Dilution Factor: 1		Analysis Time...: 19:55		
Antimony	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML6481AX
		Dilution Factor: 1		Analysis Time...: 19:55		
Selenium	ND	15	ug/L	SW846 6010C	09/12-09/13/11	ML6481A0
		Dilution Factor: 1		Analysis Time...: 19:55		
Strontium	1960 E	50	ug/L	SW846 6010C	09/12-09/13/11	ML6481A1
		Dilution Factor: 10		Analysis Time...: 19:55		
Thallium	ND	20	ug/L	SW846 6010C	09/12-09/13/11	ML6481A2
		Dilution Factor: 1		Analysis Time...: 19:55		
Vanadium	ND	50	ug/L	SW846 6010C	09/12-09/13/11	ML6481A3
		Dilution Factor: 1		Analysis Time...: 19:55		
Zinc	30.2	20	ug/L	SW846 6010C	09/12-09/13/11	ML6481A4
		Dilution Factor: 1		Analysis Time...: 19:55		

Prep Batch #...: 1251138

Mercury	ND	0.3	ug/L	SW846 7470A	09/13/11	ML6481AD
		Dilution Factor: 1		Analysis Time...: 13:03		

NOTE(S) :

J Estimated result. Result is less than RL.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW

TCLP GC/MS Volatiles

Lot-Sample #...: F1I010435-002 Work Order #...: ML6491AP Matrix.....: SOLID
 Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11
 Leach Date.....: 09/06/11 Prep Date.....: 09/08/11 Analysis Date...: 09/08/11
 Leach Batch #...: P124907 Prep Batch #...: 1251207 Analysis Time...: 23:22
 Dilution Factor: 1
 % Moisture.....: 62 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	50	ug/L
2-Butanone	ND	50	ug/L
Carbon tetrachloride	ND	50	ug/L
Chlorobenzene	5.3 J,B	50	ug/L
Chloroform	ND	50	ug/L
1,4-Dichlorobenzene	ND	50	ug/L
1,2-Dichloroethane	ND	50	ug/L
1,1-Dichloroethene	ND	50	ug/L
Tetrachloroethene	ND	50	ug/L
Trichloroethene	ND	50	ug/L
Vinyl chloride	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(85 - 115)
Toluene-d8	101	(85 - 120)
4-Bromofluorobenzene	95	(75 - 120)
1,2-Dichloroethane-d4	105	(70 - 120)

NOTE(S) :

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW

TCLP GC/MS Semivolatiles

Lot-Sample #...: F1I010435-002 Work Order #...: ML6491AQ Matrix.....: SOLID
 Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11
 Leach Date.....: 09/02/11 Prep Date.....: 09/07/11 Analysis Date...: 09/11/11
 Leach Batch #...: P124506 Prep Batch #...: 1250060 Analysis Time...: 23:00
 Dilution Factor: 1
 % Moisture.....: 62 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
1,4-Dichlorobenzene	ND	50	ug/L
2,4-Dinitrotoluene	ND	50	ug/L
Hexachlorobenzene	ND	50	ug/L
Hexachlorobutadiene	ND	50	ug/L
Hexachloroethane	ND	50	ug/L
2-Methylphenol	ND	50	ug/L
3-Methylphenol & 4-Methylphenol	ND	50	ug/L
Nitrobenzene	ND	50	ug/L
Pentachlorophenol	ND	250	ug/L
Pyridine	ND	100	ug/L
2,4,5-Trichloro- phenol	ND	50	ug/L
2,4,6-Trichloro- phenol	ND	50	ug/L

SURROGATE	PERCENT	
	RECOVERY	RECOVERY LIMITS
2-Fluorophenol	68	(20 - 110)
Phenol-d5	62	(10 - 115)
Nitrobenzene-d5	80	(40 - 110)
2-Fluorobiphenyl	76	(50 - 110)
Terphenyl-d14	74	(50 - 135)
2,4,6-Tribromophenol	90	(40 - 125)

NOTE(S) :

 Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW

TOTAL Metals

Lot-Sample #...: F1I010435-002

Matrix.....: SOLID

Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11

% Moisture.....: 62

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1256029					
Mercury	ND N	0.11	mg/kg	SW846 7471A	09/13/11	ML6491AR
		Dilution Factor: 1		Analysis Time...: 10:36		

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW

TCLP Metals

Lot-Sample #...: F1I010435-002

Matrix.....: SOLID

Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11

Leach Date.....: 09/02/11 Leach Batch #...: P124506

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1249119						
Silver	ND	40	ug/L	SW846 6010B	09/06-09/09/11	ML6491AH
		Dilution Factor: 1		Analysis Time...: 18:13		
Arsenic	ND	500	ug/L	SW846 6010B	09/06-09/09/11	ML6491AJ
		Dilution Factor: 1		Analysis Time...: 18:13		
Barium	377	125	ug/L	SW846 6010B	09/06-09/12/11	ML6491AK
		Dilution Factor: 1		Analysis Time...: 14:36		
Chromium	8.8 J	25	ug/L	SW846 6010B	09/06-09/09/11	ML6491AL
		Dilution Factor: 1		Analysis Time...: 18:13		
Lead	ND	250	ug/L	SW846 6010B	09/06-09/09/11	ML6491AM
		Dilution Factor: 1		Analysis Time...: 18:13		
Selenium	7.7 J	800	ug/L	SW846 6010B	09/06-09/09/11	ML6491AN
		Dilution Factor: 1		Analysis Time...: 18:13		

NOTE(S) :

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW

General Chemistry

Lot-Sample #...: F1I010435-002 Work Order #...: ML649 Matrix.....: SOLID
Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11
% Moisture.....: 62

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	62.3	0.10	%	MCAWW 160.3 MOD	09/06-09/07/11	1249010
		Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001

TOTAL Metals

Lot-Sample #...: F1I010435-003

Matrix.....: WATER

Date Sampled...: 08/31/11 11:50 Date Received...: 09/01/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1249123						
Uranium	34.5	10	ug/L	SW846 6020A	09/06-09/14/11	ML65D1A2
		Dilution Factor: 10		Analysis Time...: 00:08		
Prep Batch #...: 1249124						
Silver	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AC
		Dilution Factor: 1		Analysis Time...: 20:34		
Aluminum	2320	200	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AD
		Dilution Factor: 1		Analysis Time...: 20:34		
Arsenic	2.6 J	10	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AA
		Dilution Factor: 1		Analysis Time...: 20:34		
Barium	183	50	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AE
		Dilution Factor: 1		Analysis Time...: 20:34		
Beryllium	0.99 J	5	ug/L	SW846 6010C	09/12-09/14/11	ML65D1AF
		Dilution Factor: 1		Analysis Time...: 09:52		
Calcium	1200000 E	50000	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AG
		Dilution Factor: 50		Analysis Time...: 19:23		
Cadmium	ND	5	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AH
		Dilution Factor: 1		Analysis Time...: 20:34		
Cobalt	9.2 J	50	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AJ
		Dilution Factor: 1		Analysis Time...: 20:34		
Chromium	4.2 J	10	ug/L	SW846 6010C	09/12-09/14/11	ML65D1AK
		Dilution Factor: 1		Analysis Time...: 09:52		
Copper	14.4 J	25	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AL
		Dilution Factor: 1		Analysis Time...: 20:34		
Iron	3710	100	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AM
		Dilution Factor: 1		Analysis Time...: 20:34		
Magnesium	544000	50000	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AN
		Dilution Factor: 50		Analysis Time...: 19:23		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001

TOTAL Metals

Lot-Sample #...: F1I010435-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	862	15	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AP
		Dilution Factor: 1		Analysis Time...: 20:34		
Sodium	3700000 NE	50000	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AQ
		Dilution Factor: 50		Analysis Time...: 19:23		
Nickel	ND	40	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AR
		Dilution Factor: 1		Analysis Time...: 20:34		
Lead	2.0 J	10	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AT
		Dilution Factor: 1		Analysis Time...: 20:34		
Antimony	12.5	10	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AU
		Dilution Factor: 1		Analysis Time...: 20:34		
Selenium	11.2 J	15	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AV
		Dilution Factor: 1		Analysis Time...: 20:34		
Strontium	19000 E	250	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AW
		Dilution Factor: 50		Analysis Time...: 19:23		
Thallium	ND	20	ug/L	SW846 6010C	09/12-09/13/11	ML65D1AX
		Dilution Factor: 1		Analysis Time...: 20:34		
Vanadium	4.5 J	50	ug/L	SW846 6010C	09/12-09/13/11	ML65D1A0
		Dilution Factor: 1		Analysis Time...: 20:34		
Zinc	47.3	20	ug/L	SW846 6010C	09/12-09/13/11	ML65D1A1
		Dilution Factor: 1		Analysis Time...: 20:34		

NOTE(S) :

J Estimated result. Result is less than RL.

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1I010435-004

Matrix.....: WATER

Date Sampled...: 08/31/11 11:50 Date Received...: 09/01/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1249123					
Uranium	33.9	10	ug/L	SW846 6020A	09/06-09/14/11	ML65F1A2
		Dilution Factor: 10		Analysis Time...: 00:15		
Prep Batch #...	1249124					
Silver	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AC
		Dilution Factor: 1		Analysis Time...: 20:47		
Aluminum	840	200	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AD
		Dilution Factor: 1		Analysis Time...: 20:47		
Arsenic	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AA
		Dilution Factor: 1		Analysis Time...: 20:47		
Barium	172	50	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AE
		Dilution Factor: 1		Analysis Time...: 20:47		
Beryllium	ND	5	ug/L	SW846 6010C	09/12-09/14/11	ML65F1AF
		Dilution Factor: 1		Analysis Time...: 10:05		
Calcium	1260000 E	50000	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AG
		Dilution Factor: 50		Analysis Time...: 19:36		
Cadmium	ND	5	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AH
		Dilution Factor: 1		Analysis Time...: 20:47		
Cobalt	7.3 J	50	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AJ
		Dilution Factor: 1		Analysis Time...: 20:47		
Chromium	ND	10	ug/L	SW846 6010C	09/12-09/14/11	ML65F1AK
		Dilution Factor: 1		Analysis Time...: 10:05		
Copper	ND	25	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AL
		Dilution Factor: 1		Analysis Time...: 20:47		
Iron	1400	100	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AM
		Dilution Factor: 1		Analysis Time...: 20:47		
Magnesium	586000	50000	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AN
		Dilution Factor: 50		Analysis Time...: 19:36		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0001 DISSOLVED

TOTAL Metals

Lot-Sample #...: F1I010435-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	489	15	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AP
		Dilution Factor: 1		Analysis Time...: 20:47		
Sodium	4180000 NE	50000	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AQ
		Dilution Factor: 50		Analysis Time...: 19:36		
Nickel	ND	40	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AR
		Dilution Factor: 1		Analysis Time...: 20:47		
Lead	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AT
		Dilution Factor: 1		Analysis Time...: 20:47		
Antimony	8.0 J	10	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AU
		Dilution Factor: 1		Analysis Time...: 20:47		
Selenium	ND	15	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AV
		Dilution Factor: 1		Analysis Time...: 20:47		
Strontium	21700 E	250	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AW
		Dilution Factor: 50		Analysis Time...: 19:36		
Thallium	ND	20	ug/L	SW846 6010C	09/12-09/13/11	ML65F1AX
		Dilution Factor: 1		Analysis Time...: 20:47		
Vanadium	ND	50	ug/L	SW846 6010C	09/12-09/13/11	ML65F1A0
		Dilution Factor: 1		Analysis Time...: 20:47		
Zinc	19.6 J	20	ug/L	SW846 6010C	09/12-09/13/11	ML65F1A1
		Dilution Factor: 1		Analysis Time...: 20:47		

NOTE(S) :

E Matrix interference.

J Estimated result, Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #7

GC/MS Volatiles

Lot-Sample #...: F1I010435-005 Work Order #...: ML65G1AA Matrix.....: WATER
 Date Sampled...: 08/31/11 Date Received...: 09/01/11
 Prep Date.....: 09/11/11 Analysis Date...: 09/11/11
 Prep Batch #...: 1255150 Analysis Time...: 18:46
 Dilution Factor: 1
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	3.2 B	2.0	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon disulfide	ND	2.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene	ND	2.0	ug/L
(total)			
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropylene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	5.0	ug/L

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: TRIP BLANK #7

GC/MS Volatiles

Lot-Sample #...: F1I010435-005 Work Order #...: ML65G1AA Matrix.....: WATER

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	99	(85 - 120)
Dibromofluoromethane	94	(85 - 115)
1,2-Dichloroethane-d4	94	(70 - 120)
4-Bromofluorobenzene	100	(75 - 120)

NOTE(S) :

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1I010435
 MB Lot-Sample #: F1I120000-150

Work Order #...: MMDNX1AA

Matrix.....: WATER

Analysis Date...: 09/11/11

Prep Date.....: 09/11/11

Analysis Time...: 18:18

Dilution Factor: 1

Prep Batch #...: 1255150

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	1.9 J	2.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene	ND	2.0	ug/L	SW846 8260B
(total)				
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloro- propylene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	99	(85 - 120)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F1I010435

Work Order #...: MMDNX1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Dibromofluoromethane	94	(85 - 115)		
1,2-Dichloroethane-d4	98	(70 - 120)		
4-Bromofluorobenzene	100	(75 - 120)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

TCLP GC/MS Volatiles

Client Lot #...: F1I010435
 MB Lot-Sample #: F1I060000-082
 Leach Date.....: 09/06/11
 Leach Batch #...: P124907
 Dilution Factor: 1

Work Order #....: ML8Q21AA
 Prep Date.....: 09/08/11
 Prep Batch #....: 1251207

Matrix.....: SOLID
 Analysis Date...: 09/08/11
 Analysis Time...: 22:58

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Benzene	ND	50	ug/L	SW846 8260B
2-Butanone	ND	50	ug/L	SW846 8260B
Carbon tetrachloride	ND	50	ug/L	SW846 8260B
Chlorobenzene	6.0 J	50	ug/L	SW846 8260B
Chloroform	ND	50	ug/L	SW846 8260B
1,4-Dichlorobenzene	3.6 J	50	ug/L	SW846 8260B
1,2-Dichloroethane	ND	50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	50	ug/L	SW846 8260B
Tetrachloroethene	ND	50	ug/L	SW846 8260B
Trichloroethene	ND	50	ug/L	SW846 8260B
Vinyl chloride	ND	100	ug/L	SW846 8260B

SURROGATE	PERCENT	
	RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(85 - 115)
Toluene-d8	101	(85 - 120)
4-Bromofluorobenzene	97	(75 - 120)
1,2-Dichloroethane-d4	100	(70 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

TCLP GC/MS Semivolatiles

Client Lot #...: F1I010435	Work Order #...: ML7VQ1AH	Matrix.....: SOLID
MB Lot-Sample #: F1I020000-029		
Leach Date.....: 09/02/11	Prep Date.....: 09/07/11	Analysis Date...: 09/11/11
Leach Batch #...: P124506	Prep Batch #...: 1250060	Analysis Time...: 15:20
Dilution Factor: 1		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4,5-Trichloro-phenol	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	50	ug/L	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	50	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	50	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	50	ug/L	SW846 8270C
Hexachlorobenzene	ND	50	ug/L	SW846 8270C
Hexachlorobutadiene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	50	ug/L	SW846 8270C
2-Methylphenol	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	50	ug/L	SW846 8270C
Pentachlorophenol	ND	250	ug/L	SW846 8270C
Pyridine	ND	100	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	58	(20 - 110)
Phenol-d5	56	(10 - 115)
Nitrobenzene-d5	65	(40 - 110)
2-Fluorobiphenyl	64	(50 - 110)
Terphenyl-d14	78	(50 - 135)
2,4,6-Tribromophenol	73	(40 - 125)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1I060000-123 Prep Batch #... : 1249123						
Uranium	ND	1	ug/L	SW846 6020A	09/06-09/13/11	ML8V01AA
		Dilution Factor: 1				
		Analysis Time...: 23:26				
MB Lot-Sample #: F1I060000-124 Prep Batch #... : 1249124						
Aluminum	ND	200	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AD
		Dilution Factor: 1				
		Analysis Time...: 18:57				
Antimony	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AU
		Dilution Factor: 1				
		Analysis Time...: 18:57				
Arsenic	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AA
		Dilution Factor: 1				
		Analysis Time...: 18:57				
Barium	ND	50	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AE
		Dilution Factor: 1				
		Analysis Time...: 18:57				
Beryllium	ND	5	ug/L	SW846 6010C	09/12-09/14/11	ML8V21AF
		Dilution Factor: 1				
		Analysis Time...: 09:13				
Cadmium	ND	5	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AH
		Dilution Factor: 1				
		Analysis Time...: 18:57				
Calcium	ND	1000	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AG
		Dilution Factor: 1				
		Analysis Time...: 18:46				
Chromium	ND	10	ug/L	SW846 6010C	09/12-09/14/11	ML8V21AK
		Dilution Factor: 1				
		Analysis Time...: 09:13				
Cobalt	ND	50	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AJ
		Dilution Factor: 1				
		Analysis Time...: 18:57				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper	ND	25	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AL
		Dilution Factor: 1 Analysis Time...: 18:57				
Iron	ND	100	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AM
		Dilution Factor: 1 Analysis Time...: 18:57				
Lead	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AT
		Dilution Factor: 1 Analysis Time...: 18:57				
Magnesium	ND	1000	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AN
		Dilution Factor: 1 Analysis Time...: 18:46				
Manganese	ND	15	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AP
		Dilution Factor: 1 Analysis Time...: 18:57				
Nickel	ND	40	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AR
		Dilution Factor: 1 Analysis Time...: 18:57				
Selenium	ND	15	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AV
		Dilution Factor: 1 Analysis Time...: 18:57				
Silver	ND	10	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AC
		Dilution Factor: 1 Analysis Time...: 18:57				
Sodium	ND	1000	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AQ
		Dilution Factor: 1 Analysis Time...: 18:46				
Strontium	ND	5	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AW
		Dilution Factor: 1 Analysis Time...: 18:46				
Thallium	ND	20	ug/L	SW846 6010C	09/12-09/13/11	ML8V21AX
		Dilution Factor: 1 Analysis Time...: 18:57				
Vanadium	ND	50	ug/L	SW846 6010C	09/12-09/13/11	ML8V21A0
		Dilution Factor: 1 Analysis Time...: 18:57				

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	ND	20	ug/L	SW846 6010C	09/12-09/13/11	ML8V21A1
Dilution Factor: 1						
Analysis Time...: 18:57						

MB Lot-Sample #: F1I080000-138 Prep Batch #...: 1251138

Mercury	ND	0.3	ug/L	SW846 7470A	09/13/11	ML9961AA
Dilution Factor: 1						
Analysis Time...: 13:00						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1I130000-029 Prep Batch #...: 1256029						
Mercury	ND	0.040	mg/kg	SW846 7471A	09/13/11	MMDP51AA
Dilution Factor: 1						
Analysis Time...: 10:33						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: F1I010435

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F1I020000-029 Prep Batch #... : 1249119 Leach Date.....: 09/02/11 Leach Batch #... : P124506						
Arsenic	ND	500	ug/L	SW846 6010B	09/06-09/09/11	ML7VQ1AC
Dilution Factor: 1 Analysis Time...: 18:00						
Barium	ND	125	ug/L	SW846 6010B	09/06-09/12/11	ML7VQ1AD
Dilution Factor: 1 Analysis Time...: 14:23						
Chromium	ND	25	ug/L	SW846 6010B	09/06-09/09/11	ML7VQ1AE
Dilution Factor: 1 Analysis Time...: 18:00						
Lead	ND	250	ug/L	SW846 6010B	09/06-09/09/11	ML7VQ1AF
Dilution Factor: 1 Analysis Time...: 18:00						
Selenium	ND	800	ug/L	SW846 6010B	09/06-09/09/11	ML7VQ1AG
Dilution Factor: 1 Analysis Time...: 18:00						
Silver	ND	40	ug/L	SW846 6010B	09/06-09/09/11	ML7VQ1AA
Dilution Factor: 1 Analysis Time...: 18:00						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1I010435 Work Order #...: MMDNX1AC Matrix.....: WATER
 LCS Lot-Sample#: F1I120000-150
 Prep Date.....: 09/11/11 Analysis Date...: 09/11/11
 Prep Batch #...: 1255150 Analysis Time...: 17:29
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
cis-1,3-Dichloropropene	109	(70 - 130)	SW846 8260B
Dibromochloromethane	109	(60 - 135)	SW846 8260B
Vinyl chloride	104	(50 - 145)	SW846 8260B
Bromomethane	96	(30 - 145)	SW846 8260B
Chloroethane	102	(60 - 135)	SW846 8260B
Acetone	108	(40 - 140)	SW846 8260B
1,1-Dichloroethene	109	(70 - 130)	SW846 8260B
Methylene chloride	104	(55 - 140)	SW846 8260B
Carbon disulfide	100	(35 - 160)	SW846 8260B
1,1-Dichloroethane	112	(70 - 135)	SW846 8260B
2-Butanone	98	(30 - 150)	SW846 8260B
1,2-Dichloroethene (total)	103	(85 - 115)	SW846 8260B
Chloroform	106	(65 - 135)	SW846 8260B
1,1,1-Trichloroethane	108	(65 - 130)	SW846 8260B
Carbon tetrachloride	111	(65 - 140)	SW846 8260B
1,2-Dichloroethane	100	(70 - 130)	SW846 8260B
Benzene	106	(80 - 120)	SW846 8260B
Trichloroethene	106	(70 - 125)	SW846 8260B
1,2-Dichloropropane	108	(75 - 125)	SW846 8260B
Bromodichloromethane	110	(75 - 120)	SW846 8260B
1,1,2-Trichloroethane	104	(75 - 125)	SW846 8260B
trans-1,3-Dichloropropyle	116	(55 - 140)	SW846 8260B
Toluene	114	(75 - 120)	SW846 8260B
1,3-Dichlorobenzene	123	(75 - 125)	SW846 8260B
1,4-Dichlorobenzene	116	(75 - 125)	SW846 8260B
2-Hexanone	100	(55 - 130)	SW846 8260B
4-Methyl-2-pentanone	109	(60 - 135)	SW846 8260B
Chlorobenzene	115	(80 - 120)	SW846 8260B
Bromoform	139 a	(70 - 130)	SW846 8260B
Ethylbenzene	118	(75 - 125)	SW846 8260B
Styrene	113	(65 - 135)	SW846 8260B
1,1,2,2-Tetrachloroethane	128	(65 - 130)	SW846 8260B
Tetrachloroethene	113	(45 - 150)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1I010435 Work Order #...: MMDNX1AC Matrix.....: WATER
LCS Lot-Sample#: F1I120000-150

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,2-Dichlorobenzene	119	(70 - 120)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	100	(85 - 120)
Dibromofluoromethane	95	(85 - 115)
1,2-Dichloroethane-d4	95	(70 - 120)
4-Bromofluorobenzene	110	(75 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1I010435 Work Order #...: MMCWV1AA Matrix.....: SOLID
 LCS Lot-Sample#: F1I080000-207
 Prep Date.....: 09/08/11 Analysis Date...: 09/08/11
 Prep Batch #...: 1251207 Analysis Time...: 22:09
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Vinyl chloride	98	(50 - 145)	SW846 8260B
1,1-Dichloroethene	85	(70 - 130)	SW846 8260B
2-Butanone	84	(30 - 150)	SW846 8260B
Chloroform	96	(65 - 135)	SW846 8260B
Carbon tetrachloride	94	(65 - 140)	SW846 8260B
1,2-Dichloroethane	99	(70 - 130)	SW846 8260B
Benzene	103	(80 - 120)	SW846 8260B
Trichloroethene	94	(70 - 125)	SW846 8260B
Tetrachloroethene	94	(45 - 150)	SW846 8260B
Chlorobenzene	96	(80 - 120)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(85 - 115)
Toluene-d8	98	(85 - 120)
4-Bromofluorobenzene	95	(75 - 120)
1,2-Dichloroethane-d4	101	(70 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: F1I010435 Work Order #...: ML9D21AA Matrix.....: SOLID
 LCS Lot-Sample#: F1I070000-060
 Prep Date.....: 09/07/11 Analysis Date...: 09/11/11
 Prep Batch #...: 1250060 Analysis Time...: 15:53
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Pyridine	35	(20 - 52)	SW846 8270C
1,4-Dichlorobenzene	74	(30 - 100)	SW846 8270C
2-Methylphenol	75	(40 - 110)	SW846 8270C
3-Methylphenol & 4-Methylphenol	77	(30 - 110)	SW846 8270C
Hexachloroethane	75	(30 - 95)	SW846 8270C
Nitrobenzene	76	(45 - 110)	SW846 8270C
Hexachlorobutadiene	76	(25 - 105)	SW846 8270C
2,4,5-Trichloro- phenol	74	(50 - 110)	SW846 8270C
2,4,6-Trichloro- phenol	75	(50 - 115)	SW846 8270C
2,4-Dinitrotoluene	74	(50 - 120)	SW846 8270C
Hexachlorobenzene	78	(50 - 110)	SW846 8270C
Pentachlorophenol	63	(40 - 115)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(20 - 110)
Phenol-d5	67	(10 - 115)
Nitrobenzene-d5	79	(40 - 110)
2-Fluorobiphenyl	77	(50 - 110)
Terphenyl-d14	96	(50 - 135)
2,4,6-Tribromophenol	89	(40 - 125)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1I060000-123 Prep Batch #...: 1249123					
Uranium	102	(80 - 120)	SW846 6020A	09/06-09/13/11	ML8V01AC
		Dilution Factor: 1	Analysis Time...: 23:33		
LCS Lot-Sample#: F1I060000-124 Prep Batch #...: 1249124					
Arsenic	100	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A2
		Dilution Factor: 1	Analysis Time...: 19:04		
Silver	97	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A3
		Dilution Factor: 1	Analysis Time...: 19:04		
Aluminum	92	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A4
		Dilution Factor: 1	Analysis Time...: 19:04		
Barium	105	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A5
		Dilution Factor: 1	Analysis Time...: 19:04		
Beryllium	114	(80 - 120)	SW846 6010C	09/12-09/14/11	ML8V21A6
		Dilution Factor: 1	Analysis Time...: 09:20		
Calcium	106	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A7
		Dilution Factor: 1	Analysis Time...: 18:52		
Cadmium	102	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A8
		Dilution Factor: 1	Analysis Time...: 19:04		
Cobalt	101	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21A9
		Dilution Factor: 1	Analysis Time...: 19:04		
Chromium	105	(80 - 120)	SW846 6010C	09/12-09/14/11	ML8V21CA
		Dilution Factor: 1	Analysis Time...: 09:20		
Copper	99	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CC
		Dilution Factor: 1	Analysis Time...: 19:04		
Iron	102	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CD
		Dilution Factor: 1	Analysis Time...: 19:04		
Magnesium	102	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CE
		Dilution Factor: 1	Analysis Time...: 18:52		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Manganese	103	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CF
		Dilution Factor: 1		Analysis Time...: 19:04	
Sodium	103	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CG
		Dilution Factor: 1		Analysis Time...: 18:52	
Nickel	99	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CH
		Dilution Factor: 1		Analysis Time...: 19:04	
Lead	99	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CJ
		Dilution Factor: 1		Analysis Time...: 19:04	
Antimony	102	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CK
		Dilution Factor: 1		Analysis Time...: 19:04	
Selenium	100	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CL
		Dilution Factor: 1		Analysis Time...: 19:04	
Strontium	104	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CM
		Dilution Factor: 1		Analysis Time...: 18:52	
Thallium	98	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CN
		Dilution Factor: 1		Analysis Time...: 19:04	
Vanadium	102	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CP
		Dilution Factor: 1		Analysis Time...: 19:04	
Zinc	108	(80 - 120)	SW846 6010C	09/12-09/13/11	ML8V21CQ
		Dilution Factor: 1		Analysis Time...: 19:04	
LCS Lot-Sample#: F1I080000-138 Prep Batch #...: 1251138					
Mercury	101	(80 - 120)	SW846 7470A	09/13/11	ML9961AC
		Dilution Factor: 1		Analysis Time...: 13:02	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------------	----------------------------------	---------------	---	---------------------

LCS Lot-Sample#: F1I130000-029 Prep Batch #...: 1256029

Mercury	112	(80 - 120)	SW846 7471A	09/13/11	MMDP51AC
---------	-----	------------	-------------	----------	----------

Dilution Factor: 1

Analysis Time...: 10:35

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: F1I010435

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F1I060000-119 Prep Batch #...: 1249119					
Silver	96	(80 - 120)	SW846 6010B	09/06-09/09/11	ML8VR1AA
		Dilution Factor: 1		Analysis Time...: 18:06	
Arsenic	95	(80 - 120)	SW846 6010B	09/06-09/09/11	ML8VR1AC
		Dilution Factor: 1		Analysis Time...: 18:06	
Barium	102	(80 - 120)	SW846 6010B	09/06-09/12/11	ML8VR1AD
		Dilution Factor: 1		Analysis Time...: 14:29	
Chromium	96	(80 - 120)	SW846 6010B	09/06-09/09/11	ML8VR1AE
		Dilution Factor: 1		Analysis Time...: 18:06	
Lead	96	(80 - 120)	SW846 6010B	09/06-09/09/11	ML8VR1AF
		Dilution Factor: 1		Analysis Time...: 18:06	
Selenium	98	(80 - 120)	SW846 6010B	09/06-09/09/11	ML8VR1AG
		Dilution Factor: 1		Analysis Time...: 18:06	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1I010435 Work Order #...: ML6481DW-MS Matrix.....: WATER
 MS Lot-Sample #: F1I010435-001 ML6481DX-MSD
 Date Sampled...: 08/31/11 09:30 Date Received...: 09/01/11
 Prep Date.....: 09/11/11 Analysis Date...: 09/11/11
 Prep Batch #...: 1255150 Analysis Time...: 19:35
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
cis-1,3-Dichloropropene	110	(70 - 130)			SW846 8260B
	109	(70 - 130)	1.6	(0-20)	SW846 8260B
Dibromochloromethane	110	(60 - 135)			SW846 8260B
	109	(60 - 135)	1.1	(0-20)	SW846 8260B
Vinyl chloride	96	(50 - 145)			SW846 8260B
	93	(50 - 145)	2.3	(0-20)	SW846 8260B
Bromomethane	92	(30 - 145)			SW846 8260B
	87	(30 - 145)	4.9	(0-20)	SW846 8260B
Chloroethane	98	(60 - 135)			SW846 8260B
	93	(60 - 135)	5.5	(0-20)	SW846 8260B
Acetone	65	(40 - 140)			SW846 8260B
	57	(40 - 140)	7.4	(0-20)	SW846 8260B
1,1-Dichloroethene	99	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.0	(0-20)	SW846 8260B
Methylene chloride	107	(55 - 140)			SW846 8260B
	109	(55 - 140)	2.1	(0-20)	SW846 8260B
Carbon disulfide	98	(35 - 160)			SW846 8260B
	95	(35 - 160)	2.9	(0-20)	SW846 8260B
1,1-Dichloroethane	112	(70 - 135)			SW846 8260B
	111	(70 - 135)	0.78	(0-20)	SW846 8260B
2-Butanone	106	(30 - 150)			SW846 8260B
	109	(30 - 150)	2.9	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	107	(85 - 115)			SW846 8260B
	106	(85 - 115)	0.70	(0-20)	SW846 8260B
Chloroform	106	(65 - 135)			SW846 8260B
	109	(65 - 135)	2.6	(0-20)	SW846 8260B
1,1,1-Trichloroethane	106	(65 - 130)			SW846 8260B
	105	(65 - 130)	1.0	(0-20)	SW846 8260B
Carbon tetrachloride	104	(65 - 140)			SW846 8260B
	103	(65 - 140)	1.4	(0-20)	SW846 8260B
1,2-Dichloroethane	107	(70 - 130)			SW846 8260B
	111	(70 - 130)	3.4	(0-20)	SW846 8260B
Benzene	108	(80 - 120)			SW846 8260B
	109	(80 - 120)	0.46	(0-20)	SW846 8260B
Trichloroethene	103	(70 - 125)			SW846 8260B
	103	(70 - 125)	0.68	(0-20)	SW846 8260B
1,2-Dichloropropane	109	(75 - 125)			SW846 8260B
	107	(75 - 125)	1.2	(0-20)	SW846 8260B

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: FLI010435 Work Order #...: ML6481DW-MS Matrix.....: WATER
 MS Lot-Sample #: FLI010435-001 ML6481DX-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromodichloromethane	108	(75 - 120)			SW846 8260B
	109	(75 - 120)	0.83	(0-20)	SW846 8260B
1,1,2-Trichloroethane	108	(75 - 125)			SW846 8260B
	106	(75 - 125)	1.2	(0-20)	SW846 8260B
trans-1,3-Dichloropropyle	114	(55 - 140)			SW846 8260B
	114	(55 - 140)	0.35	(0-20)	SW846 8260B
Toluene	109	(75 - 120)			SW846 8260B
	107	(75 - 120)	1.9	(0-20)	SW846 8260B
1,3-Dichlorobenzene	108	(75 - 125)			SW846 8260B
	107	(75 - 125)	1.0	(0-20)	SW846 8260B
1,4-Dichlorobenzene	105	(75 - 125)			SW846 8260B
	106	(75 - 125)	1.1	(0-20)	SW846 8260B
2-Hexanone	97	(55 - 130)			SW846 8260B
	103	(55 - 130)	6.0	(0-20)	SW846 8260B
4-Methyl-2-pentanone	112	(60 - 135)			SW846 8260B
	116	(60 - 135)	3.9	(0-20)	SW846 8260B
Chlorobenzene	109	(80 - 120)			SW846 8260B
	108	(80 - 120)	0.46	(0-20)	SW846 8260B
Bromoform	120	(70 - 130)			SW846 8260B
	125	(70 - 130)	3.6	(0-20)	SW846 8260B
Ethylbenzene	108	(75 - 125)			SW846 8260B
	108	(75 - 125)	0.09	(0-20)	SW846 8260B
Styrene	109	(65 - 135)			SW846 8260B
	111	(65 - 135)	1.1	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	115	(65 - 130)			SW846 8260B
	117	(65 - 130)	1.4	(0-20)	SW846 8260B
Tetrachloroethene	104	(45 - 150)			SW846 8260B
	104	(45 - 150)	0.48	(0-20)	SW846 8260B
1,2-Dichlorobenzene	108	(70 - 120)			SW846 8260B
	108	(70 - 120)	0.27	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	98	(85 - 120)
	97	(85 - 120)
Dibromofluoromethane	101	(85 - 115)
	102	(85 - 115)
1,2-Dichloroethane-d4	98	(70 - 120)
	102	(70 - 120)
4-Bromofluorobenzene	103	(75 - 120)
	102	(75 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

FLI010435

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F1I010435 Work Order #...: ML6491CC-MS Matrix.....: SOLID
 MS Lot-Sample #: F1I010435-002 ML6491CD-MSD
 Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11
 Prep Date.....: 09/08/11 Analysis Date...: 09/08/11
 Prep Batch #...: 1251207 Analysis Time...: 23:47
 Dilution Factor: 1 % Moisture.....: 62

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Vinyl chloride	106	(50 - 145)			SW846 8260B
	108	(50 - 145)	1.8	(0-20)	SW846 8260B
1,1-Dichloroethene	90	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.22	(0-20)	SW846 8260B
2-Butanone	85	(30 - 150)			SW846 8260B
	93	(30 - 150)	8.7	(0-20)	SW846 8260B
Chloroform	98	(65 - 135)			SW846 8260B
	96	(65 - 135)	2.8	(0-20)	SW846 8260B
Carbon tetrachloride	98	(65 - 140)			SW846 8260B
	98	(65 - 140)	0.30	(0-20)	SW846 8260B
1,2-Dichloroethane	97	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.5	(0-20)	SW846 8260B
Benzene	104	(80 - 120)			SW846 8260B
	102	(80 - 120)	2.0	(0-20)	SW846 8260B
Trichloroethene	92	(70 - 125)			SW846 8260B
	92	(70 - 125)	0.10	(0-20)	SW846 8260B
Tetrachloroethene	92	(45 - 150)			SW846 8260B
	90	(45 - 150)	2.2	(0-20)	SW846 8260B
Chlorobenzene	95	(80 - 120)			SW846 8260B
	94	(80 - 120)	0.60	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(85 - 115)
	100	(85 - 115)
Toluene-d8	99	(85 - 120)
	97	(85 - 120)
4-Bromofluorobenzene	100	(75 - 120)
	99	(75 - 120)
1,2-Dichloroethane-d4	104	(70 - 120)
	101	(70 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: F1I010435 Work Order #...: ML6491A9-MS Matrix.....: SOLID
 MS Lot-Sample #: F1I010435-002 ML6491CA-MSD
 Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11
 Prep Date.....: 09/07/11 Analysis Date...: 09/11/11
 Prep Batch #...: 1250060 Analysis Time...: 23:33
 Dilution Factor: 1 % Moisture.....: 62

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pyridine	41	(20 - 52)			SW846 8270C
	37	(20 - 52)	9.2	(0-20)	SW846 8270C
1,4-Dichlorobenzene	73	(30 - 100)			SW846 8270C
	67	(30 - 100)	8.9	(0-20)	SW846 8270C
2-Methylphenol	70	(40 - 110)			SW846 8270C
	68	(40 - 110)	3.9	(0-20)	SW846 8270C
3-Methylphenol & 4-Methylphenol	73	(30 - 110)			SW846 8270C
	71	(30 - 110)	3.6	(0-20)	SW846 8270C
Hexachloroethane	64	(30 - 95)			SW846 8270C
	59	(30 - 95)	8.8	(0-20)	SW846 8270C
Nitrobenzene	76	(45 - 110)			SW846 8270C
	71	(45 - 110)	6.9	(0-20)	SW846 8270C
Hexachlorobutadiene	75	(25 - 105)			SW846 8270C
	69	(25 - 105)	8.9	(0-20)	SW846 8270C
2,4,5-Trichloro- phenol	79	(50 - 110)			SW846 8270C
	75	(50 - 110)	5.4	(0-20)	SW846 8270C
2,4,6-Trichloro- phenol	76	(50 - 115)			SW846 8270C
	72	(50 - 115)	6.6	(0-20)	SW846 8270C
2,4-Dinitrotoluene	73	(50 - 120)			SW846 8270C
	70	(50 - 120)	4.5	(0-20)	SW846 8270C
Hexachlorobenzene	75	(50 - 110)			SW846 8270C
	71	(50 - 110)	5.5	(0-20)	SW846 8270C
Pentachlorophenol	70	(40 - 115)			SW846 8270C
	63	(40 - 115)	10	(0-20)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	67	(20 - 110)
	63	(20 - 110)
Phenol-d5	63	(10 - 115)
	61	(10 - 115)
Nitrobenzene-d5	79	(40 - 110)
	72	(40 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: F1I010435 Work Order #...: ML6491A9-MS Matrix.....: SOLID
MS Lot-Sample #: F1I010435-002 ML6491CA-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorobiphenyl	74	(50 - 110)
	69	(50 - 110)
Terphenyl-d14	74	(50 - 135)
	74	(50 - 135)
2,4,6-Tribromophenol	88	(40 - 125)
	82	(40 - 125)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

Date Sampled...: 08/31/11 09:30 Date Received...: 09/01/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1I010435-001 Prep Batch #...: 1249123						
Uranium	106	(80 - 120)		SW846 6020A	09/06-09/13/11	ML6481A8
	107	(80 - 120)	1.1 (0-20)	SW846 6020A	09/06-09/14/11	ML6481A9
			Dilution Factor: 1			
			Analysis Time...: 23:54			
MS Lot-Sample #: F1I010435-001 Prep Batch #...: 1249124						
Aluminum	109	(80 - 120)		SW846 6010C	09/12-09/13/11	ML6481CF
	104	(80 - 120)	5.2 (0-20)	SW846 6010C	09/12-09/13/11	ML6481CG
			Dilution Factor: 1			
			Analysis Time...: 20:21			
Antimony	108	(80 - 120)		SW846 6010C	09/12-09/13/11	ML6481DD
	103	(80 - 120)	4.4 (0-20)	SW846 6010C	09/12-09/13/11	ML6481DE
			Dilution Factor: 1			
			Analysis Time...: 20:21			
Arsenic	106	(80 - 120)		SW846 6010C	09/12-09/13/11	ML6481CA
	100	(80 - 120)	5.4 (0-20)	SW846 6010C	09/12-09/13/11	ML6481CC
			Dilution Factor: 1			
			Analysis Time...: 20:21			
Barium	109	(80 - 120)		SW846 6010C	09/12-09/13/11	ML6481CH
	103	(80 - 120)	4.5 (0-20)	SW846 6010C	09/12-09/13/11	ML6481CJ
			Dilution Factor: 1			
			Analysis Time...: 20:21			
Beryllium	112	(80 - 120)		SW846 6010C	09/12-09/14/11	ML6481CK
	112	(80 - 120)	0.90 (0-20)	SW846 6010C	09/12-09/14/11	ML6481CL
			Dilution Factor: 1			
			Analysis Time...: 09:39			
Cadmium	105	(80 - 120)		SW846 6010C	09/12-09/13/11	ML6481CP
	99	(80 - 120)	5.5 (0-20)	SW846 6010C	09/12-09/13/11	ML6481CQ
			Dilution Factor: 1			
			Analysis Time...: 20:21			
Calcium	89	(80 - 120)		SW846 6010C	09/12-09/13/11	ML6481CM
	83	(80 - 120)	0.33 (0-20)	SW846 6010C	09/12-09/13/11	ML6481CN
			Dilution Factor: 10			
			Analysis Time...: 20:08			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

Date Sampled...: 08/31/11 09:30 Date Received...: 09/01/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Chromium	103	(80 - 120)			SW846 6010C	09/12-09/14/11	ML6481CU
	105	(80 - 120)	1.7	(0-20)	SW846 6010C	09/12-09/14/11	ML6481CV
Dilution Factor: 1							
Analysis Time...: 09:39							
Cobalt	103	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481CR
	98	(80 - 120)	5.1	(0-20)	SW846 6010C	09/12-09/13/11	ML6481CT
Dilution Factor: 1							
Analysis Time...: 20:21							
Copper	108	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481CW
	103	(80 - 120)	5.1	(0-20)	SW846 6010C	09/12-09/13/11	ML6481CX
Dilution Factor: 1							
Analysis Time...: 20:21							
Iron	105	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481C0
	98	(80 - 120)	4.7	(0-20)	SW846 6010C	09/12-09/13/11	ML6481C1
Dilution Factor: 1							
Analysis Time...: 20:21							
Lead	102	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481DA
	97	(80 - 120)	4.7	(0-20)	SW846 6010C	09/12-09/13/11	ML6481DC
Dilution Factor: 1							
Analysis Time...: 20:21							
Magnesium	90	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481C2
	89	(80 - 120)	0.08	(0-20)	SW846 6010C	09/12-09/13/11	ML6481C3
Dilution Factor: 10							
Analysis Time...: 20:08							
Manganese	107	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481C4
	101	(80 - 120)	5.0	(0-20)	SW846 6010C	09/12-09/13/11	ML6481C5
Dilution Factor: 1							
Analysis Time...: 20:21							
Nickel	103	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481C8
	98	(80 - 120)	5.3	(0-20)	SW846 6010C	09/12-09/13/11	ML6481C9
Dilution Factor: 1							
Analysis Time...: 20:21							
Selenium	105	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481DF
	100	(80 - 120)	4.6	(0-20)	SW846 6010C	09/12-09/13/11	ML6481DG
Dilution Factor: 1							
Analysis Time...: 20:21							

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: WATER

Date Sampled...: 08/31/11 09:30 Date Received...: 09/01/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	103	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481CD
	99	(80 - 120)	4.6	(0-20)	SW846 6010C	09/12-09/13/11	ML6481CE
					Dilution Factor: 1		
					Analysis Time...: 20:21		
Sodium	94	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481C6
	77 N	(80 - 120)	1.0	(0-20)	SW846 6010C	09/12-09/13/11	ML6481C7
					Dilution Factor: 10		
					Analysis Time...: 20:08		
Strontium	99	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481DH
	97	(80 - 120)	0.83	(0-20)	SW846 6010C	09/12-09/13/11	ML6481DJ
					Dilution Factor: 10		
					Analysis Time...: 20:08		
Thallium	101	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481DK
	95	(80 - 120)	5.5	(0-20)	SW846 6010C	09/12-09/13/11	ML6481DL
					Dilution Factor: 1		
					Analysis Time...: 20:21		
Vanadium	106	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481DM
	101	(80 - 120)	4.9	(0-20)	SW846 6010C	09/12-09/13/11	ML6481DN
					Dilution Factor: 1		
					Analysis Time...: 20:21		
Zinc	113	(80 - 120)			SW846 6010C	09/12-09/13/11	ML6481DP
	107	(80 - 120)	5.4	(0-20)	SW846 6010C	09/12-09/13/11	ML6481DQ
					Dilution Factor: 1		
					Analysis Time...: 20:21		

MS Lot-Sample #: F1I010435-001 Prep Batch #...: 1251138

Mercury	102	(80 - 120)			SW846 7470A	09/13/11	ML6481DU
	100	(80 - 120)	1.8	(0-20)	SW846 7470A	09/13/11	ML6481DV
					Dilution Factor: 1		
					Analysis Time...: 13:07		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F1I010435

Matrix.....: SOLID

Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
-----------	---------------------	--------------------	---------------	--------	-------------------------------	-----------------

MS Lot-Sample #: F1I010435-002 Prep Batch #...: 1256029

% Moisture.....: 62

Mercury	128 N	(80 - 120)		SW846 7471A	09/13/11	ML6491CE
	132 N	(80 - 120)	2.9 (0-20)	SW846 7471A	09/13/11	ML6491CF

Dilution Factor: 1

Analysis Time...: 10:43

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: F1I010435

Matrix.....: SOLID

Date Sampled...: 08/31/11 10:20 Date Received...: 09/01/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F1I010435-002 Prep Batch #... : 1249119							
Leach Date..... : 09/02/11 Leach Batch #... : P124506							
Arsenic	96	(80 - 120)			SW846 6010B	09/06-09/09/11	ML6491AV
	107	(80 - 120)	11	(0-20)	SW846 6010B	09/06-09/09/11	ML6491AW
Dilution Factor: 1							
Analysis Time...: 18:26							
Barium	93	(80 - 120)			SW846 6010B	09/06-09/12/11	ML6491AX
	95	(80 - 120)	1.8	(0-20)	SW846 6010B	09/06-09/12/11	ML6491A0
Dilution Factor: 1							
Analysis Time...: 14:48							
Chromium	99	(80 - 120)			SW846 6010B	09/06-09/09/11	ML6491A1
	109	(80 - 120)	10	(0-20)	SW846 6010B	09/06-09/09/11	ML6491A2
Dilution Factor: 1							
Analysis Time...: 18:26							
Lead	98	(80 - 120)			SW846 6010B	09/06-09/09/11	ML6491A3
	108	(80 - 120)	9.6	(0-20)	SW846 6010B	09/06-09/09/11	ML6491A4
Dilution Factor: 1							
Analysis Time...: 18:26							
Selenium	98	(80 - 120)			SW846 6010B	09/06-09/09/11	ML6491A5
	110	(80 - 120)	11	(0-20)	SW846 6010B	09/06-09/09/11	ML6491A6
Dilution Factor: 1							
Analysis Time...: 18:26							
Silver	92	(80 - 120)			SW846 6010B	09/06-09/09/11	ML6491AT
	101	(80 - 120)	9.2	(0-20)	SW846 6010B	09/06-09/09/11	ML6491AU
Dilution Factor: 1							
Analysis Time...: 18:26							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F1I010435

Work Order #...: MLT1Q-SMP
MLT1Q-DUP

Matrix.....: SOLID

Date Sampled...: 08/10/11 11:48 Date Received...: 08/19/11

% Moisture.....: 41

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Moisture	40.9	40.9	%	0.049	(0-30)	SD Lot-Sample #: F1H190417-002 MCAWW 160.3 MOD	09/06-09/07/11	1249010
				Dilution Factor: 1		Analysis Time...: 00:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: AQUEOUS IDW

Radiochemistry

Lab Sample ID: F1I010435-001

Date Collected: 08/31/11 0930

Work Order: ML648

Date Received: 09/01/11 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1251056	Yld % 87	
Thorium 228	0.022	U	0.028	0.100	0.036	09/08/11	09/09/11
Thorium 230	0.077		0.050	0.100	0.036	09/08/11	09/09/11
Thorium 232	0.028	U	0.032	0.100	0.039	09/08/11	09/09/11
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 1251057	Yld % 78	
Uranium 234	0.102		0.062	0.100	0.054	09/08/11	09/09/11
Uranium 235/236	0.011	U	0.021	0.100	0.029	09/08/11	09/09/11
Uranium 238	0.082		0.054	0.100	0.038	09/08/11	09/09/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1I010435

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: AQUEOUS IDW DUP

Radiochemistry

Lab Sample ID: F11010435-001X
 Work Order: ML648
 Matrix: WATER

Date Collected: 08/31/11 0930
 Date Received: 09/01/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
<hr/>							
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1251056	Yld % 69
Thorium 228	0.037	U	0.040	0.100	0.045	09/08/11	09/09/11
Thorium 230	0.098		0.064	0.100	0.045	09/08/11	09/09/11
Thorium 232	0.017	U	0.029	0.100	0.045	09/08/11	09/09/11
<hr/>							
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 1251057	Yld % 74
Uranium 234	0.093		0.063	0.100	0.052	09/08/11	09/09/11
Uranium 235/236	0.003	U	0.027	0.100	0.072	09/08/11	09/09/11
Uranium 238	0.088		0.063	0.100	0.062	09/08/11	09/09/11
<hr/>							

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U F11010435
 Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW

Radiochemistry

Lab Sample ID: FLI010435-002

Date Collected: 08/31/11 1020

Work Order: ML649

Date Received: 09/01/11 0920

Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1249211	Yld % 84
Uranium 234	0.337		0.079	0.100	0.021	09/06/11	09/14/11
Uranium 235/236	0.009	U	0.014	0.100	0.023	09/06/11	09/14/11
Uranium 238	0.322		0.077	0.100	0.011	09/06/11	09/14/11
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1249210	Yld % 51
Thorium 228	0.35		0.11	0.10	0.05	09/06/11	09/14/11
Thorium 230	0.40		0.11	0.10	0.03	09/06/11	09/14/11
Thorium 232	0.259		0.088	0.100	0.032	09/06/11	09/14/11

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F1I010435** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: NON-AQUEOUS IDW DUP

Radiochemistry

Lab Sample ID: F1I010435-002X
 Work Order: ML649
 Matrix: SOLID

Date Collected: 08/31/11 1020
 Date Received: 09/01/11 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
<hr/>							
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1249210	Yld % 55
Thorium 228	0.318		0.096	0.100	0.048	09/06/11	09/14/11
Thorium 230	0.38		0.10	0.10	0.03	09/06/11	09/14/11
Thorium 232	0.244		0.081	0.100	0.029	09/06/11	09/14/11
<hr/>							
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/g		Batch # 1249211	Yld % 84
Uranium 234	0.303		0.073	0.100	0.017	09/06/11	09/14/11
Uranium 235/236	0.014		0.016	0.100	0.013	09/06/11	09/14/11
Uranium 238	0.417		0.087	0.100	0.010	09/06/11	09/14/11
<hr/>							

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F1I010435

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1I010435
 Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/g	Batch #	1249211	Yld %	95 F1I060000-211B
Uranium 234	-0.0009	U	0.0086	0.100	0.026	09/06/11	09/14/11
Uranium 235/236	-0.0023	U	0.0033	0.100	0.025	09/06/11	09/14/11
Uranium 238	0.008	U	0.011	0.100	0.010	09/06/11	09/14/11
Iso THORIUM (LONG CT) DOE A-01-R MOD							
			pCi/g	Batch #	1249210	Yld %	90 F1I060000-210B
Thorium 228	0.024	U	0.021	0.100	0.025	09/06/11	09/14/11
Thorium 230	0.021	U	0.020	0.100	0.023	09/06/11	09/14/11
Thorium 232	-0.001	U	0.0020	0.100	0.018	09/06/11	09/14/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F1I010435

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso THORIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1251056	Yld %	91 F1I080000-056B
Thorium 228	0.012	U	0.023	0.100	0.041	09/08/11	09/09/11
Thorium 230	0.085		0.053	0.100	0.036	09/08/11	09/09/11
Thorium 232	-0.0020	U	0.0039	0.100	0.036	09/08/11	09/09/11
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	1251057	Yld %	83 F1I080000-057B
Uranium 234	0.058	U	0.050	0.100	0.059	09/08/11	09/09/11
Uranium 235/236	-0.0053	U	0.0076	0.100	0.057	09/08/11	09/09/11
Uranium 238	0.017	U	0.024	0.100	0.023	09/08/11	09/09/11

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1I010435
 Matrix: SOLID

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso THORIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1I060000-210C
Thorium 230	24.5	24.2	2.4	0.07	90	99	(77 - 122)
	Batch #:	1249210		Analysis Date:	09/14/11		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1I060000-211C
Uranium 234	1.63	1.75	0.22	0.02	93	107	(74 - 139)
Uranium 238	1.70	1.72	0.22	0.02	93	102	(75 - 140)
	Batch #:	1249211		Analysis Date:	09/14/11		

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F1I010435
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso THORIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1I080000-056C
Thorium 230	2.37	2.23	0.32	0.04	89	94	(77 - 118)
Batch #:	1251056			Analysis Date:	09/09/11		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F1I080000-057C
Uranium 234	3.26	3.31	0.42	0.04	98	101	(76 - 136)
Uranium 238	3.39	3.53	0.44	0.04	98	104	(76 - 134)
Batch #:	1251057			Analysis Date:	09/09/11		

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1I010435
 Matrix: SOLID

Date Sampled: 08/31/11
 Date Received: 09/01/11

Parameter	SAMPLE Result	Total Uncert.	% Yld	DUPLICATE Result	Total Uncert.	% Yld	QC Sample ID		
		(2 σ+/-)			(2 σ+/-)		Precision		
<hr/>									
Iso THORIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1I010435-002		
Thorium 228	0.35	0.11	51	0.318	0.096	55	11	%RPD	
Thorium 230	0.40	0.11	51	0.38	0.10	55	5	%RPD	
Thorium 232	0.259	0.088	51	0.244	0.081	55	6	%RPD	
Batch #:		1249210	(Sample)	1249210	(Duplicate)				
<hr/>									
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F1I010435-002		
Uranium 234	0.337	0.079	84	0.303	0.073	84	11	%RPD	
Uranium 235/236	0.009	U 0.014	84	0.014	0.016	84	48	%RPD	
Uranium 238	0.322	0.077	84	0.417	0.087	84	25	%RPD	
Batch #:		1249211	(Sample)	1249211	(Duplicate)				
<hr/>									

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1I010435

U Result is less than the sample detection limit.

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F1I010435
 Matrix: WATER

Date Sampled: 08/31/11
 Date Received: 09/01/11

Parameter	SAMPLE Result		Total Uncert. (2 σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Iso THORIUM (LONG CT) DOE A-01-R MOD				pCi/L		A-01-R MOD			F1I010435-001
Thorium 228	0.022 U		0.028	87	0.037 U		0.040	69	54 %RPD
Thorium 230	0.077		0.050	87	0.098		0.064	69	24 %RPD
Thorium 232	0.028 U		0.032	87	0.017 U		0.029	69	48 %RPD
Batch #:		1251056	(Sample)		1251056	(Duplicate)			
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		A-01-R MOD			F1I010435-001
Uranium 234	0.102		0.062	78	0.093		0.063	74	9 %RPD
Uranium 235/236	0.011 U		0.021	78	0.003 U		0.027	74	110 %RPD
Uranium 238	0.082		0.054	78	0.088		0.063	74	7 %RPD
Batch #:		1251057	(Sample)		1251057	(Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F1I010435

U Result is less than the sample detection limit.

F1I010435

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R44,METS,V1

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2011-09-01
 Analytical Due Date: 2011-09-14
 Report Due Date: 2011-09-15
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 5

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	AQUEOUS IDW			2011-08-31 / 930	ML648	WATER
SAMPLE COMMENTS:						
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
HG O8	SW846 7470A	WATER, 7470 Mercury	19 METALS, TOTAL (Method exclusive) - Waters	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX QK	SW846 8260B	WATER, 8260B, VOC	25 PURGE AND TRAP - 25 mL purge (Waters)	D4 DOD QSM V4.X	PROT: A	WRK LOC 06 TIC: N
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
XX 2O	EML A-01-R MOD	WATER, A-01-R MOD, Iso TH (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: B	WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	A
2	NON-AQUEOUS IDW			2011-08-31 / 1020	ML649	SOLID
SAMPLE COMMENTS:						
HG O9	SW846 7471A	SOLID, 7471 Mercury	70 METALS, TOTAL (Method Exclusive) - Solids	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB QO	SW846 6010B	SOLID, TCLP 6010	34 TCLP(1311) -> METALS, TOTAL	D4 DOD QSM V4.X	PROT: T	WRK LOC 06
CR QO	SW846 6010B	SOLID, TCLP 6010	34 TCLP(1311) -> METALS, TOTAL	D4 DOD QSM V4.X	PROT: T	WRK LOC 06

F1I010435

60 of 64

F1I010435

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: RAD.2-152

Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guterl Steel
Report to: [REDACTED]

#SMPS In LOT: 5

Date Received: 2011-09-01
Analytical Due Date: 2011-09-14
Report Due Date: 2011-09-15
Report Type: D Expanded Deliverable
EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

BA	QO	SW846	6010B	SOLID, TCLP 6010	34	TCLP(1311) -> METALS, TOTAL	D4	DOD QSM V4.X	PROT: T	WRK LOC	06	
AS	QO	SW846	6010B	SOLID, TCLP 6010	34	TCLP(1311) -> METALS, TOTAL	D4	DOD QSM V4.X	PROT: T	WRK LOC	06	
AG	QO	SW846	6010B	SOLID, TCLP 6010	34	TCLP(1311) -> METALS, TOTAL	D4	DOD QSM V4.X	PROT: T	WRK LOC	06	
SE	QO	SW846	6010B	SOLID, TCLP 6010	34	TCLP(1311) -> METALS, TOTAL	D4	DOD QSM V4.X	PROT: T	WRK LOC	06	
XX	QL	SW846	8270C	SOLID, TCLP 8270	62	TCLP(1311) -> LIQ/LIQ, SEP FUNNEL - Acid->Base	D4	DOD QSM V4.X	PROT: T	WRK LOC	06	TIC: N
XX	QK	SW846	8260B	SOLID, TCLP 8260	58	TCLP(1311-ZHE/filter) -> PURGE-AND-TRAP (Low Level)	D4	DOD QSM V4.X	PROT: T	WRK LOC	06	TIC: N
XX	ZV		RAD SCREEN	SOLID, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	ZZ	NONE	NONE	SOLID, 1311 TCLP ZHE Extraction	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: T	WRK LOC	06	
XX	ZZ	NONE	NONE	SOLID, TCLP 1311 Non ZHE Extraction	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: T	WRK LOC	06	
XX	2M	EML	A-01-R MOD	SOLID, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: B	WRK LOC	06	
XX	2O	EML	A-01-R MOD	SOLID, A-01-R MOD, Iso TH (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06	
XX	WM	MCAW W	160.3 MOD	SOLID, 160.3 MOD, Percent Moisture	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	

SAMPLE # 3 CLIENT SAMPLE ID A04BMW707DD0001 Site ID DATE/TIME SAMPLED 2011-08-31 / 1150 WORKORDER ML65D WATER

SAMPLE COMMENTS:

AS	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
AG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
ZN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
VX	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
SB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
PB	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NI	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
NA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MN	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
FE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CU	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CR	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CO	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BA	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
CD	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
BE	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
TL	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	
MG	I\$	SW846	6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	

F1I010435

61 of 64

F11010435

CLIENT ANALYSIS SUMMARYTestAmerica St. Louis
Storage Loc: **METS**

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 5

Date Received: 2011-09-01
 Analytical Due Date: 2011-09-14
 Report Due Date: 2011-09-15
 Report Type: D Expanded Deliverable
 EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SAMPLE #	CLIENT SAMPLE ID		Site ID	Client Matrix	DATE/TIME SAMPLED		WORKORDER	I	
4	A04BMW707DD0001 DISSOLVED				2011-08-31 / 1150		ML65F	WATER	
SAMPLE COMMENTS:									
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>				
5	TRIP BLANK #7			2011-08-31 / 0	ML65G	WATER				
<u>SAMPLE COMMENTS:</u>										
XX QK	SW846 8260B	WATER, 8260B, VOC	25	PURGE AND TRAP - 25 mL purge (Waters)	D4	DOD QSM V4.X	PROT: A	WRK LOC	06	TIC: N

F11010435

62 of 64

TestAmerica St. Louis
15 Rider Trail North

St. Louis, MO 63045
Phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Karl Van Keuren, PG, PMP		Site Contact: Kevin Cronin		Date: 08/31/2011		COC No: 015											
Law Environmental & Infrastructure, Inc.		Tel/Fax: (513) 782-4745 / (513) 782-4807		Lab Contact: Lynn Fussner		Carrier:		1 of 1 COCs											
50 Section Avenue		Analysis Turnaround Time						Job No. 140416.09020100											
Cincinnati, OH 45212		Calendar (C) or Work Days (W)						SDG No.											
3) 782-4700 Phone		TAT if different from Below																	
3) 782-4807 FAX		<input type="checkbox"/> 2 weeks																	
Project Name: Former Guterl Specialty Steel Corporation FUSRA		<input type="checkbox"/> 1 week																	
Address: Lockport, NY		<input type="checkbox"/> 2 days																	
Job #		<input type="checkbox"/> 1 day																	
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Isotopic Thorium (a-spec)	Isotopic Uranium (a-spec)	Total Uranium	TAL Metals except Mercury	Anions	Alkalinity	Total Dissolved Solids	Volatile Organic Compounds (VOCs)	TCLP Volatiles	TCLP Semi-volatiles	TCLP Metals except Mercury	Mercury	Sample Specific Notes:
Aqueous IDW	8/31/2011	0930	Grab	GW	11		X	X	X	X				X				X	
1-Aqueous IDW	8/31/2011	1020	Grab	Soil	4		X	X							X	X	X	X	
4BMW707DD0001	8/31/2011	1150	Grab	GW	3	X			X	X									
Blank #7	8/31/2011	--	TB	--	1									X					
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1, 2, and 4																			
Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
Special Instructions/QC Requirements & Comments:																			

Company: Shaw E & I. Inc.	Date/Time: 8/31/11 15:35	Received	Company: JTB	Date/Time: 8/31/11 15:55	Received
Company:	Date/Time:	Received	Company: BFLO	Date/Time: 8/31/11 16:40	Received
Company:	Date/Time:	Received	Company: TA	Date/Time: 9/1/11 0920	Received

TestAmerica St. Louis

CONDITION UPON RECEIPT FORM

Client: Shaw

Quote No: 89251

COC/RFA No: 015

Initiated By: AD

Date: 9/1/11

Time: 0920



Shipping Information

Shipper: FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

Y N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0258 6001
2. ↓ 6102
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

1. 2
2. _____
3. _____
4. _____
5. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. Y <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y <u>N</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

2048MW707DD0001 sample bottle only has total metals for analysis. Log total uranium, per COC & LF

Corrective Action:

☐ Client Contact Name:

Informed by:

☐ Sample(s) processed "as

☐ Sample(s) on hold until:

If released, notify:

Project Management Review

THIS FORM MUST BE COMPLETED THAT PERSON USED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

Date: 9/2/11

ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR. THEN

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

Guterl Steel

Lot #: F2B010413

[REDACTED]
Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.

[REDACTED]
Project Manager

February 15, 2012

Case Narrative
LOT NUMBER: F2B010413

This report contains the analytical results for the eight samples received under chain of custody by TestAmerica in St. Louis on February 1, 2012. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Per client requirements in the Statement of Work, dilutions were not preformed unless otherwise stated.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

The following clean-up methods for Organic analyses may have been used on samples in this data set. Specific methods employed are documented on the batch extraction logs.

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup
Method 3665A: Sulfuric Acid/Permanganate Cleanup

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample to analyze samples at requested volume of 1L and a reduced aliquot of 500mL was performed. There was also insufficient sample sent for sample F2B010413-08 to be weighed at 500mL and a reduced aliquot of 250mL was used. An LCS/LCSD was also performed.

Affected Samples:

F2B010413 (1): A04DMW710D0002 (DISSOLVED)
F2B010413 (2): A04DMW710DD0002 (DISSOLVED)
F2B010413 (3): A04DMW713D0002 (DISSOLVED)
F2B010413 (4): A04DMW708DD0002 (DISSOLVED)
F2B010413 (5): A04DMW710D0002
F2B010413 (6): A04DMW710DD0002
F2B010413 (7): A04DMW713D0002
F2B010413 (8): A04DMW708DD0002

The Uranium sample did not meet the CRDL due to a reduced sample volume. No further action is required and sample results will be reported for client review.

Affected Samples:

F2B010413 (8): A04DMW708DD0002

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY**F2B010413**

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Uranium by Alpha Spectroscopy ICP-MS (6020A)	EML A-01-R MOD SW846 6020A	

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2B010413

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MQH68	001	A04DMW710D0002 (DISSOLVED)	01/30/12	11:00
MQH7F	002	A04DMW710DD0002 (DISSOLVED)	01/30/12	11:40
MQH7G	003	A04DMW713D0002 (DISSOLVED)	01/30/12	13:25
MQH7H	004	A04DMW708DD0002 (DISSOLVED)	01/30/12	14:50
MQH7P	005	A04DMW710D0002	01/30/12	11:00
MQH7W	006	A04DMW710DD0002	01/30/12	11:40
MQH71	007	A04DMW713D0002	01/30/12	13:25
MQH72	008	A04DMW708DD0002	01/30/12	14:50

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B010413-001

Matrix.....: WATER

Date Sampled...: 01/30/12 11:00 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	57.8 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH681AC
		Dilution Factor: 1		Analysis Time...: 21:15		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B010413-002

Matrix.....: WATER

Date Sampled...: 01/30/12 11:40 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	71.9 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH7F1AC
		Dilution Factor: 1		Analysis Time...: 21:41		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B010413-003

Matrix.....: WATER

Date Sampled...: 01/30/12 13:25 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	0.25 BE	1	ug/L	SW846 6020A	02/03-02/09/12	MQH7G1AC
		Dilution Factor: 1		Analysis Time...: 21:55		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B010413-004

Matrix.....: WATER

Date Sampled...: 01/30/12 14:50 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	22.3 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH7H1AC
		Dilution Factor: 1		Analysis Time...: 22:01		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0002

TOTAL Metals

Lot-Sample #...: F2B010413-005

Matrix.....: WATER

Date Sampled...: 01/30/12 11:00 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	59.1 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH7P1AC
		Dilution Factor: 1		Analysis Time...: 22:08		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0002

TOTAL Metals

Lot-Sample #...: F2B010413-006

Matrix.....: WATER

Date Sampled...: 01/30/12 11:40 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2034044						
Uranium	71.4 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH7W1AC
		Dilution Factor: 1		Analysis Time...: 22:28		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0002

TOTAL Metals

Lot-Sample #...: F2B010413-007

Matrix.....: WATER

Date Sampled...: 01/30/12 13:25 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	1.0 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH711AC
		Dilution Factor: 1		Analysis Time...: 22:35		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0002

TOTAL Metals

Lot-Sample #...: F2B010413-008

Matrix.....: WATER

Date Sampled...: 01/30/12 14:50 Date Received...: 02/01/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2034044					
Uranium	24.7 E	1	ug/L	SW846 6020A	02/03-02/09/12	MQH721AC
		Dilution Factor: 1		Analysis Time...: 22:41		

NOTE(S):

E Matrix interference.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2B010413

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F2B030000-044 Prep Batch #... : 2034044						
Uranium	ND	1	ug/L	SW846 6020A	02/03-02/09/12	MQK841AA
Dilution Factor: 1						
Analysis Time...: 20:49						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2B010413

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#:	F2B030000-044	Prep Batch #...	2034044		
Uranium	107	(80 - 120)	SW846 6020A	02/03-02/09/12	MQK841AC
		Dilution Factor: 1	Analysis Time...: 21:09		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2B010413

Matrix.....: WATER

Date Sampled...: 01/30/12 11:00 Date Received...: 02/01/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #:	F2B010413-001	Prep Batch #...	2034044			
Uranium	108	(80 - 120)		SW846 6020A	02/03-02/09/12	MQH681AE
	109	(80 - 120)	0.24 (0-20)	SW846 6020A	02/03-02/09/12	MQH681AF

Dilution Factor: 1

Analysis Time...: 21:28

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B010413-001
Work Order: MQH68
Matrix: WATER

Date Collected: 01/30/12 1100
Date Received: 02/01/12 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 71
Uranium 234	17.3		1.8	0.1	0.1	02/02/12	02/04/12
Uranium 235/236	0.90		0.30	0.10	0.11	02/02/12	02/04/12
Uranium 238	17.5		1.9	0.1	0.1	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B010413-002

Date Collected: 01/30/12 1140

Work Order: MQH7F

Date Received: 02/01/12 0900

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 76
Uranium 234	20.0		2.1	0.1	0.1	02/02/12	02/04/12
Uranium 235/236	1.17		0.34	0.10	0.06	02/02/12	02/04/12
Uranium 238	20.4		2.1	0.1	0.05	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B010413-003

Date Collected: 01/30/12 1325

Work Order: MQH7G

Date Received: 02/01/12 0900

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 79
Uranium 234	0.19		0.12	0.10	0.08	02/02/12	02/04/12
Uranium 235/236	-0.011	U	0.016	0.100	0.12	02/02/12	02/04/12
Uranium 238	0.071		0.072	0.100	0.048	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B010413-004
Work Order: MQH7H
Matrix: WATER

Date Collected: 01/30/12 1450
Date Received: 02/01/12 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 83
Uranium 234	7.99		0.98	0.10	0.09	02/02/12	02/04/12
Uranium 235/236	0.49		0.20	0.10	0.05	02/02/12	02/04/12
Uranium 238	7.76		0.96	0.10	0.07	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0002

Radiochemistry

Lab Sample ID: F2B010413-005
Work Order: MQH7P
Matrix: WATER

Date Collected: 01/30/12 1100
Date Received: 02/01/12 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 84
Uranium 234	16.6		1.7	0.1	0.04	02/02/12	02/04/12
Uranium 235/236	0.81		0.27	0.10	0.12	02/02/12	02/04/12
Uranium 238	16.8		1.8	0.1	0.09	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0002

Radiochemistry

Lab Sample ID: F2B010413-006
Work Order: MQH7W
Matrix: WATER

Date Collected: 01/30/12 1140
Date Received: 02/01/12 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 81
Uranium 234	19.6		2.0	0.1	0.1	02/02/12	02/04/12
Uranium 235/236	0.93		0.28	0.10	0.05	02/02/12	02/04/12
Uranium 238	21.3		2.1	0.1	0.1	02/02/12	02/04/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0002

Radiochemistry

Lab Sample ID: F2B010413-007

Date Collected: 01/30/12 1325

Work Order: MQH71

Date Received: 02/01/12 0900

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 84
Uranium 234	0.32		0.15	0.10	0.09	02/02/12	02/04/12
Uranium 235/236	0.036	U	0.059	0.100	0.093	02/02/12	02/04/12
Uranium 238	0.23		0.13	0.10	0.10	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0002

Radiochemistry

Lab Sample ID: F2B010413-008
Work Order: MQH72
Matrix: WATER

Date Collected: 01/30/12 1450
Date Received: 02/01/12 0900

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2033010	Yld % 87
Uranium 234	7.1		1.1	0.1	0.2	02/02/12	02/04/12
Uranium 235/236	0.29		0.22	0.10	0.21	02/02/12	02/04/12
Uranium 238	7.2		1.1	0.1	0.3	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B010413

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F2B010413

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	2033010	Yld % 96	F2B020000-010B
Uranium 234	0.011	U	0.021	0.100	0.037	02/02/12	02/04/12
Uranium 235/236	-0.0022	U	0.0044	0.100	0.040	02/02/12	02/04/12
Uranium 238	-0.0018	U	0.0035	0.100	0.032	02/02/12	02/04/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F2B010413
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F2B020000-010C	
Uranium 234	3.27	3.15	0.40	96	97	(82 - 118)	
Spk 2	3.26	3.02	0.39	100	93	(82 - 118)	4 %RPD
Uranium 238	3.39	3.53	0.44	96	104	(80 - 121)	
Spk 2	3.39	3.16	0.40	100	93	(80 - 121)	11 %RPD
Batch #:		2033010	Analysis Date: 02/04/12				

F2B010413

CLIENT ANALYSIS SUMMARY

Storage Loc:

MET,R19

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2012-02-01

Project: 140415

Guterl Steel

Analytical Due Date:

2012-02-15

PO#: 697886

Report to:

Report Due Date:

2012-02-15

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D

Expanded Deliverable

#SMPS in LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
1	A04DMW710D0002 (DISSOLVED)			2012-01-30 / 1100	MQH68	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
2	A04DMW710DD0002 (DISSOLVE)			2012-01-30 / 1140	MQH7F	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
3	A04DMW713D0002 (DISSOLVED)			2012-01-30 / 1325	MQH7G	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
4	A04DMW708DD0002 (DISSOLVE)			2012-01-30 / 1450	MQH7H	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
5	A04DMW710D0002			2012-01-30 / 1100	MQH7P	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
6	A04DMW710DD0002			2012-01-30 / 1140	MQH7W	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F2B010413**CLIENT ANALYSIS SUMMARY**Storage Loc: **MET,R19**

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2012-02-01

Project: 140415

Guterl Steel

Analytical Due Date: 2012-02-15

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-02-15

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 8

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
7	A04DMW713D0002			2012-01-30 / 1325	MQH71	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
8	A04DMW708DD0002			2012-01-30 / 1450	MQH72	WATER

SAMPLE COMMENTS:

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK	06

cul
210

TestAmerica

COC No. 0/6

Chain of Custody Number
158167

Page 1 of 1

--	--

Special Instructions/

Special Instructions/
Conditions of Receipt

2xLP 2x250P

Sample Disposal ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)	

Comments _____

DISTRIBUTION: *WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy*

CONDITION UPON RECEIPT FORM

Client: SHAW INVIRO

Quote No: 89251

COC/RFA No: 016

Initiated By: NVO

Date: 2-1-12

Time: 0900

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____

Multiple Packages: Y (N)

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0260 4060

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

1. AMBIENT

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>(Y)</u> N	Are there custody seals present on the cooler?	8. Y <u>(N)</u>	Are there custody seals present on bottles?
2. Y <u>(N)</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>(N/A)</u>	Do custody seals on bottles appear to be tampered with?
3. <u>(Y)</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>(Y)</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>(Y)</u> N	Sample received with Chain of Custody?	11. Y N <u>(N/A)</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>(Y)</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>(Y)</u> N	Sample received in proper containers?
6. Y <u>(N)</u>	Was sample received broken?	13. Y N <u>(N/A)</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>(Y)</u> N	Is sample volume sufficient for analysis?	14. Y N <u>(N/A)</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

☐ Client Contact Name: _____

☐ Sample(s) processed "as is" _____

☐ Sample(s) on hold until: _____

Project Management Review: _____

Informed by: _____

If released, notify: _____

Date: 2/3/12

THIS FORM MUST BE COMPLETED AND BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

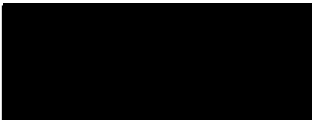
PROJECT NO. 140415

Guterl Steel

Lot #: F2B030480


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

February 14, 2012

F2B030480

1 of 47

Case Narrative
LOT NUMBER: F2B030480

This report contains the analytical results for the 14 samples received under chain of custody by TestAmerica in St. Louis on February 3, 2012. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.1 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received from 2-6° C. No observations or non-conformances were noted at the time of receipt.

Per client requirements in the Statement of Work, dilutions were not preformed unless otherwise stated.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

The following clean-up methods for Organic analyses may have been used on samples in this data set. Specific methods employed are documented on the batch extraction logs.

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup
Method 3665A: Sulfuric Acid/Permanganate Cleanup

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared.

Affected Samples:

F2B030480 (1): A04BMW260002
F2B030480 (2): A04BMW707DD0002
F2B030480 (3): A04BMW605D0002
F2B030480 (5): A04BMW9006
F2B030480 (6): A04DMW604D0002
F2B030480 (7): A04DMW709DD0002
F2B030480 (8): A04BMW260002 (DISSOLVED)
F2B030480 (9): A04BMW707DD0002 (DISSOLVED)
F2B030480 (10): A04BMW605D0002 (DISSOLVED)
F2B030480 (12): A04BMW9006 (DISSOLVED)
F2B030480 (13): A04DMW604D0002 (DISSOLVED)
F2B030480 (14): A04DMW709DD0002 (DISSOLVED)

The Uranium sample did not meet the CRDL due to a reduced sample volume.

Affected Samples:

F2B030480 (3): A04BMW605D0002
F2B030480 (5): A04BMW9006
F2B030480 (10): A04BMW605D0002 (DISSOLVED)
F2B030480 (12): A04BMW9006 (DISSOLVED)

The serial dilution percent difference is not within QC limits for uranium.

Affected Samples:

F2B030480 (1): A04BMW260002
F2B030480 (2): A04BMW707DD0002
F2B030480 (3): A04BMW605D0002
F2B030480 (4): A04DMW704DD0002
F2B030480 (5): A04BMW9006
F2B030480 (6): A04DMW604D0002
F2B030480 (7): A04DMW709DD0002
F2B030480 (8): A04BMW260002 (DISSOLVED)
F2B030480 (9): A04BMW707DD0002 (DISSOLVED)
F2B030480 (10): A04BMW605D0002 (DISSOLVED)
F2B030480 (11): A04DMW704DD0002 (DISSOLVED)
F2B030480 (12): A04BMW9006 (DISSOLVED)
F2B030480 (13): A04DMW604D0002 (DISSOLVED)
F2B030480 (14): A04DMW709DD0002 (DISSOLVED)

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F2B030480

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Uranium by Alpha Spectroscopy ICP-MS (6020A)	EML A-01-R MOD SW846 6020A	

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2B030480

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MQLQ0	001	A04BMW260002	02/01/12	09:45
MQLQ6	002	A04BMW707DD0002	02/01/12	10:20
MQLQ8	003	A04BMW605D0002	02/01/12	11:30
MQLRA	004	A04DMW704DD0002	02/01/12	13:30
MQLRF	005	A04BMW9006	02/01/12	
MQLRG	006	A04DMW604D0002	02/01/12	14:55
MQLRH	007	A04DMW709DD0002	02/01/12	15:05
MQLRK	008	A04BMW260002 (DISSOLVED)	02/01/12	09:45
MQLRM	009	A04BMW707DD0002 (DISSOLVED)	02/01/12	10:20
MQLRP	010	A04BMW605D0002 (DISSOLVED)	02/01/12	11:30
MQLRQ	011	A04DMW704DD0002 (DISSOLVED)	02/01/12	13:30
MQLRT	012	A04BMW9006 (DISSOLVED)	02/01/12	
MQLRV	013	A04DMW604D0002 (DISSOLVED)	02/01/12	14:55
MQLRW	014	A04DMW709DD0002 (DISSOLVED)	02/01/12	15:05

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260002

TOTAL Metals

Lot-Sample #...: F2B030480-001

Matrix.....: WATER

Date Sampled...: 02/01/12 09:45 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	145 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLQ01AC
		Dilution Factor: 1		Analysis Time...: 02:11		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0002

TOTAL Metals

Lot-Sample #...: F2B030480-002

Matrix.....: WATER

Date Sampled...: 02/01/12 10:20 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	13.6 E	1	ug/L	SW846 6020A	02/06-02/08/12	MLQ61AC
		Dilution Factor: 1		Analysis Time...: 02:18		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0002

TOTAL Metals

Lot-Sample #...: F2B030480-003

Matrix.....: WATER

Date Sampled...: 02/01/12 11:30 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	299 E	1	ug/L	SW846 6020A	02/06-02/08/12	MLQ81AC
		Dilution Factor: 1		Analysis Time...: 02:38		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0002

TOTAL Metals

Lot-Sample #...: F2B030480-004

Matrix.....: WATER

Date Sampled...: 02/01/12 13:30 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	81.3 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRA1AC
		Dilution Factor: 1		Analysis Time...: 02:44		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9006

TOTAL Metals

Lot-Sample #...: F2B030480-005

Matrix.....: WATER

Date Sampled...: 02/01/12

Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	300 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRF1AC
		Dilution Factor: 1		Analysis Time...: 03:11		

NOTE(S):

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0002

TOTAL Metals

Lot-Sample #...: F2B030480-006

Matrix.....: WATER

Date Sampled...: 02/01/12 14:55 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	76.7 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRG1AC
		Dilution Factor: 1		Analysis Time...: 03:24		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0002

TOTAL Metals

Lot-Sample #...: F2B030480-007

Matrix.....: WATER

Date Sampled...: 02/01/12 15:05 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	88.3 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRH1AC
		Dilution Factor: 1		Analysis Time...: 03:31		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-008

Matrix.....: WATER

Date Sampled...: 02/01/12 09:45 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	152 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRK1AC
		Dilution Factor: 1		Analysis Time...: 03:37		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-009

Matrix.....: WATER

Date Sampled...: 02/01/12 10:20 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	14.1 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRM1AC
		Dilution Factor: 1		Analysis Time...: 03:57		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-010

Matrix.....: WATER

Date Sampled...: 02/01/12 11:30 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	302 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRP1AC
		Dilution Factor: 1		Analysis Time...: 04:04		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-011

Matrix.....: WATER

Date Sampled...: 02/01/12 13:30 Date Received...: 02/03/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...	2037060					
Uranium	80.2 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRQ1AC
		Dilution Factor: 1		Analysis Time...: 04:11		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9006 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-012

Matrix.....: WATER

Date Sampled...: 02/01/12

Date Received...: 02/03/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 2037060						
Uranium	304 E	1	ug/L	SW846 6020A	02/06-02/08/12	MLRTIAC
		Dilution Factor: 1		Analysis Time...: 04:30		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-013

Matrix.....: WATER

Date Sampled...: 02/01/12 14:55 Date Received...: 02/03/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2037060						
Uranium	76.4 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRV1AC
		Dilution Factor: 1		Analysis Time...: 04:37		

NOTE(S) :

E Matrix interference.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0002 (DISSOLVED)

TOTAL Metals

Lot-Sample #...: F2B030480-014

Matrix.....: WATER

Date Sampled...: 02/01/12 15:05 Date Received...: 02/03/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2037060					
Uranium	88.5 E	1	ug/L	SW846 6020A	02/06-02/08/12	MQLRW1AC
		Dilution Factor: 1		Analysis Time...: 04:44		

NOTE(S) :

E Matrix interference.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2B030480

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MB Lot-Sample #: F2B060000-060 Prep Batch #...: 2037060						
Uranium	ND	1	ug/L	SW846 6020A	02/06-02/08/12	MQL991AA
Dilution Factor: 1						
Analysis Time..: 01:58						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2B030480

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------	----------------------------	---------------	---------------------------------------	---------------------

LCS Lot-Sample#: F2B060000-060 Prep Batch #...: 2037060

Uranium 103 (80 - 120) SW846 6020A 02/06-02/08/12 MQL991AC

Dilution Factor: 1

Analysis Time...: 02:05

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2B030480

Matrix.....: WATER

Date Sampled...: 02/01/12 13:30 Date Received...: 02/03/12

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>RPD</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MS Lot-Sample #: F2B030480-004 Prep Batch #...: 2037060						
Uranium	108	(80 - 120)		SW846 6020A	02/06-02/08/12	MQLRA1AE
	120	(80 - 120)	9.6 (0-20)	SW846 6020A	02/06-02/08/12	MQLRA1AF
		Dilution Factor: 1				
		Analysis Time...: 02:58				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2B030480

Matrix.....: WATER

Date Sampled...: 02/01/12 13:30 Date Received...: 02/03/12

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>RPD</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MS Lot-Sample #:	F2B030480-011	Prep Batch #...	2037060			
Uranium	112	(80 - 120)		SW846 6020A	02/06-02/08/12	MQLRQ1AE
	111	(80 - 120) 0.30 (0-20)		SW846 6020A	02/06-02/08/12	MQLRQ1AF

Dilution Factor: 1

Analysis Time...: 04:17

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260002

Radiochemistry

Lab Sample ID: F2B030480-001
Work Order: MQLQ0
Matrix: WATER

Date Collected: 02/01/12 0945
Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 77
Uranium 234	39.7		3.7	0.1	0.1	02/07/12	02/09/12
Uranium 235/236	1.62		0.41	0.10	0.06	02/07/12	02/09/12
Uranium 238	38.3		3.6	0.1	0.05	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0002

Radiochemistry

Lab Sample ID: F2B030480-002

Date Collected: 02/01/12 1020

Work Order: MQLQ6

Date Received: 02/03/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 83
Uranium 234	7.76		0.98	0.10	0.08	02/07/12	02/09/12
Uranium 235/236	0.14		0.11	0.10	0.11	02/07/12	02/09/12
Uranium 238	5.14		0.73	0.10	0.05	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

25 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0002

Radiochemistry

Lab Sample ID: F2B030480-003

Date Collected: 02/01/12 1130

Work Order: MQLQ8

Date Received: 02/03/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 50
Uranium 234	87.3		7.9	0.1	0.2	02/07/12	02/09/12
Uranium 235/236	3.59		0.75	0.10	0.09	02/07/12	02/09/12
Uranium 238	91.0		8.3	0.1	0.1	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

26 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0002

Radiochemistry

Lab Sample ID: F2B030480-004
Work Order: MQLRA
Matrix: WATER

Date Collected: 02/01/12 1330
Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 60
Uranium 234	29.8		2.8	0.1	0.03	02/07/12	02/09/12
Uranium 235/236	1.20		0.28	0.10	0.08	02/07/12	02/09/12
Uranium 238	23.8		2.3	0.1	0.07	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

27 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0002 DUP

Radiochemistry

Lab Sample ID: F2B030480-004X
 Work Order: MQLRA
 Matrix: WATER

Date Collected: 02/01/12 1330
 Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 67
Uranium 234	25.9		2.4	0.1	0.07	02/07/12	02/09/12
Uranium 235/236	1.26		0.27	0.10	0.03	02/07/12	02/09/12
Uranium 238	21.5		2.0	0.1	0.09	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

28 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW9006

Radiochemistry

Lab Sample ID: F2B030480-005
 Work Order: MQLRF
 Matrix: WATER

Date Collected: 02/01/12 0000
 Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 45
Uranium 234	101		9.2	0.1	0.2	02/07/12	02/09/12
Uranium 235/236	5.3		1.0	0.1	0.2	02/07/12	02/09/12
Uranium 238	99.8		9.1	0.1	0.2	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0002

Radiochemistry

Lab Sample ID: F2B030480-006
 Work Order: MQLRG
 Matrix: WATER

Date Collected: 02/01/12 1455
 Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 82
Uranium 234	23.1		2.3	0.1	0.1	02/07/12	02/09/12
Uranium 235/236	1.05		0.31	0.10	0.11	02/07/12	02/09/12
Uranium 238	21.9		2.2	0.1	0.1	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

30 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-013
 Work Order: MQLRV
 Matrix: WATER

Date Collected: 02/01/12 1455
 Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038127	Yld % 80
Uranium 234	22.0		2.2	0.1	0.05	02/07/12	02/09/12
Uranium 235/236	1.28		0.35	0.10	0.06	02/07/12	02/09/12
Uranium 238	23.1		2.3	0.1	0.05	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0002

Radiochemistry

Lab Sample ID: F2B030480-007
Work Order: MQLRH
Matrix: WATER

Date Collected: 02/01/12 1505
Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 79
Uranium 234	25.5		2.5	0.1	0.09	02/07/12	02/09/12
Uranium 235/236	1.48		0.38	0.10	0.1	02/07/12	02/09/12
Uranium 238	26.3		2.6	0.1	0.08	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

32 of 47

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW260002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-008
Work Order: MQLRK
Matrix: WATER

Date Collected: 02/01/12 0945
Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 70
Uranium 234	48.4		4.5	0.1	0.1	02/07/12	02/09/12
Uranium 235/236	2.10		0.49	0.10	0.12	02/07/12	02/09/12
Uranium 238	48.4		4.5	0.1	0.1	02/07/12	02/09/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-009

Date Collected: 02/01/12 1020

Work Order: MQLRM

Date Received: 02/03/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 83
Uranium 234	14.5		1.6	0.1	0.1	02/07/12	02/09/12
Uranium 235/236	0.23		0.14	0.10	0.06	02/07/12	02/09/12
Uranium 238	4.32		0.65	0.10	0.12	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

34 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-010

Date Collected: 02/01/12 1130

Work Order: MQLRP

Date Received: 02/03/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038119	Yld % 46
Uranium 234	92.9		8.5	0.1	0.3	02/07/12	02/09/12
Uranium 235/236	3.99		0.84	0.10	0.24	02/07/12	02/09/12
Uranium 238	91.2		8.3	0.1	0.2	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

35 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-011
Work Order: MQLRQ
Matrix: WATER

Date Collected: 02/01/12 1330
Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038127	Yld % 67
Uranium 234	26.3		2.5	0.1	0.08	02/07/12	02/09/12
Uranium 235/236	1.15		0.27	0.10	0.04	02/07/12	02/09/12
Uranium 238	22.6		2.1	0.1	0.06	02/07/12	02/09/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

36 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW704DD0002 (DISSOLVED) DUP

Radiochemistry

Lab Sample ID: F2B030480-011X
Work Order: MQLRQ
Matrix: WATER

Date Collected: 02/01/12 1330
Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038127	Yld % 59
Uranium 234	30.0		2.8	0.1	0.09	02/07/12	02/09/12
Uranium 235/236	1.26		0.29	0.10	0.08	02/07/12	02/09/12
Uranium 238	24.1		2.3	0.1	0.08	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

37 of 47

Shaw Environmental & Infrastructure Inc
Client Sample ID: A04BMW9006 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-012
 Work Order: MQLRT
 Matrix: WATER

Date Collected: 02/01/12 0000
 Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038127	Yld % 46
Uranium 234	90.6		8.3	0.1	0.2	02/07/12	02/09/12
Uranium 235/236	4.67		0.91	0.10	0.1	02/07/12	02/09/12
Uranium 238	90.6		8.3	0.1	0.08	02/07/12	02/09/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

38 of 47

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0002 (DISSOLVED)

Radiochemistry

Lab Sample ID: F2B030480-014
 Work Order: MQLRW
 Matrix: WATER

Date Collected: 02/01/12 1505
 Date Received: 02/03/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2038127	Yld % 76
Uranium 234	27.5		2.7	0.1	0.1	02/07/12	02/09/12
Uranium 235/236	1.01		0.31	0.10	0.10	02/07/12	02/09/12
Uranium 238	25.5		2.5	0.1	0.1	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2B030480

39 of 47

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F2B030480
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2038119	Yld %	99 F2B070000-119B
Uranium 234	0.011	U	0.021	0.100	0.038	02/07/12	02/09/12
Uranium 235/236	0.009	U	0.018	0.100	0.024	02/07/12	02/09/12
Uranium 238	0.007	U	0.014	0.100	0.019	02/07/12	02/09/12
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2038127	Yld %	95 F2B070000-127B
Uranium 234	0.037		0.033	0.100	0.020	02/07/12	02/09/12
Uranium 235/236	0.009	U	0.018	0.100	0.025	02/07/12	02/09/12
Uranium 238	0.007	U	0.015	0.100	0.020	02/07/12	02/09/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F2B030480
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2B070000-119C
Uranium 234	3.27	3.28	0.42	0.04	87	100	(82 - 118)
Uranium 238	3.39	3.52	0.45	0.04	87	104	(80 - 121)
Batch #:	2038119			Analysis Date:	02/09/12		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2B070000-127C
Uranium 234	3.27	3.04	0.39	0.03	92	93	(82 - 118)
Uranium 238	3.39	3.28	0.41	0.03	92	97	(80 - 121)
Batch #:	2038127			Analysis Date:	02/09/12		

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F2B030480
 Matrix: WATER

Date Sampled: 02/01/12
 Date Received: 02/03/12

Parameter	SAMPLE Result	Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result	Total Uncert. (2σ+/-)	% Yld	QC Sample ID Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2B030480-004
Uranium 234	29.8	2.8	60	25.9	2.4	67	14 %RPD
Uranium 235/236	1.20	0.28	60	1.26	0.27	67	4 %RPD
Uranium 238	23.8	2.3	60	21.5	2.0	67	10 %RPD
Batch #:		2038119 (Sample)		2038119 (Duplicate)			
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2B030480-011
Uranium 234	26.3	2.5	67	30.0	2.8	59	13 %RPD
Uranium 235/236	1.15	0.27	67	1.26	0.29	59	9 %RPD
Uranium 238	22.6	2.1	67	24.1	2.3	59	7 %RPD
Batch #:		2038127 (Sample)		2038127 (Duplicate)			

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F2B030480

F2B030480**CLIENT ANALYSIS SUMMARY**Storage Loc: **METS,R30/31**

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2012-02-03

Project: 140415

Guterl Steel

Analytical Due Date: 2012-02-14

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-02-15

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04BMW260002			2012-02-01 / 945	MLQ0	WATER
SAMPLE COMMENTS:						
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
2	A04BMW707DD0002			2012-02-01 / 1020	MLQ6	WATER
SAMPLE COMMENTS:						
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
3	A04BMW605D0002			2012-02-01 / 1130	MLQ8	WATER
SAMPLE COMMENTS:						
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
4	A04DMW704DD0002			2012-02-01 / 1330	MLRRA	WATER
SAMPLE COMMENTS:						
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4 X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
D UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
S UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
X XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
5	A04BMW90006			2012-02-01 / 0	MLRFR	WATER
SAMPLE COMMENTS:						
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
6	A04DMW604D0002			2012-02-01 / 1455	MLLRG	WATER
SAMPLE COMMENTS:						

43 of 47

F2B030480**CLIENT ANALYSIS SUMMARY**Storage Loc: **METS,R30/31**

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2012-02-03

Project: 140415

Guterl Steel

Analytical Due Date: 2012-02-14

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-02-15

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 14

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I			
7	A04DMW709DD0002			2012-02-01 / 1505	MQLRH	WATER			
SAMPLE COMMENTS:									
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I			
8	A04BMW260002 (DISSOLVED)			2012-02-01 / 945	MQLRK	WATER			
SAMPLE COMMENTS:									
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I			
9	A04BMW707DD0002 (DISSOLVE			2012-02-01 / 1020	MQLRM	WATER			
SAMPLE COMMENTS:									
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I			
10	A04BMW605D0002 (DISSOLVED)			2012-02-01 / 1130	MQLRP	WATER			
SAMPLE COMMENTS:									
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I			
11	A04DMW704DD0002 (DISSOLVE			2012-02-01 / 1330	MQLRQ	WATER			
SAMPLE COMMENTS:									
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
D UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
X XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F2B030480

44 of 47

F2B030480

44 of 47

F2B030480**CLIENT ANALYSIS SUMMARY**

Storage Loc: **METS,R30/31**
 Date Received: 2012-02-03
 Analytical Due Date: 2012-02-14
 Report Due Date: 2012-02-15
 Report Type: D Expanded Deliverable
 EDD Code: 00

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS In LOT: 14

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>			
12	A04BMW90006 (DISSOLVED)			2012-02-01 / 0	MLQRT	WATER			
<u>SAMPLE COMMENTS:</u>									
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>			
13	A04DMW604D0002 (DISSOLVED)			2012-02-01 / 1455	MLQRV	WATER			
<u>SAMPLE COMMENTS:</u>									
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>			
14	A04DMW709DD0002 (DISSOLVE)			2012-02-01 / 1505	MLQRW	WATER			
<u>SAMPLE COMMENTS:</u>									
UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F2B030480

45 of 47

Chain of Custody Record

CUR 259

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

COC No. 017

AL-4124 (10/97)

Client
SILVER ENVIRONMENTAL INFRASTRUCTURE

Address
5080 SECTION AVENUE

City
CINCINNATI

State
OH

Zip Code
45212

Project Name and Location (State)

Former General Specialty Steel Fusrap

Contract/Purchase Order/Quote No.

Project Manager
KARL VAN KLOVEN PG, PMP

Telephone Number (Area Code)/Fax Number
(513) 782-4745/(513) 782-4807

Site Contact
Kevin Green

Lab Contact
LYNN FUSSNER

Carrier/Waybill Number

Date

Lab Number

Chain of Custody Number

158168

Page 1 of 1

Analysis (Attach list if more space is needed)

Special Instructions/
Conditions of Receipt

Contract/Purchase Order/Quote No.			Matrix				Containers & Preservatives							Special Instructions				Conditions of Receipt																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		TOTAL U	TOTAL U (Filtered)	ISOTAC U	ISOTAC U (Filtered)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

1xLP 2x250P

6xLP 6x250P

2xLP 2x250P

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
	2/1/12	1510		2-1-12	1510
	2-1-12	1630		2-1-12	1630
	Date	Time		Date	Time
	2-2-12	1705		2/3/12	09

7.0, 8.0 #3 NO 11

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica St. Louis

CONDITION UPON RECEIPT FORM

Client: SHAW ENVIRO

Quote No: 89251

COC/RFA No: 017

Initiated By: NVO

Date: 02/03/12

Time: 0920

Shipping Information

Shipper: (FedEx) UPS DHL Courier Client Other:

Multiple Packages: (Y) N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0260 4151

6.

1. AMBIENT

6.

2. 4485 0260 4162

7.

2. AMBIENT

7.

3.

8.

3.

8.

4.

9.

4.

9.

5.

10.

5.

10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	(Y) N	Are there custody seals present on the cooler?	8.	Y (N)	Are there custody seals present on bottles?
2.	Y (N) N/A	Do custody seals on cooler appear to be tampered with?	9.	Y N (N/A)	Do custody seals on bottles appear to be tampered with?
3.	(Y) N	Were contents of cooler frisked after opening, but before unpacking?	10.	(Y) N N/A	Was sample received with proper pH ¹ ? (if not, make note below)
4.	(Y) N	Sample received with Chain of Custody?	11.	Y N (N/A)	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5.	(Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	(Y) N	Sample received in proper containers?
6.	Y (N)	Was sample received broken?	13.	Y N (N/A)	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7.	(Y) N	Is sample volume sufficient for analysis?	14.	Y N (N/A)	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

☐ Client Contact Name:

Informed by:

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until:

If released, notify:

Project Management Review:

Date: 2/16/12

THIS FORM IS TO BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

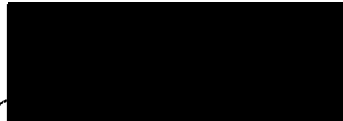
PROJECT NO. 140415

Guterl Steel

Lot #: F2E080406


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

May 22, 2012

Case Narrative
LOT NUMBER: F2E080406

This report contains the analytical results for the 22 samples received under chain of custody by TestAmerica in St. Louis on May 7, 2012. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.2 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

The coolers were received at ambient temperature. No observations or non-conformances were noted at the time of receipt.

Per client requirements in the Statement of Work, dilutions were not preformed unless otherwise stated.

Manual Integration:

Manual integration may have been preformed for certain analysis and/or samples. Raw sample data can be supplied upon request detailing the manual integration and reasons why.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

The following clean-up methods for Organic analyses may have been used on samples in this data set. Specific methods employed are documented on the batch extraction logs.

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup
Method 3665A: Sulfuric Acid/Permanganate Cleanup

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

Batch: 2130026

There was insufficient sample to perform the analysis at 1000mL. The sample aliquots were reduced to 500mL.

Affected Samples:

F2E080406 (1): A04DMW710D0003	F2E080406 (10): A04DMW604D0003
F2E080406 (2): A04DMW710DD0003	F2E080406 (11): A04DMW709DD0003
F2E080406 (3): A04DMW713D0003	F2E080406 (12): A04DMW710D0003
F2E080406 (4): A04DMW708DD0003	F2E080406 (13): A04DMW710DD0003
F2E080406 (5): DUP-01	F2E080406 (14): A04DMW713D0003
F2E080406 (6): A04BMW605D0003	F2E080406 (15): A04DMW708DD0003
F2E080406 (7): A04BMW704DD0003	F2E080406 (16): DUP-01
F2E080406 (8): A04BMW707DD0003	F2E080406 (17): A04BMW605D0003
F2E080406 (9): A04BMW260003	

Batch: 2130026

The associated Uranium samples did not meet the client requested reporting limit due to the presence of the nuclide in the sample and the reduced sample volume.

Affected Samples:

F2E080406 (5): DUP-01	F2E080406 (16): DUP-01
F2E080406 (6): A04BMW605D0003	F2E080406 (17): A04BMW605D0003
F2E080406 (9): A04BMW260003	

Batch: 2130027

There was insufficient sample to perform the analysis at 1000mL. The sample aliquots were reduced to 500mL. The reduction in sample size had no effect on the sample results.

Affected Samples:

F2E080406 (18): A04BMW704DD0003	F2E080406 (21): A04DMW604D0003
F2E080406 (19): A04BMW707DD0003	F2E080406 (22): A04DMW709DD0003
F2E080406 (20): A04BMW260003	

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY**F2E080406**

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Uranium by Alpha Spectroscopy ICP-MS (6020A)	EML A-01-R MOD SW846 6020A	

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2E080406

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MTE67	001	A04DMW710D0003	05/03/12	09:35
MTE7N	002	A04DMW710DD0003	05/03/12	10:35
MTE7P	003	A04DMW713D0003	05/03/12	11:45
MTE7Q	004	A04DMW708DD0003	05/03/12	14:00
MTE7R	005	DUP-01	05/03/12	
MTE7T	006	A04BMW605D0003	05/03/12	15:15
MTE7V	007	A04BMW704DD0003	05/03/12	16:05
MTE7X	008	A04BMW707DD0003	05/04/12	08:40
MTE70	009	A04BMW260003	05/04/12	09:35
MTE71	010	A04DMW604D0003	05/04/12	10:40
MTE72	011	A04DMW709DD0003	05/04/12	11:30
MTE8C	012	A04DMW710D0003	05/04/12	09:35
MTE8G	013	A04DMW710DD0003	05/04/12	10:35
MTE8J	014	A04DMW713D0003	05/04/12	11:45
MTE8K	015	A04DMW708DD0003	05/04/12	14:00
MTE8M	016	DUP-01	05/04/12	
MTE8P	017	A04BMW605D0003	05/04/12	15:15
MTE8R	018	A04BMW704DD0003	05/04/12	16:05
MTE8V	019	A04BMW707DD0003	05/04/12	08:40
MTE80	020	A04BMW260003	05/04/12	09:35
MTE81	021	A04DMW604D0003	05/04/12	10:40
MTE82	022	A04DMW709DD0003	05/04/12	11:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0003

TOTAL Metals

Lot-Sample #...: F2E080406-001

Matrix.....: WATER

Date Sampled...: 05/03/12 09:35 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	52.5	1	ug/L	SW846 6020A	05/10-05/15/12	MTE671AC
		Dilution Factor: 1		Analysis Time...: 22:54		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-002

Matrix.....: WATER

Date Sampled...: 05/03/12 10:35 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	59.1	1	ug/L	SW846 6020A	05/10-05/15/12	MTE7N1AC
		Dilution Factor: 1		Analysis Time...: 23:01		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0003

TOTAL Metals

Lot-Sample #...: F2E080406-003

Matrix.....: WATER

Date Sampled...: 05/03/12 11:45 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	0.33 J	1	ug/L	SW846 6020A	05/10-05/15/12	MTE7P1AC
		Dilution Factor: 1		Analysis Time...: 23:07		

NOTE(S):

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-004

Matrix.....: WATER

Date Sampled...: 05/03/12 14:00 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131079						
Uranium	18.0	1	ug/L	SW846 6020A	05/10-05/15/12	MTE7Q1AC
		Dilution Factor: 1		Analysis Time...: 23:14		

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUP-01

TOTAL Metals

Lot-Sample #...: F2E080406-005

Matrix.....: WATER

Date Sampled...: 05/03/12

Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131079						
Uranium	266	1	ug/L	SW846 6020A	05/10-05/15/12	MTE7R1AC
		Dilution Factor: 1		Analysis Time...: 23:21		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0003

TOTAL Metals

Lot-Sample #...: F2E080406-006

Matrix.....: WATER

Date Sampled...: 05/03/12 15:15 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	265	1	ug/L	SW846 6020A	05/10-05/15/12	MFE7T1AC
		Dilution Factor: 1		Analysis Time...: 23:28		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-007

Matrix.....: WATER

Date Sampled...: 05/03/12 16:05 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	67.0	1	ug/L	SW846 6020A	05/10-05/15/12	MTE7V1AC
		Dilution Factor: 1		Analysis Time...: 23:34		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-008

Matrix.....: WATER

Date Sampled...: 05/04/12 08:40 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	10.8	1	ug/L	SW846 6020A	05/10-05/15/12	MTE7X1AC
Dilution Factor: 1			Analysis Time...: 23:41			

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260003

TOTAL Metals

Lot-Sample #...: F2E080406-009

Matrix.....: WATER

Date Sampled...: 05/04/12 09:35 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131079						
Uranium	145	1	ug/L	SW846 6020A	05/10-05/16/12	MTE701AC
		Dilution Factor: 1		Analysis Time...: 00:01		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0003

TOTAL Metals

Lot-Sample #...: F2E080406-010

Matrix.....: WATER

Date Sampled...: 05/04/12 10:40 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131079						
Uranium	86.5	1	ug/L	SW846 6020A	05/10-05/16/12	MTE711AC
		Dilution Factor: 1		Analysis Time...: 00:08		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-011

Matrix.....: WATER

Date Sampled...: 05/04/12 11:30 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131079						
Uranium	80.0	1	ug/L	SW846 6020A	05/10-05/16/12	MTE721AC
		Dilution Factor: 1		Analysis Time...: 00:41		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0003

TOTAL Metals

Lot-Sample #...: F2E080406-012

Matrix.....: WATER

Date Sampled...: 05/04/12 09:35 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	49.5	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8C1AA
		Dilution Factor: 1		Analysis Time...: 00:48		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-013

Matrix.....: WATER

Date Sampled...: 05/04/12 10:35 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131079						
Uranium	56.6	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8G1AC
		Dilution Factor: 1		Analysis Time...: 00:55		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0003

TOTAL Metals

Lot-Sample #...: F2E080406-014

Matrix.....: WATER

Date Sampled...: 05/04/12 11:45 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131079					
Uranium	ND	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8J1AC
		Dilution Factor: 1		Analysis Time...: 01:01		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-015

Matrix.....: WATER

Date Sampled...: 05/04/12 14:00 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131079						
Uranium	18.3	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8K1AC
		Dilution Factor: 1		Analysis Time...: 01:22		

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUP-01

TOTAL Metals

Lot-Sample #...: F2E080406-016

Matrix.....: WATER

Date Sampled...: 05/04/12

Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131080						
Uranium	262	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8M1AC
		Dilution Factor: 1		Analysis Time...: 01:42		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0003

TOTAL Metals

Lot-Sample #...: F2E080406-017

Matrix.....: WATER

Date Sampled...: 05/04/12 15:15 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131080						
Uranium	256	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8P1AC
		Dilution Factor: 1		Analysis Time...: 01:48		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-018

Matrix.....: WATER

Date Sampled...: 05/04/12 16:05 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131080						
Uranium	65.8	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8R1AC
		Dilution Factor: 1		Analysis Time...: 01:55		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-019

Matrix.....: WATER

Date Sampled...: 05/04/12 08:40 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131080						
Uranium	10.6	1	ug/L	SW846 6020A	05/10-05/16/12	MTE8V1AC
		Dilution Factor: 1		Analysis Time...: 02:02		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260003

TOTAL Metals

Lot-Sample #...: F2E080406-020

Matrix.....: WATER

Date Sampled...: 05/04/12 09:35 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2131080					
Uranium	139	1	ug/L	SW846 6020A	05/10-05/16/12	MTE801AC
		Dilution Factor: 1		Analysis Time...: 02:09		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0003

TOTAL Metals

Lot-Sample #...: F2E080406-021

Matrix.....: WATER

Date Sampled...: 05/04/12 10:40 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2131080						
Uranium	76.4	1	ug/L	SW846 6020A	05/10-05/16/12	MTE811AC
		Dilution Factor: 1		Analysis Time...: 02:15		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0003

TOTAL Metals

Lot-Sample #...: F2E080406-022

Matrix.....: WATER

Date Sampled...: 05/04/12 11:30 Date Received...: 05/07/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131080						
Uranium	80.4	1	ug/L	SW846 6020A	05/10-05/16/12	MTE821AC
		Dilution Factor: 1		Analysis Time...: 03:02		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2E080406

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F2E100000-079 Prep Batch #... : 2131079						
Uranium	ND	1	ug/L	SW846 6020A	05/10-05/15/12	MTG1J1AA
Dilution Factor: 1						
Analysis Time...: 22:41						

MB Lot-Sample #: F2E100000-080 Prep Batch #... : 2131080						
Uranium	ND	1	ug/L	SW846 6020A	05/10-05/16/12	MTG1N1AA
Dilution Factor: 1						
Analysis Time...: 01:28						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E080406

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------	----------------------------	---------------	---------------------------------------	---------------------

LCS Lot-Sample#: F2E100000-079 Prep Batch #...: 2131079

Uranium	95	(80 - 120)	SW846 6020A	05/10-05/15/12	MTG1J1AC
		Dilution Factor: 1		Analysis Time..: 22:48	

LCS Lot-Sample#: F2E100000-080 Prep Batch #...: 2131080

Uranium	92	(80 - 120)	SW846 6020A	05/10-05/16/12	MTG1N1AC
		Dilution Factor: 1		Analysis Time..: 01:35	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E080406

Matrix.....: WATER

Date Sampled...: 05/04/12 10:40 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>RPD</u>	<u>RECOVERY</u>	<u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>WORK</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	<u>RPD</u>	<u>LIMITS</u>				<u>ANALYSIS DATE</u>	<u>ORDER #</u>

MS Lot-Sample #: F2E080406-010 Prep Batch #...: 2131079

Uranium	96	(80 - 120)			SW846 6020A			05/10-05/16/12	MTE711AE
	97	(80 - 120)	0.38	(0-20)	SW846 6020A			05/10-05/16/12	MTE711AF

Dilution Factor: 1

Analysis Time...: 00:21

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E080406

Matrix.....: WATER

Date Sampled...: 05/04/12 10:40 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
------------------	-----------------------------------	----------------------------------	--------------------------	-----------------------------	---------------	---	-------------------------------

MS Lot-Sample #: F2E080406-021 Prep Batch #...: 2131080

Uranium	94	(80 - 120)			SW846 6020A	05/10-05/16/12	MTE811AE
	98	(80 - 120)	3.5	(0-20)	SW846 6020A	05/10-05/16/12	MTE811AF

Dilution Factor: 1

Analysis Time...: 02:42

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0003

Radiochemistry

Lab Sample ID: F2E080406-001
Work Order: MTE67
Matrix: WATER

Date Collected: 05/03/12 0935
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 85
Uranium 234	18.3		1.9	0.1	0.07	05/09/12	05/14/12
Uranium 235/236	0.99		0.29	0.10	0.05	05/09/12	05/14/12
Uranium 238	17.6		1.8	0.1	0.04	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0003

Radiochemistry

Lab Sample ID: F2E080406-002
Work Order: MTE7N
Matrix: WATER

Date Collected: 05/03/12 1035
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 75
Uranium 234	21.7		2.2	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	0.96		0.30	0.10	0.06	05/09/12	05/14/12
Uranium 238	22.1		2.2	0.1	0.09	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0003

Radiochemistry

Lab Sample ID: F2E080406-003
 Work Order: MTE7P
 Matrix: WATER

Date Collected: 05/03/12 1145
 Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 82
Uranium 234	0.081		0.073	0.100	0.044	05/09/12	05/14/12
Uranium 235/236	0.056	U	0.071	0.100	0.092	05/09/12	05/14/12
Uranium 238	0.122		0.093	0.100	0.086	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0003

Radiochemistry

Lab Sample ID: F2E080406-004
Work Order: MTE7Q
Matrix: WATER

Date Collected: 05/03/12 1400
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 84
Uranium 234	6.97		0.89	0.10	0.10	05/09/12	05/14/12
Uranium 235/236	0.20		0.13	0.10	0.05	05/09/12	05/14/12
Uranium 238	6.72		0.87	0.10	0.09	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUP-01

Radiochemistry

Lab Sample ID: F2E080406-005
Work Order: MTE7R
Matrix: WATER

Date Collected: 05/03/12 0000
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 46
Uranium 234	87.9		8.0	0.1	0.2	05/09/12	05/14/12
Uranium 235/236	4.51		0.88	0.10	0.1	05/09/12	05/14/12
Uranium 238	89.5		8.2	0.1	0.2	05/09/12	05/14/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0003

Radiochemistry

Lab Sample ID: F2E080406-006
Work Order: MTE7T
Matrix: WATER

Date Collected: 05/03/12 1515
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 49
Uranium 234	86.2		7.9	0.1	0.2	05/09/12	05/14/12
Uranium 235/236	4.09		0.84	0.10	0.19	05/09/12	05/14/12
Uranium 238	87.8		8.0	0.1	0.2	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0003

Radiochemistry

Lab Sample ID: F2E080406-007
 Work Order: MTE7V
 Matrix: WATER

Date Collected: 05/03/12 1605
 Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 2130026		Yld % 88
Uranium 234	25.3		2.5	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	0.99		0.29	0.10	0.05	05/09/12	05/14/12
Uranium 238	20.4		2.0	0.1	0.04	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0003

Radiochemistry

Lab Sample ID: F2E080406-008
Work Order: MTE7X
Matrix: WATER

Date Collected: 05/04/12 0840
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 76
Uranium 234	12.8		1.4	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	0.28		0.16	0.10	0.1	05/09/12	05/14/12
Uranium 238	3.54		0.58	0.10	0.11	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260003

Radiochemistry

Lab Sample ID: F2E080406-009

Date Collected: 05/04/12 0935

Work Order: MTE70

Date Received: 05/07/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 66
Uranium 234	52.7		4.9	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	2.36		0.54	0.10	0.16	05/09/12	05/14/12
Uranium 238	54.4		5.1	0.1	0.1	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0003

Radiochemistry

Lab Sample ID: F2E080406-010
Work Order: MTE71
Matrix: WATER

Date Collected: 05/04/12 1040
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 75
Uranium 234	29.2		2.9	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	1.28		0.36	0.10	0.06	05/09/12	05/14/12
Uranium 238	28.8		2.8	0.1	0.1	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0003

Radiochemistry

Lab Sample ID: F2E080406-011
Work Order: MTE72
Matrix: WATER

Date Collected: 05/04/12 1130
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 75
Uranium 234	27.7		2.7	0.1	0.09	05/09/12	05/14/12
Uranium 235/236	1.05		0.32	0.10	0.06	05/09/12	05/14/12
Uranium 238	28.7		2.8	0.1	0.09	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0003

Radiochemistry

Lab Sample ID: F2E080406-012
Work Order: MTE8C
Matrix: WATER

Date Collected: 05/04/12 0935
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 81
Uranium 234	18.7		1.9	0.1	0.09	05/09/12	05/14/12
Uranium 235/236	0.91		0.29	0.10	0.06	05/09/12	05/14/12
Uranium 238	19.4		2.0	0.1	0.09	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0003

Radiochemistry

Lab Sample ID: F2E080406-013
Work Order: MTE8G
Matrix: WATER

Date Collected: 05/04/12 1035
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 89
Uranium 234	19.0		1.9	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	1.0		0.29	0.10	0.05	05/09/12	05/14/12
Uranium 238	19.1		2.0	0.1	0.04	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0003

Radiochemistry

Lab Sample ID: F2E080406-014
Work Order: MTE8J
Matrix: WATER

Date Collected: 05/04/12 1145
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 89
Uranium 234	0.103		0.085	0.100	0.084	05/09/12	05/14/12
Uranium 235/236	-0.0049	U	0.0098	0.100	0.089	05/09/12	05/14/12
Uranium 238	0.075		0.071	0.100	0.072	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U F2E080406
Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0003

Radiochemistry

Lab Sample ID: F2E080406-015
Work Order: MTE8K
Matrix: WATER

Date Collected: 05/04/12 1400
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 77
Uranium 234	7.37		0.95	0.10	0.11	05/09/12	05/14/12
Uranium 235/236	0.26		0.15	0.10	0.06	05/09/12	05/14/12
Uranium 238	7.35		0.95	0.10	0.08	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUP-01

Radiochemistry

Lab Sample ID: F2E080406-016
Work Order: MTE8M
Matrix: WATER

Date Collected: 05/04/12 0000
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 55
Uranium 234	80.6		7.3	0.1	0.2	05/09/12	05/14/12
Uranium 235/236	3.63		0.73	0.10	0.14	05/09/12	05/14/12
Uranium 238	77.9		7.1	0.1	0.07	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0003

Radiochemistry

Lab Sample ID: F2E080406-017

Date Collected: 05/04/12 1515

Work Order: MTE8P

Date Received: 05/07/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130026	Yld % 49
Uranium 234	90.2		8.3	0.1	0.2	05/09/12	05/14/12
Uranium 235/236	4.37		0.89	0.10	0.10	05/09/12	05/14/12
Uranium 238	89.6		8.2	0.1	0.2	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0003

Radiochemistry

Lab Sample ID: F2E080406-018
Work Order: MTE8R
Matrix: WATER

Date Collected: 05/04/12 1605
Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130027	Yld % 71
Uranium 234	27.8		2.7	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	1.15		0.34	0.10	0.06	05/09/12	05/14/12
Uranium 238	21.1		2.2	0.1	0.05	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0003

Radiochemistry

Lab Sample ID: F2E080406-019
 Work Order: MTE8V
 Matrix: WATER

Date Collected: 05/04/12 0840
 Date Received: 05/07/12 0920

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130027	Yld % 77
Uranium 234	12.3		1.4	0.1	0.09	05/09/12	05/14/12
Uranium 235/236	0.18		0.12	0.10	0.06	05/09/12	05/14/12
Uranium 238	3.51		0.58	0.10	0.05	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260003

Radiochemistry

Lab Sample ID: F2E080406-020

Date Collected: 05/04/12 0935

Work Order: MTE80

Date Received: 05/07/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130027	Yld % 61
Uranium 234	54.5		5.1	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	2.62		0.60	0.10	0.13	05/09/12	05/14/12
Uranium 238	55.7		5.2	0.1	0.1	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0003

Radiochemistry

Lab Sample ID: F2E080406-021

Date Collected: 05/04/12 1040

Work Order: MTE81

Date Received: 05/07/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130027	Yld % 70
Uranium 234	31.0		3.0	0.1	0.1	05/09/12	05/14/12
Uranium 235/236	1.52		0.41	0.10	0.13	05/09/12	05/14/12
Uranium 238	29.9		2.9	0.1	0.1	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0003

Radiochemistry

Lab Sample ID: F2E080406-022

Date Collected: 05/04/12 1130

Work Order: MTE82

Date Received: 05/07/12 0920

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2130027	Yld % 83
Uranium 234	27.2		2.7	0.1	0.09	05/09/12	05/14/12
Uranium 235/236	1.23		0.34	0.10	0.06	05/09/12	05/14/12
Uranium 238	25.9		2.6	0.1	0.05	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E080406

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F2E080406
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2130026	Yld %	90 F2E090000-026B
Uranium 234	-0.0019	U	0.0039	0.100	0.035	05/09/12	05/14/12
Uranium 235/236	-0.0048	U	0.0069	0.100	0.051	05/09/12	05/14/12
Uranium 238	0.021	U	0.027	0.100	0.035	05/09/12	05/14/12
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2130027	Yld %	103 F2E090000-027B
Uranium 234	0.015	U	0.029	0.100	0.052	05/09/12	05/14/12
Uranium 235/236	-0.0064	U	0.0074	0.100	0.050	05/09/12	05/14/12
Uranium 238	0.007	U	0.020	0.100	0.044	05/09/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F2E080406

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2E090000-026C
Uranium 234	3.27	3.06	0.40	0.06	90	94	(82 - 118)
Uranium 238	3.39	3.45	0.43	0.06	90	102	(80 - 121)
Batch #:	2130026			Analysis Date:	05/14/12		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2E090000-027C
Uranium 234	3.27	3.31	0.42	0.03	100	101	(82 - 118)
Uranium 238	3.39	3.50	0.43	0.04	100	103	(80 - 121)
Batch #:	2130027			Analysis Date:	05/14/12		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F2E080406
 Matrix: WATER

Date Sampled: 05/04/12 1040
 Date Received: 05/07/12 0920

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID		
							% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD				F2E080406-010
Uranium 234	6.53	35.7	3.4	77	29.2	2.9	75	100	(65 - 146)
Spk2	6.53	37.8	3.6	74	29.2	2.9	75	131	(65 - 146)
						Precision:	6	%RPD	
Uranium 238	6.78	34.9	3.3	77	28.8	2.8	75	91	(68 - 143)
Spk2	6.78	37.0	3.5	74	28.8	2.8	75	121	(68 - 143)
						Precision:	6	%RPD	
Batch #: 2130026			Analysis date: 05/14/12						
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD				F2E080406-021
Uranium 234	6.53	37.6	3.6	69	31.0	3.0	70	100	(65 - 146)
Spk2	6.53	36.0	3.4	73	31.0	3.0	70	76	(65 - 146)
						Precision:	4	%RPD	
Uranium 238	6.78	36.4	3.5	69	29.9	2.9	70	96	(68 - 143)
Spk2	6.78	36.5	3.5	73	29.9	2.9	70	97	(68 - 143)
						Precision:	0.3	%RPD	
Batch #: 2130027			Analysis date: 05/14/12						

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

F2E080406**CLIENT ANALYSIS SUMMARY**Storage Loc: **R72-73,METS**

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2012-05-07

Project: 140415

Guterl Steel

Analytical Due Date: 2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-05-22

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
1	A04DMW710D0003			2012-05-03 / 935	MTE67	WATER
<u>SAMPLE COMMENTS:</u>						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
PROT: A	WRK LOC	06				
PROT: A	WRK LOC	06				
PROT: C	WRK LOC	06				
<hr/>						
2	A04DMW710DD0003			2012-05-03 / 1035	MTE7N	WATER
<u>SAMPLE COMMENTS:</u>						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
PROT: A	WRK LOC	06				
PROT: A	WRK LOC	06				
PROT: C	WRK LOC	06				
<hr/>						
3	A04DMW713D0003			2012-05-03 / 1145	MTE7P	WATER
<u>SAMPLE COMMENTS:</u>						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
PROT: A	WRK LOC	06				
PROT: A	WRK LOC	06				
PROT: C	WRK LOC	06				
<hr/>						
4	A04DMW708DD0003			2012-05-03 / 1400	MTE7Q	WATER
<u>SAMPLE COMMENTS:</u>						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
PROT: A	WRK LOC	06				
PROT: A	WRK LOC	06				
PROT: C	WRK LOC	06				
<hr/>						
5	DUP-01			2012-05-03 / 0	MTE7R	WATER
<u>SAMPLE COMMENTS:</u>						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
PROT: A	WRK LOC	06				
PROT: A	WRK LOC	06				
PROT: C	WRK LOC	06				
<hr/>						
6	A04BMW605D0003			2012-05-03 / 1515	MTE7T	WATER
<u>SAMPLE COMMENTS:</u>						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET
PROT: A	WRK LOC	06				
PROT: A	WRK LOC	06				
PROT: C	WRK LOC	06				

F2E080406**CLIENT ANALYSIS SUMMARY**Storage Loc: **R72-73,MET**

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2012-05-07

Project: 140415

Guterl Steel

Analytical Due Date: 2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-05-22

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
7	A04BMW704DD0003			2012-05-03 / 1605	MTE7V	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
8	A04BMW707DD0003			2012-05-04 / 840	MTE7X	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
9	A04BMW260003			2012-05-04 / 935	MTE70	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
10	A04DMW604D0003			2012-05-04 / 1040	MTE71	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
D UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
D XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
S UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
S XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06
<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
11	A04DMW709DD0003			2012-05-04 / 1130	MTE72	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
-----------------	-------------------------	----------------	----------------------	--------------------------	------------------	----------

F2E080406**CLIENT ANALYSIS SUMMARY**

Storage Loc:

R72-73

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2012-05-07

Project: 140415

Guterl Steel

Analytical Due Date:

2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2012-05-22

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D

Expanded Deliverable

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

12 A04DMW710D0003

2012-05-04 / 935

MTE8C

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER !

13 A04DMW710DD0003

2012-05-04 / 1035

MTE8G

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER !

14 A04DMW713D0003

2012-05-04 / 1145

MTE8J

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER !

15 A04DMW708DD0003

2012-05-04 / 1400

MTE8K

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER !

16 DUP-01

2012-05-04 / 0

MTE8M

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER !

17 A04BMW605D0003

2012-05-04 / 1515

MTE8P

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER !

F2E080406**CLIENT ANALYSIS SUMMARY**

Storage Loc:

R72-73

Project Manager: LMF

Quote #: 89251

SDG:

Date Received:

2012-05-07

Project: 140415

Guterl Steel

Analytical Due Date:

2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date:

2012-05-22

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D

Expanded Deliverable

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

18 A04BMW704DD0003

2012-05-04/ 1605

MTE8R

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER |

19 A04BMW707DD0003

2012-05-04/ 840

MTE8V

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER |

20 A04BMW260003

2012-05-04/ 935

MTE80

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER |

21 A04DMW604D0003

2012-05-04/ 1040

MTE81

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
D UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06
S UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE IDSite IDClient MatrixDATE/TIME SAMPLEDWORKORDER |

22 A04DMW709DD0003

2012-05-04/ 1130

MTE82

WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

Chain of Custody Record

TAL-412 (1007)

Client: **SHAW ENVIRONMENTAL : INFRASTRUCTURE** Project Manager: **KARL VAN KEUREN PG, PMP** Date: **05/4/2012** Chain of Custody Number: **COC No. 18**

Address: **5050 SECTION AVENUE** Telephone Number (Area Code)/Fax Number: **(513) 782-4745 / (513) 782-4807** Lab Number: **05/4/2012** Page **1** of **2**

City: **CINCINNATI** State: **OH** Zip Code: **45212** Site Contact: **KEVIN CROWIN** Lab Contact: **LYNN FUSSNER** Analysis (Attach list if more space is needed)

Project Name and Location (State): **FORMER GUTER SPECIALTY STEEL FABRAP** Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives								TOTAL U (Filtered)	TOTAL U (Unfiltered)	ISOTOPIC U	ISOTOPIC U (Filtered)	Special Instructions/ Conditions of Receipt
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH							
A 04 D MW 710D 0003	05/3/12	0935		X					X						X	X	X	X	2x LP, 2x 250P
A 04 D MW 710DD 0003		1035																	
A 04 D MW 713D 0003		1145																	
A 04 D MW 708DD 0003		1400																	
PUP-01																			
A 04 B MW 605D 0003		1515																	
A 04 B MW 704DD 0003		1605																	
A 04 B MW 707DD 0003	05/4/12	0840																	
A 04 B MW 26 0003		0935																	
A 04 D MW 604D 0003		1040																	6x LP, 6x 250P
A 04 D MW 604D 0003 MS																			
A 04 D MW 604D 0003 MSD																			

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other **STANDARD** QC Requirements (Specify)

Comments	Date	Time	Date	Time	Date	Time
	5/4/12	11:55	5-4-12	11:55	5/4/12	11:55
	5-4-12	12:30	5/4/12	12:30	5/4/12	12:30
	5/4/12	1700			5-7-12	0920

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): P2E080406CUR Form #: 2 8 1**CONDITION UPON RECEIPT FORM**Client: ShawQuote No: 89251COC/RFA No: 191675Initiated By: bnDate: 5/17/12Time: 0920**Shipping Information**Shipper: FedEx

UPS

DHL

Courier

Client

Other: _____

Multiple Packages: (Y) N

Shipping # (s):*

Sample Temperature (s):**

1. 4485 0261 0812

6. _____

1. Ambient

6. _____

2. ↓ 0823

7. _____

2. ↓

7. _____

3. _____

8. _____

3. _____

8. _____

4. _____

9. _____

4. _____

9. _____

5. _____

10. _____

5. _____

10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>(Y)</u> N	Are there custody seals present on the cooler?	8. Y <u>(N)</u>	Are there custody seals present on bottles?
2. Y <u>(N)</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>(N/A)</u>	Do custody seals on bottles appear to be tampered with?
3. <u>(X)</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>(Y)</u> N N/A	Was sample received with proper pH? (if not, make note below)
4. <u>(Y)</u> N	Sample received with Chain of Custody?	11. Y N <u>(N/A)</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>(Y)</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>(Y)</u> N	Sample received in proper containers?
6. Y <u>(N)</u>	Was sample received broken?	13. Y N <u>(N/A)</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>(Y)</u> N	Is sample volume sufficient for analysis?	14. Y N <u>(N/A)</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.**Notes:****Corrective Action:**☐ Client Contact Name: _____

Informed by: _____

☐ Sample(s) processed "as is"☐ Sample(s) on hold until _____

If released, notify: _____

Project Management Review _____

Date: 5/19/12

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

P2E080406

ADMIN-0004 rev13, REVISED 05/27/11 \\slsvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin-0004 CUR.doc

63 of 63


TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 140415

Guterl Steel

Lot #: F2E090426


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

May 23, 2012

Case Narrative
LOT NUMBER: F2E090426-

This report contains the analytical results for the 10 samples received under chain of custody by TestAmerica in St. Louis on May 8, 2012. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.2 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

The following clean-up methods for Organic analyses may have been used on samples in this data set. Specific methods employed are documented on the batch extraction logs.

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup
Method 3665A: Sulfuric Acid/Permanganate Cleanup

Mercury in Liquid Waste (Manual Cold Vapor) (SW846 7470)

Additional Potassium Permanganate in the amount of 4.5mL was added to all samples and QC due to the permanganate color not persisting for 15 min.

Affected Samples:

F2E090426 (1): GUTERL STEEL SEEP (1)
F2E090426 (2): GUTERL STEEL SEEP (1) (F)
F2E090426 (3): GUTERL STEEL SEEP (2)
F2E090426 (4): GUTERL STEEL SEEP (2) (F)
F2E090426 (5): GUTERL STEEL SEEP (3)
F2E090426 (6): GUTERL STEEL SEEP (3) (F)
F2E090426 (7): GUTERL SURFACE (1)
F2E090426 (8): GUTERL SURFACE (1) (F)
F2E090426 (9): GUTERL SURFACE (2)
F2E090426 (10): GUTERL SURFACE (2) (F)

Inductively Coupled Plasma (ICP) Metals (SW-846 6010)

The LLC recovery for thallium is outside the upper QC limit, indicating a potential positive bias for that analyte. This analyte was non-detect, indicating that the samples were not affected by this excursion. The original sample results are provided.

The MS (MSD) recovery for calcium is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery. No further action is required.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted for the dilution.

Affected Samples:

F2E090426 (1): GUTERL STEEL SEEP (1)
F2E090426 (2): GUTERL STEEL SEEP (1) (F)
F2E090426 (3): GUTERL STEEL SEEP (2)
F2E090426 (4): GUTERL STEEL SEEP (2) (F)
F2E090426 (5): GUTERL STEEL SEEP (3)
F2E090426 (6): GUTERL STEEL SEEP (3) (F)
F2E090426 (7): GUTERL SURFACE (1)
F2E090426 (8): GUTERL SURFACE (1) (F)
F2E090426 (9): GUTERL SURFACE (2)
F2E090426 (10): GUTERL SURFACE (2) (F)

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There was insufficient sample to perform a sample duplicate. The sample aliquot was also reduced from 1000mL to 500mL.

Affected Samples:

F2E090426 (1): GUTERL STEEL SEEP (1)
F2E090426 (2): GUTERL STEEL SEEP (1) (F)
F2E090426 (3): GUTERL STEEL SEEP (2)
F2E090426 (4): GUTERL STEEL SEEP (2) (F)
F2E090426 (5): GUTERL STEEL SEEP (3)
F2E090426 (6): GUTERL STEEL SEEP (3) (F)
F2E090426 (7): GUTERL SURFACE (1)
F2E090426 (8): GUTERL SURFACE (1) (F)
F2E090426 (9): GUTERL SURFACE (2)
F2E090426 (10): GUTERL SURFACE (2) (F)

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY**F2E090426**

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
ICP-MS (6020A)	SW846 6020A	
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010C	

References:

- EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F2E090426**

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
MTF4W	001	GUTERL	STEEL SEEP (1)	05/07/12	09:05
MTF40	002	GUTERL	STEEL SEEP (1) (F)	05/07/12	09:05
MTF41	003	GUTERL	STEEL SEEP (2)	05/07/12	09:15
MTF43	004	GUTERL	STEEL SEEP (2) (F)	05/07/12	09:15
MTF44	005	GUTERL	STEEL SEEP (3)	05/07/12	09:30
MTF46	006	GUTERL	STEEL SEEP (3) (F)	05/07/12	09:30
MTF47	007	GUTERL	SURFACE (1)	05/07/12	09:45
MTF49	008	GUTERL	SURFACE (1) (F)	05/07/12	09:45
MTF5A	009	GUTERL	SURFACE (2)	05/07/12	09:55
MTF5C	010	GUTERL	SURFACE (2) (F)	05/07/12	09:55

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (1)

TOTAL Metals

Lot-Sample #...: F2E090426-001

Matrix.....: WATER

Date Sampled...: 05/07/12 09:05 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AE
		Dilution Factor: 1		Analysis Time...: 10:09		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AF
		Dilution Factor: 1		Analysis Time...: 10:09		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AD
		Dilution Factor: 1		Analysis Time...: 10:09		
Barium	53.7	50	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AG
		Dilution Factor: 1		Analysis Time...: 10:09		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AH
		Dilution Factor: 1		Analysis Time...: 10:09		
Calcium	121000 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AJ
		Dilution Factor: 10		Analysis Time...: 12:50		
Cadmium	1.3 J	5	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AK
		Dilution Factor: 1		Analysis Time...: 10:09		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AL
		Dilution Factor: 1		Analysis Time...: 10:09		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AM
		Dilution Factor: 1		Analysis Time...: 10:09		
Copper	232	25	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AN
		Dilution Factor: 1		Analysis Time...: 10:09		
Iron	51.9 J	100	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AP
		Dilution Factor: 1		Analysis Time...: 10:09		
Magnesium	32000	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AQ
		Dilution Factor: 1		Analysis Time...: 10:09		
Manganese	19.2	15	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AR
		Dilution Factor: 1		Analysis Time...: 10:09		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (1)

TOTAL Metals

Lot-Sample #...: F2E090426-001

Matrix.....: WATER

		REPORTING			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Sodium	268000	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AT
		Dilution Factor: 10		Analysis Time...: 12:50		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AU
		Dilution Factor: 1		Analysis Time...: 10:09		
Lead	1.9 J	10	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AV
		Dilution Factor: 1		Analysis Time...: 10:09		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AW
		Dilution Factor: 1		Analysis Time...: 10:09		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1AX
		Dilution Factor: 1		Analysis Time...: 10:09		
Strontium	504	50	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1A0
		Dilution Factor: 10		Analysis Time...: 12:50		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1A1
		Dilution Factor: 1		Analysis Time...: 10:09		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1A2
		Dilution Factor: 1		Analysis Time...: 10:09		
Zinc	85.8	20	ug/L	SW846 6010C	05/10-05/18/12	MTF4W1A3
		Dilution Factor: 1		Analysis Time...: 10:09		
Prep Batch #...: 2131080						
Uranium	5.3	1	ug/L	SW846 6020A	05/10-05/16/12	MTF4W1A4
		Dilution Factor: 1		Analysis Time...: 03:09		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF4W1AC
		Dilution Factor: 1		Analysis Time...: 13:21		

NOTE(S) :

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (1) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-002

Matrix.....: WATER

Date Sampled...: 05/07/12 09:05 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF401AL
		Dilution Factor: 1		Analysis Time...: 10:23		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF401AM
		Dilution Factor: 1		Analysis Time...: 10:23		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF401AK
		Dilution Factor: 1		Analysis Time...: 10:23		
Barium	54.3	50	ug/L	SW846 6010C	05/10-05/18/12	MTF401AN
		Dilution Factor: 1		Analysis Time...: 10:23		
Beryllium	1.2 J	5	ug/L	SW846 6010C	05/10-05/18/12	MTF401AP
		Dilution Factor: 1		Analysis Time...: 10:23		
Calcium	116000 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF401AQ
		Dilution Factor: 10		Analysis Time...: 13:05		
Cadmium	1.1 J	5	ug/L	SW846 6010C	05/10-05/18/12	MTF401AR
		Dilution Factor: 1		Analysis Time...: 10:23		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF401AT
		Dilution Factor: 1		Analysis Time...: 10:23		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF401AU
		Dilution Factor: 1		Analysis Time...: 10:23		
Copper	195	25	ug/L	SW846 6010C	05/10-05/18/12	MTF401AV
		Dilution Factor: 1		Analysis Time...: 10:23		
Iron	28.5 J	100	ug/L	SW846 6010C	05/10-05/18/12	MTF401AW
		Dilution Factor: 1		Analysis Time...: 10:23		
Magnesium	31600	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF401AX
		Dilution Factor: 1		Analysis Time...: 10:23		
Manganese	13.2 J	15	ug/L	SW846 6010C	05/10-05/18/12	MTF401AO
		Dilution Factor: 1		Analysis Time...: 10:23		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (1) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-002

Matrix.....: WATER

		REPORTING			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Sodium	265000	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF401A1
		Dilution Factor: 10		Analysis Time...: 13:05		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF401A2
		Dilution Factor: 1		Analysis Time...: 10:23		
Lead	1.8 J	10	ug/L	SW846 6010C	05/10-05/18/12	MTF401A3
		Dilution Factor: 1		Analysis Time...: 10:23		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF401A4
		Dilution Factor: 1		Analysis Time...: 10:23		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF401A5
		Dilution Factor: 1		Analysis Time...: 10:23		
Strontium	497	50	ug/L	SW846 6010C	05/10-05/18/12	MTF401AA
		Dilution Factor: 10		Analysis Time...: 13:05		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF401AC
		Dilution Factor: 1		Analysis Time...: 10:23		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF401AD
		Dilution Factor: 1		Analysis Time...: 10:23		
Zinc	74.4	20	ug/L	SW846 6010C	05/10-05/18/12	MTF401AE
		Dilution Factor: 1		Analysis Time...: 10:23		
Prep Batch #...: 2131080						
Uranium	5.3	1	ug/L	SW846 6020A	05/10-05/16/12	MTF401AF
		Dilution Factor: 1		Analysis Time...: 03:16		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF401AJ
		Dilution Factor: 1		Analysis Time...: 13:23		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (2)

TOTAL Metals

Lot-Sample #...: F2E090426-003

Matrix.....: WATER

Date Sampled...: 05/07/12 09:15 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF411AL
		Dilution Factor: 1		Analysis Time...: 10:31		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF411AM
		Dilution Factor: 1		Analysis Time...: 10:31		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF411AK
		Dilution Factor: 1		Analysis Time...: 10:31		
Barium	38.3 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF411AN
		Dilution Factor: 1		Analysis Time...: 10:31		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF411AP
		Dilution Factor: 1		Analysis Time...: 10:31		
Calcium	86600 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF411AQ
		Dilution Factor: 10		Analysis Time...: 13:12		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF411AR
		Dilution Factor: 1		Analysis Time...: 10:31		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF411AT
		Dilution Factor: 1		Analysis Time...: 10:31		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF411AU
		Dilution Factor: 1		Analysis Time...: 10:31		
Copper	239	25	ug/L	SW846 6010C	05/10-05/18/12	MTF411AV
		Dilution Factor: 1		Analysis Time...: 10:31		
Iron	ND	100	ug/L	SW846 6010C	05/10-05/18/12	MTF411AW
		Dilution Factor: 1		Analysis Time...: 10:31		
Magnesium	23000	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF411AX
		Dilution Factor: 1		Analysis Time...: 10:31		
Manganese	18.0	15	ug/L	SW846 6010C	05/10-05/18/12	MTF411AO
		Dilution Factor: 1		Analysis Time...: 10:31		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (2)

TOTAL Metals

Lot-Sample #...: F2E090426-003

Matrix.....: WATER

REPORTING				PREPARATION-	WORK	
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Sodium	154000	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF411A1
		Dilution Factor: 10		Analysis Time...: 13:12		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF411A2
		Dilution Factor: 1		Analysis Time...: 10:31		
Lead	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF411A3
		Dilution Factor: 1		Analysis Time...: 10:31		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF411A4
		Dilution Factor: 1		Analysis Time...: 10:31		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF411A5
		Dilution Factor: 1		Analysis Time...: 10:31		
Strontium	296	50	ug/L	SW846 6010C	05/10-05/18/12	MTF411AA
		Dilution Factor: 10		Analysis Time...: 13:12		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF411AC
		Dilution Factor: 1		Analysis Time...: 10:31		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF411AD
		Dilution Factor: 1		Analysis Time...: 10:31		
Zinc	81.1	20	ug/L	SW846 6010C	05/10-05/18/12	MTF411AE
		Dilution Factor: 1		Analysis Time...: 10:31		
Prep Batch #...: 2131080						
Uranium	5.8	1	ug/L	SW846 6020A	05/10-05/16/12	MTF411AF
		Dilution Factor: 1		Analysis Time...: 03:22		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF411AJ
		Dilution Factor: 1		Analysis Time...: 13:29		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (2) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-004

Matrix.....: WATER

Date Sampled...: 05/07/12 09:15 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF431AL
		Dilution Factor: 1		Analysis Time...: 10:34		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF431AM
		Dilution Factor: 1		Analysis Time...: 10:34		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF431AK
		Dilution Factor: 1		Analysis Time...: 10:34		
Barium	38.1 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF431AN
		Dilution Factor: 1		Analysis Time...: 10:34		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF431AP
		Dilution Factor: 1		Analysis Time...: 10:34		
Calcium	87300 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF431AQ
		Dilution Factor: 10		Analysis Time...: 13:15		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF431AR
		Dilution Factor: 1		Analysis Time...: 10:34		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF431AT
		Dilution Factor: 1		Analysis Time...: 10:34		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF431AU
		Dilution Factor: 1		Analysis Time...: 10:34		
Copper	206	25	ug/L	SW846 6010C	05/10-05/18/12	MTF431AV
		Dilution Factor: 1		Analysis Time...: 10:34		
Iron	ND	100	ug/L	SW846 6010C	05/10-05/18/12	MTF431AW
		Dilution Factor: 1		Analysis Time...: 10:34		
Magnesium	22700	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF431AX
		Dilution Factor: 1		Analysis Time...: 10:34		
Manganese	18.4	15	ug/L	SW846 6010C	05/10-05/18/12	MTF431A0
		Dilution Factor: 1		Analysis Time...: 10:34		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (2) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-004

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Sodium	156000	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF431A1
		Dilution Factor: 10		Analysis Time...: 13:15		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF431A2
		Dilution Factor: 1		Analysis Time...: 10:34		
Lead	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF431A3
		Dilution Factor: 1		Analysis Time...: 10:34		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF431A4
		Dilution Factor: 1		Analysis Time...: 10:34		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF431A5
		Dilution Factor: 1		Analysis Time...: 10:34		
Strontium	303	50	ug/L	SW846 6010C	05/10-05/18/12	MTF431AA
		Dilution Factor: 10		Analysis Time...: 13:15		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF431AC
		Dilution Factor: 1		Analysis Time...: 10:34		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF431AD
		Dilution Factor: 1		Analysis Time...: 10:34		
Zinc	78.4	20	ug/L	SW846 6010C	05/10-05/18/12	MTF431AE
		Dilution Factor: 1		Analysis Time...: 10:34		
Prep Batch #...: 2131080						
Uranium	5.9	1	ug/L	SW846 6020A	05/10-05/16/12	MTF431AF
		Dilution Factor: 1		Analysis Time...: 03:29		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF431AJ
		Dilution Factor: 1		Analysis Time...: 13:30		

NOTE(S):

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (3)

TOTAL Metals

Lot-Sample #...: F2E090426-005

Matrix.....: WATER

Date Sampled...: 05/07/12 09:30 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF441AL
		Dilution Factor: 1		Analysis Time...: 10:45		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF441AM
		Dilution Factor: 1		Analysis Time...: 10:45		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF441AK
		Dilution Factor: 1		Analysis Time...: 10:45		
Barium	31.7 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF441AN
		Dilution Factor: 1		Analysis Time...: 10:45		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF441AP
		Dilution Factor: 1		Analysis Time...: 10:45		
Calcium	103000 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF441AQ
		Dilution Factor: 10		Analysis Time...: 13:19		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF441AR
		Dilution Factor: 1		Analysis Time...: 10:45		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF441AT
		Dilution Factor: 1		Analysis Time...: 10:45		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF441AU
		Dilution Factor: 1		Analysis Time...: 10:45		
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTF441AV
		Dilution Factor: 1		Analysis Time...: 10:45		
Iron	ND	100	ug/L	SW846 6010C	05/10-05/18/12	MTF441AW
		Dilution Factor: 1		Analysis Time...: 10:45		
Magnesium	27700	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF441AX
		Dilution Factor: 1		Analysis Time...: 10:45		
Manganese	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF441A0
		Dilution Factor: 1		Analysis Time...: 10:45		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (3)

TOTAL Metals

Lot-Sample #...: F2E090426-005

Matrix.....: WATER

		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD		ANALYSIS DATE	ORDER #
Sodium	95400	1000	ug/L	SW846 6010C		05/10-05/18/12	MTF441A1
		Dilution Factor: 1		Analysis Time...: 10:45			
Nickel	ND	40	ug/L	SW846 6010C		05/10-05/18/12	MTF441A2
		Dilution Factor: 1		Analysis Time...: 10:45			
Lead	1.7 J	10	ug/L	SW846 6010C		05/10-05/18/12	MTF441A3
		Dilution Factor: 1		Analysis Time...: 10:45			
Antimony	ND	10	ug/L	SW846 6010C		05/10-05/18/12	MTF441A4
		Dilution Factor: 1		Analysis Time...: 10:45			
Selenium	ND	15	ug/L	SW846 6010C		05/10-05/18/12	MTF441A5
		Dilution Factor: 1		Analysis Time...: 10:45			
Strontium	300	50	ug/L	SW846 6010C		05/10-05/18/12	MTF441AA
		Dilution Factor: 10		Analysis Time...: 13:19			
Thallium	ND	20	ug/L	SW846 6010C		05/10-05/18/12	MTF441AC
		Dilution Factor: 1		Analysis Time...: 10:45			
Vanadium	ND	50	ug/L	SW846 6010C		05/10-05/18/12	MTF441AD
		Dilution Factor: 1		Analysis Time...: 10:45			
Zinc	54.8	20	ug/L	SW846 6010C		05/10-05/18/12	MTF441AE
		Dilution Factor: 1		Analysis Time...: 10:45			
Prep Batch #...: 2131080							
Uranium	20.7	1	ug/L	SW846 6020A		05/10-05/16/12	MTF441AF
		Dilution Factor: 1		Analysis Time...: 03:36			
Prep Batch #...: 2137017							
Mercury	ND	0.2	ug/L	SW846 7470A		05/16/12	MTF441AJ
		Dilution Factor: 1		Analysis Time...: 13:32			

NOTE(S) :

J Estimated result, Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (3) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-006

Matrix.....: WATER

Date Sampled...: 05/07/12 09:30 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF461AL
		Dilution Factor: 1		Analysis Time...: 10:48		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF461AM
		Dilution Factor: 1		Analysis Time...: 10:48		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF461AK
		Dilution Factor: 1		Analysis Time...: 10:48		
Barium	31.8 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF461AN
		Dilution Factor: 1		Analysis Time...: 10:48		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF461AP
		Dilution Factor: 1		Analysis Time...: 10:48		
Calcium	102000 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF461AQ
		Dilution Factor: 10		Analysis Time...: 13:23		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF461AR
		Dilution Factor: 1		Analysis Time...: 10:48		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF461AT
		Dilution Factor: 1		Analysis Time...: 10:48		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF461AU
		Dilution Factor: 1		Analysis Time...: 10:48		
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTF461AV
		Dilution Factor: 1		Analysis Time...: 10:48		
Iron	ND	100	ug/L	SW846 6010C	05/10-05/18/12	MTF461AW
		Dilution Factor: 1		Analysis Time...: 10:48		
Magnesium	27700	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF461AX
		Dilution Factor: 1		Analysis Time...: 10:48		
Manganese	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF461A0
		Dilution Factor: 1		Analysis Time...: 10:48		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (3) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-006

Matrix.....: WATER

		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD		ANALYSIS DATE	ORDER #
Sodium	95100	1000	ug/L	SW846 6010C		05/10-05/18/12	MTF461A1
		Dilution Factor: 1		Analysis Time...: 10:48			
Nickel	ND	40	ug/L	SW846 6010C		05/10-05/18/12	MTF461A2
		Dilution Factor: 1		Analysis Time...: 10:48			
Lead	1.6 J	10	ug/L	SW846 6010C		05/10-05/18/12	MTF461A3
		Dilution Factor: 1		Analysis Time...: 10:48			
Antimony	ND	10	ug/L	SW846 6010C		05/10-05/18/12	MTF461A4
		Dilution Factor: 1		Analysis Time...: 10:48			
Selenium	ND	15	ug/L	SW846 6010C		05/10-05/18/12	MTF461A5
		Dilution Factor: 1		Analysis Time...: 10:48			
Strontium	299	50	ug/L	SW846 6010C		05/10-05/18/12	MTF461AA
		Dilution Factor: 10		Analysis Time...: 13:23			
Thallium	ND	20	ug/L	SW846 6010C		05/10-05/18/12	MTF461AC
		Dilution Factor: 1		Analysis Time...: 10:48			
Vanadium	ND	50	ug/L	SW846 6010C		05/10-05/18/12	MTF461AD
		Dilution Factor: 1		Analysis Time...: 10:48			
Zinc	56.7	20	ug/L	SW846 6010C		05/10-05/18/12	MTF461AE
		Dilution Factor: 1		Analysis Time...: 10:48			
Prep Batch #...: 2131080							
Uranium	20.8	1	ug/L	SW846 6020A		05/10-05/16/12	MTF461AF
		Dilution Factor: 1		Analysis Time...: 03:42			
Prep Batch #...: 2137017							
Mercury	ND	0.2	ug/L	SW846 7470A		05/16/12	MTF461AJ
		Dilution Factor: 1		Analysis Time...: 13:33			

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (1)

TOTAL Metals

Lot-Sample #...: F2E090426-007

Matrix.....: WATER

Date Sampled...: 05/07/12 09:45 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF471AL
		Dilution Factor: 1		Analysis Time...: 10:52		
Aluminum	368	200	ug/L	SW846 6010C	05/10-05/18/12	MTF471AM
		Dilution Factor: 1		Analysis Time...: 10:52		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF471AK
		Dilution Factor: 1		Analysis Time...: 10:52		
Barium	40.5 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF471AN
		Dilution Factor: 1		Analysis Time...: 10:52		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF471AP
		Dilution Factor: 1		Analysis Time...: 10:52		
Calcium	82600 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF471AQ
		Dilution Factor: 10		Analysis Time...: 13:33		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF471AR
		Dilution Factor: 1		Analysis Time...: 10:52		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF471AT
		Dilution Factor: 1		Analysis Time...: 10:52		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF471AU
		Dilution Factor: 1		Analysis Time...: 10:52		
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTF471AV
		Dilution Factor: 1		Analysis Time...: 10:52		
Iron	636	100	ug/L	SW846 6010C	05/10-05/18/12	MTF471AW
		Dilution Factor: 1		Analysis Time...: 10:52		
Magnesium	15000	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF471AX
		Dilution Factor: 1		Analysis Time...: 10:52		
Manganese	72.5	15	ug/L	SW846 6010C	05/10-05/18/12	MTF471A0
		Dilution Factor: 1		Analysis Time...: 10:52		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (1)

TOTAL Metals

Lot-Sample #...: F2E090426-007

Matrix.....: WATER

REPORTING				PREPARATION-		WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Sodium	38300	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF471A1
		Dilution Factor: 1		Analysis Time...: 10:52		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF471A2
		Dilution Factor: 1		Analysis Time...: 10:52		
Lead	2.0 J	10	ug/L	SW846 6010C	05/10-05/18/12	MTF471A3
		Dilution Factor: 1		Analysis Time...: 10:52		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF471A4
		Dilution Factor: 1		Analysis Time...: 10:52		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF471A5
		Dilution Factor: 1		Analysis Time...: 10:52		
Strontium	661	50	ug/L	SW846 6010C	05/10-05/18/12	MTF471AA
		Dilution Factor: 10		Analysis Time...: 13:33		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF471AC
		Dilution Factor: 1		Analysis Time...: 10:52		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF471AD
		Dilution Factor: 1		Analysis Time...: 10:52		
Zinc	9.9 J	20	ug/L	SW846 6010C	05/10-05/18/12	MTF471AE
		Dilution Factor: 1		Analysis Time...: 10:52		
Prep Batch #...: 2131080						
Uranium	0.52 J	1	ug/L	SW846 6020A	05/10-05/16/12	MTF471AF
		Dilution Factor: 1		Analysis Time...: 04:03		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF471AJ
		Dilution Factor: 1		Analysis Time...: 13:35		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (1) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-008

Matrix.....: WATER

Date Sampled...: 05/07/12 09:45 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF491AL
		Dilution Factor: 1		Analysis Time...: 10:56		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF491AM
		Dilution Factor: 1		Analysis Time...: 10:56		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF491AK
		Dilution Factor: 1		Analysis Time...: 10:56		
Barium	36.9 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF491AN
		Dilution Factor: 1		Analysis Time...: 10:56		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF491AP
		Dilution Factor: 1		Analysis Time...: 10:56		
Calcium	82100 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF491AQ
		Dilution Factor: 10		Analysis Time...: 13:37		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF491AR
		Dilution Factor: 1		Analysis Time...: 10:56		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF491AT
		Dilution Factor: 1		Analysis Time...: 10:56		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF491AU
		Dilution Factor: 1		Analysis Time...: 10:56		
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTF491AV
		Dilution Factor: 1		Analysis Time...: 10:56		
Iron	47.4 J	100	ug/L	SW846 6010C	05/10-05/18/12	MTF491AW
		Dilution Factor: 1		Analysis Time...: 10:56		
Magnesium	15000	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF491AX
		Dilution Factor: 1		Analysis Time...: 10:56		
Manganese	45.1	15	ug/L	SW846 6010C	05/10-05/18/12	MTF491A0
		Dilution Factor: 1		Analysis Time...: 10:56		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (1) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-008

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Sodium	38500	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF491A1
		Dilution Factor: 1		Analysis Time...: 10:56		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF491A2
		Dilution Factor: 1		Analysis Time...: 10:56		
Lead	1.6 J	10	ug/L	SW846 6010C	05/10-05/18/12	MTF491A3
		Dilution Factor: 1		Analysis Time...: 10:56		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF491A4
		Dilution Factor: 1		Analysis Time...: 10:56		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF491A5
		Dilution Factor: 1		Analysis Time...: 10:56		
Strontium	660	50	ug/L	SW846 6010C	05/10-05/18/12	MTF491AA
		Dilution Factor: 10		Analysis Time...: 13:37		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF491AC
		Dilution Factor: 1		Analysis Time...: 10:56		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF491AD
		Dilution Factor: 1		Analysis Time...: 10:56		
Zinc	7.3 J	20	ug/L	SW846 6010C	05/10-05/18/12	MTF491AE
		Dilution Factor: 1		Analysis Time...: 10:56		
Prep Batch #...: 2131080						
Uranium	0.51 J	1	ug/L	SW846 6020A	05/10-05/16/12	MTF491AF
		Dilution Factor: 1		Analysis Time...: 04:09		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF491AJ
		Dilution Factor: 1		Analysis Time...: 13:40		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (2)

TOTAL Metals

Lot-Sample #...: F2E090426-009

Matrix.....: WATER

Date Sampled...: 05/07/12 09:55 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AL
		Dilution Factor: 1		Analysis Time...: 10:59		
Aluminum	386	200	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AM
		Dilution Factor: 1		Analysis Time...: 10:59		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AK
		Dilution Factor: 1		Analysis Time...: 10:59		
Barium	39.7 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AN
		Dilution Factor: 1		Analysis Time...: 10:59		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AP
		Dilution Factor: 1		Analysis Time...: 10:59		
Calcium	80700 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AQ
		Dilution Factor: 10		Analysis Time...: 13:41		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AR
		Dilution Factor: 1		Analysis Time...: 10:59		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AT
		Dilution Factor: 1		Analysis Time...: 10:59		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AU
		Dilution Factor: 1		Analysis Time...: 10:59		
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AV
		Dilution Factor: 1		Analysis Time...: 10:59		
Iron	666	100	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AW
		Dilution Factor: 1		Analysis Time...: 10:59		
Magnesium	14900	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AX
		Dilution Factor: 1		Analysis Time...: 10:59		
Manganese	73.1	15	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1A0
		Dilution Factor: 1		Analysis Time...: 10:59		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (2)

TOTAL Metals

Lot-Sample #...: F2E090426-009

Matrix.....: WATER

REPORTING				PREPARATION-	WORK	
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Sodium	38200	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1A1
		Dilution Factor: 1		Analysis Time...: 10:59		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1A2
		Dilution Factor: 1		Analysis Time...: 10:59		
Lead	1.8 J	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1A3
		Dilution Factor: 1		Analysis Time...: 10:59		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1A4
		Dilution Factor: 1		Analysis Time...: 10:59		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1A5
		Dilution Factor: 1		Analysis Time...: 10:59		
Strontium	661	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AA
		Dilution Factor: 10		Analysis Time...: 13:41		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AC
		Dilution Factor: 1		Analysis Time...: 10:59		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AD
		Dilution Factor: 1		Analysis Time...: 10:59		
Zinc	10.4 J	20	ug/L	SW846 6010C	05/10-05/18/12	MTF5A1AE
		Dilution Factor: 1		Analysis Time...: 10:59		
Prep Batch #...: 2131080						
Uranium	0.50 J	1	ug/L	SW846 6020A	05/10-05/16/12	MTF5A1AF
		Dilution Factor: 1		Analysis Time...: 04:16		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF5A1AJ
		Dilution Factor: 1		Analysis Time...: 13:41		

NOTE(S) :

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (2) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-010

Matrix.....: WATER

Date Sampled...: 05/07/12 09:55 Date Received...: 05/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2131078						
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AL
		Dilution Factor: 1		Analysis Time...: 11:03		
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AM
		Dilution Factor: 1		Analysis Time...: 11:03		
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AK
		Dilution Factor: 1		Analysis Time...: 11:03		
Barium	36.7 J	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AN
		Dilution Factor: 1		Analysis Time...: 11:03		
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AP
		Dilution Factor: 1		Analysis Time...: 11:03		
Calcium	80200 N	10000	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AQ
		Dilution Factor: 10		Analysis Time...: 13:44		
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AR
		Dilution Factor: 1		Analysis Time...: 11:03		
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AT
		Dilution Factor: 1		Analysis Time...: 11:03		
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AU
		Dilution Factor: 1		Analysis Time...: 11:03		
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AV
		Dilution Factor: 1		Analysis Time...: 11:03		
Iron	46.9 J	100	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AW
		Dilution Factor: 1		Analysis Time...: 11:03		
Magnesium	15000	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AX
		Dilution Factor: 1		Analysis Time...: 11:03		
Manganese	45.3	15	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1A0
		Dilution Factor: 1		Analysis Time...: 11:03		

(Continued on next page)

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (2) (F)

TOTAL Metals

Lot-Sample #...: F2E090426-010

Matrix.....: WATER

REPORTING				PREPARATION-	WORK	
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Sodium	38000	1000	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1A1
		Dilution Factor: 1		Analysis Time...: 11:03		
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1A2
		Dilution Factor: 1		Analysis Time...: 11:03		
Lead	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1A3
		Dilution Factor: 1		Analysis Time...: 11:03		
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1A4
		Dilution Factor: 1		Analysis Time...: 11:03		
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1A5
		Dilution Factor: 1		Analysis Time...: 11:03		
Strontium	655	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AA
		Dilution Factor: 10		Analysis Time...: 13:44		
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AC
		Dilution Factor: 1		Analysis Time...: 11:03		
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AD
		Dilution Factor: 1		Analysis Time...: 11:03		
Zinc	8.0 J	20	ug/L	SW846 6010C	05/10-05/18/12	MTF5C1AE
		Dilution Factor: 1		Analysis Time...: 11:03		
Prep Batch #...: 2131080						
Uranium	0.49 J	1	ug/L	SW846 6020A	05/10-05/16/12	MTF5C1AF
		Dilution Factor: 1		Analysis Time...: 04:23		
Prep Batch #...: 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTF5C1AJ
		Dilution Factor: 1		Analysis Time...: 13:43		

NOTE(S):

J Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F2E100000-078 Prep Batch #...: 2131078						
Aluminum	ND	200	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AD
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Antimony	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AU
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Arsenic	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AA
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Barium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AE
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Beryllium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AF
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Cadmium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AH
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Calcium	ND	1000	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AG
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Chromium	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AK
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Cobalt	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AJ
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Copper	ND	25	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AL
		Dilution Factor: 1				
		Analysis Time...: 10:02				
Iron	ND	100	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AM
		Dilution Factor: 1				
		Analysis Time...: 10:02				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Lead	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AT
		Dilution Factor: 1 Analysis Time...: 10:02				
Magnesium	ND	1000	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AN
		Dilution Factor: 1 Analysis Time...: 10:02				
Manganese	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AP
		Dilution Factor: 1 Analysis Time...: 10:02				
Nickel	ND	40	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AR
		Dilution Factor: 1 Analysis Time...: 10:02				
Selenium	ND	15	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AV
		Dilution Factor: 1 Analysis Time...: 10:02				
Silver	ND	10	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AC
		Dilution Factor: 1 Analysis Time...: 10:02				
Sodium	ND	1000	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AQ
		Dilution Factor: 1 Analysis Time...: 10:02				
Strontium	ND	5	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AW
		Dilution Factor: 1 Analysis Time...: 10:02				
Thallium	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1AX
		Dilution Factor: 1 Analysis Time...: 10:02				
Vanadium	ND	50	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1A0
		Dilution Factor: 1 Analysis Time...: 10:02				
Zinc	ND	20	ug/L	SW846 6010C	05/10-05/18/12	MTG1F1A1
		Dilution Factor: 1 Analysis Time...: 10:02				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
MB Lot-Sample #: F2E100000-080 Prep Batch #... : 2131080						
Uranium	ND	1	ug/L	SW846 6020A	05/10-05/16/12	MTG1N1AA
Dilution Factor: 1						
Analysis Time...: 01:28						

MB Lot-Sample #: F2E160000-017 Prep Batch #... : 2137017						
Mercury	ND	0.2	ug/L	SW846 7470A	05/16/12	MTKRW1AA
Dilution Factor: 1						
Analysis Time...: 13:15						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F2E090426

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F2E100000-078 Prep Batch #....: 2131078					
Arsenic	103	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A2
		Dilution Factor: 1	Analysis Time...: 10:06		
Silver	103	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A3
		Dilution Factor: 1	Analysis Time...: 10:06		
Aluminum	101	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A4
		Dilution Factor: 1	Analysis Time...: 10:06		
Barium	102	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A5
		Dilution Factor: 1	Analysis Time...: 10:06		
Beryllium	103	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A6
		Dilution Factor: 1	Analysis Time...: 10:06		
Calcium	109	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A7
		Dilution Factor: 1	Analysis Time...: 10:06		
Cadmium	105	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A8
		Dilution Factor: 1	Analysis Time...: 10:06		
Cobalt	108	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1A9
		Dilution Factor: 1	Analysis Time...: 10:06		
Chromium	107	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CA
		Dilution Factor: 1	Analysis Time...: 10:06		
Copper	107	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CC
		Dilution Factor: 1	Analysis Time...: 10:06		
Iron	104	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CD
		Dilution Factor: 1	Analysis Time...: 10:06		
Magnesium	102	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CE
		Dilution Factor: 1	Analysis Time...: 10:06		
Manganese	104	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CF
		Dilution Factor: 1	Analysis Time...: 10:06		
Sodium	101	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CG
		Dilution Factor: 1	Analysis Time...: 10:06		

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Nickel	108	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CH
		Dilution Factor: 1		Analysis Time...: 10:06	
Lead	110	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CJ
		Dilution Factor: 1		Analysis Time...: 10:06	
Antimony	110	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CK
		Dilution Factor: 1		Analysis Time...: 10:06	
Selenium	104	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CL
		Dilution Factor: 1		Analysis Time...: 10:06	
Strontium	103	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CM
		Dilution Factor: 1		Analysis Time...: 10:06	
Thallium	115	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CN
		Dilution Factor: 1		Analysis Time...: 10:06	
Vanadium	101	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CP
		Dilution Factor: 1		Analysis Time...: 10:06	
Zinc	106	(80 - 120)	SW846 6010C	05/10-05/18/12	MTG1F1CQ
		Dilution Factor: 1		Analysis Time...: 10:06	
LCS Lot-Sample#: F2E100000-080 Prep Batch #...: 2131080					
Uranium	92	(80 - 120)	SW846 6020A	05/10-05/16/12	MTG1N1AC
		Dilution Factor: 1		Analysis Time...: 01:35	
LCS Lot-Sample#: F2E160000-017 Prep Batch #...: 2137017					
Mercury	103	(80 - 120)	SW846 7470A	05/16/12	MTKRW1AC
		Dilution Factor: 1		Analysis Time...: 13:16	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

Date Sampled...: 05/07/12 09:05 Date Received...: 05/08/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F2E090426-001 Prep Batch #... : 2131078						
Aluminum	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CA
	103	(80 - 120)	1.1 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CC
		Dilution Factor: 1				
		Analysis Time...: 10:16				
Antimony	107	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1C8
	111	(80 - 120)	3.7 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1C9
		Dilution Factor: 1				
		Analysis Time...: 10:16				
Arsenic	103	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1A6
	106	(80 - 120)	3.5 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1A7
		Dilution Factor: 1				
		Analysis Time...: 10:16				
Barium	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CD
	103	(80 - 120)	0.18 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CE
		Dilution Factor: 1				
		Analysis Time...: 10:16				
Beryllium	104	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CF
	104	(80 - 120)	0.19 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CG
		Dilution Factor: 1				
		Analysis Time...: 10:16				
Cadmium	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CK
	106	(80 - 120)	3.8 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CL
		Dilution Factor: 1				
		Analysis Time...: 10:16				
Calcium	58 N	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CH
	26 N	(80 - 120)	2.6 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CJ
		Dilution Factor: 10				
		Analysis Time...: 12:58				
Chromium	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CP
	104	(80 - 120)	2.3 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CQ
		Dilution Factor: 1				
		Analysis Time...: 10:16				

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

Date Sampled...: 05/07/12 09:05 Date Received...: 05/08/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Cobalt	100	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CM
	105	(80 - 120)	4.2 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CN
Dilution Factor: 1						
Analysis Time...: 10:16						
Copper	98	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CR
	103	(80 - 120)	3.6 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CT
Dilution Factor: 1						
Analysis Time...: 10:16						
Iron	104	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CU
	105	(80 - 120)	0.95 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CV
Dilution Factor: 1						
Analysis Time...: 10:16						
Lead	100	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1C6
	104	(80 - 120)	3.6 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1C7
Dilution Factor: 1						
Analysis Time...: 10:16						
Magnesium	94	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1CW
	100	(80 - 120)	1.4 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1CX
Dilution Factor: 1						
Analysis Time...: 10:16						
Manganese	103	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1C0
	104	(80 - 120)	0.85 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1C1
Dilution Factor: 1						
Analysis Time...: 10:16						
Nickel	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1C4
	106	(80 - 120)	4.5 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1C5
Dilution Factor: 1						
Analysis Time...: 10:16						
Selenium	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1DA
	106	(80 - 120)	3.2 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1DC
Dilution Factor: 1						
Analysis Time...: 10:16						
Silver	101	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1A8
	103	(80 - 120)	1.2 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1A9
Dilution Factor: 1						
Analysis Time...: 10:16						

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

Date Sampled...: 05/07/12 09:05 Date Received...: 05/08/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Sodium	101	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1C2
	95	(80 - 120)	0.21 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1C3
Dilution Factor: 10 Analysis Time...: 12:58						
Strontium	108	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1DD
	107	(80 - 120)	0.19 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1DE
Dilution Factor: 10 Analysis Time...: 12:58						
Thallium	100	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1DF
	105	(80 - 120)	4.8 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1DG
Dilution Factor: 1 Analysis Time...: 10:16						
Vanadium	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1DH
	102	(80 - 120)	0.09 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1DJ
Dilution Factor: 1 Analysis Time...: 10:16						
Zinc	102	(80 - 120)		SW846 6010C	05/10-05/18/12	MTF4W1DK
	107	(80 - 120)	4.1 (0-20)	SW846 6010C	05/10-05/18/12	MTF4W1DL
Dilution Factor: 1 Analysis Time...: 10:16						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2E090426

Matrix.....: WATER

Date Sampled...: 05/04/12 10:40 Date Received...: 05/07/12

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>RPD</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
------------------	-----------------------------------	----------------------------------	-----------------------------	---------------	---	-------------------------------

MS Lot-Sample #: F2E080406-021 Prep Batch #...: 2131080

Uranium	94	(80 - 120)		SW846 6020A	05/10-05/16/12	MTE811AE
	98	(80 - 120)	3.5 (0-20)	SW846 6020A	05/10-05/16/12	MTE811AF

Dilution Factor: 1

Analysis Time...: 02:42

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (1)

Radiochemistry

Lab Sample ID: F2E090426-001
Work Order: MTF4W
Matrix: WATER

Date Collected: 05/07/12 0905
Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 92
Uranium 234	1.88		0.30	0.10	0.08	05/11/12	05/14/12
Uranium 235/236	0.084		0.063	0.100	0.058	05/11/12	05/14/12
Uranium 238	1.99		0.31	0.10	0.06	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E090426

36 of 57

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (1) (F)

Radiochemistry

Lab Sample ID: F2E090426-002

Date Collected: 05/07/12 0905

Work Order: MTF40

Date Received: 05/08/12 0915

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 84
Uranium 234	1.90		0.32	0.10	0.06	05/11/12	05/14/12
Uranium 235/236	0.171		0.092	0.100	0.033	05/11/12	05/14/12
Uranium 238	2.04		0.33	0.10	0.03	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E090426

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (2)

Radiochemistry

Lab Sample ID: F2E090426-003

Date Collected: 05/07/12 0915

Work Order: MTF41

Date Received: 05/08/12 0915

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 87
Uranium 234	2.34		0.36	0.10	0.05	05/11/12	05/14/12
Uranium 235/236	0.048		0.049	0.100	0.033	05/11/12	05/14/12
Uranium 238	2.00		0.33	0.10	0.06	05/11/12	05/14/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E090426

38 of 57

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (2) (F)

Radiochemistry

Lab Sample ID: F2E090426-004
Work Order: MTF43
Matrix: WATER

Date Collected: 05/07/12 0915
Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 81
Uranium 234	2.56		0.39	0.10	0.08	05/11/12	05/14/12
Uranium 235/236	0.22		0.11	0.10	0.03	05/11/12	05/14/12
Uranium 238	2.28		0.36	0.10	0.03	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E090426

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (3)

Radiochemistry

Lab Sample ID: F2E090426-005

Work Order: MTF44

Matrix: WATER

Date Collected: 05/07/12 0930

Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 76
Uranium 234	7.30		0.83	0.10	0.07	05/11/12	05/14/12
Uranium 235/236	0.36		0.14	0.10	0.04	05/11/12	05/14/12
Uranium 238	7.25		0.82	0.10	0.03	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E090426

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL STEEL SEEP (3) (F)

Radiochemistry

Lab Sample ID: F2E090426-006
Work Order: MTF46
Matrix: WATER

Date Collected: 05/07/12 0930
Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 85
Uranium 234	6.88		0.77	0.10	0.06	05/11/12	05/14/12
Uranium 235/236	0.37		0.14	0.10	0.03	05/11/12	05/14/12
Uranium 238	7.44		0.82	0.10	0.03	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2E090426

41 of 57

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (1)

Radiochemistry

Lab Sample ID: F2E090426-007
 Work Order: MTF47
 Matrix: WATER

Date Collected: 05/07/12 0945
 Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 81
Uranium 234	0.31		0.12	0.10	0.07	05/11/12	05/14/12
Uranium 235/236	0.008	U	0.029	0.100	0.069	05/11/12	05/14/12
Uranium 238	0.217		0.099	0.100	0.055	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F2E090426** Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc
Client Sample ID: GUTERL SURFACE (1) (F)

Radiochemistry

Lab Sample ID: F2E090426-008
 Work Order: MTF49
 Matrix: WATER

Date Collected: 05/07/12 0945
 Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 79
Uranium 234	0.184		0.096	0.100	0.082	05/11/12	05/14/12
Uranium 235/236	0.002	U	0.031	0.100	0.083	05/11/12	05/14/12
Uranium 238	0.171		0.089	0.100	0.067	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U **F2E090426**
 Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: GUTERL SURFACE (2)

Radiochemistry

Lab Sample ID: F2E090426-009
 Work Order: MTF5A
 Matrix: WATER

Date Collected: 05/07/12 0955
 Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 86
Uranium 234	0.24		0.11	0.10	0.09	05/11/12	05/14/12
Uranium 235/236	0.031	U	0.043	0.100	0.063	05/11/12	05/14/12
Uranium 238	0.221		0.094	0.100	0.026	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

F2E090426

Shaw Environmental & Infrastructure Inc
Client Sample ID: GUTERL SURFACE (2) (F)

Radiochemistry

Lab Sample ID: F2E090426-010
Work Order: MTF5C
Matrix: WATER

Date Collected: 05/07/12 0955
Date Received: 05/08/12 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2131054	Yld % 78
Uranium 234	0.34		0.13	0.10	0.11	05/11/12	05/14/12
Uranium 235/236	0.016	U	0.041	0.100	0.083	05/11/12	05/14/12
Uranium 238	0.150		0.092	0.100	0.10	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F2E090426
Matrix: WATER

Parameter	Result	Qual	Total Uncert.	RL	MDC	Lab Sample ID	
			(2 σ+/-)			Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	Batch #	2131054	Yld %	89 F2E100000-054B
Uranium 234	0.006	U	0.015	0.100	0.031	05/11/12	05/14/12
Uranium 235/236	0.0	U	0.0051	0.100	0.016	05/11/12	05/14/12
Uranium 238	0.015		0.017	0.100	0.013	05/11/12	05/14/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F2E090426

Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Iso URANIUM (LONG CT) DOE A-01-R MOD		pCi/L		A-01-R MOD		F2E100000-054C	
Uranium 234	3.27	3.40	0.39	85	104	(82 - 118)	
Spk 2	3.27	3.04	0.35	96	93	(82 - 118)	11 %RPD
Uranium 238	3.39	3.59	0.40	85	106	(80 - 121)	
Spk 2	3.39	3.38	0.38	96	100	(80 - 121)	6 %RPD
Batch #:		2131054	Analysis Date: 05/14/12				

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79,METS

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2012-05-08
 Analytical Due Date: 2012-05-21
 Report Due Date: 2012-05-23
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS In LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	GUTERL STEEL SEEP (1)			2012-05-07 / 905	MTF4W	WATER
SAMPLE COMMENTS:						
SE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
SB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
PB I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NI I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
NA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AS I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
FE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CU I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CR I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CO I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CD I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
CA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
AL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BA I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
HG O8	SW846 7470A	WATER, 7470 Mercury	19 METALS, TOTAL (Method exclusive) - Waters	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: C	WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	GUTERL STEEL SEEP (1) (F)			2012-05-07 / 905	MTF40	WATER
SAMPLE COMMENTS:						
MG I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
BE I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
ZN I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
VX I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
TL I\$	SW846 6010C	WATER, 6010C	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06

F2E090426

48 of 57

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79,METS

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2012-05-08
 Analytical Due Date: 2012-05-21
 Report Due Date: 2012-05-23
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium lstead of 200.8

SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG	O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	GUTERL STEEL SEEP (2)			2012-05-07 / 915	MTF41	WATER

SAMPLE COMMENTS:

MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F2E090426

49 of 57

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79, METS

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2012-05-08

Project: 140415

Guterl Steel

Analytical Due Date: 2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-05-23

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I

4 GUTERL STEEL SEEP (2) (F) 2012-05-07 / 915 MTF43 WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F2E090426

50 of 57

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79,METS

Project Manager: LMF
Project: 140415
PO#: 697886
Client: 522706 Shaw Environmental & Infrastructure Inc

Quote #: 89251
Guterl Steel
Report to: [REDACTED]

SDG:

Date Received: 2012-05-08
Analytical Due Date: 2012-05-21
Report Due Date: 2012-05-23

Report Type: D Expanded Deliverable
EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	GUTERL STEEL SEEP (3)			2012-05-07 / 930	MTF44	WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	GUTERL STEEL SEEP (3) (F)			2012-05-07 / 930	MTF46	WATER

SAMPLE COMMENTS:

51 of 57

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79,METS

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2012-05-08

Project: 140415

Guterl Steel

Analytical Due Date: 2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-05-23

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 0

Report Type: D Expanded Deliverable
EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG	O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	GUTERL SURFACE (1)			2012-05-07/ 945	MTF47	WATER

SAMPLE COMMENTS:

MG	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB	I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F2E090426

52 6957

F2E090426

CLIENT ANALYSIS SUMMARY

 TestAmerica St. Louis
 Storage Loc: R79, METS

 Project Manager: LMF
 Project: 140415
 PO#: 697886
 Client: 522706 Shaw Environmental & Infrastructure Inc
 Quote #: 89251
 SDG:
 Guterl Steel
 Report to: XXXXXXXXXX

 Date Received: 2012-05-08
 Analytical Due Date: 2012-05-21
 Report Due Date: 2012-05-23
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Spedal L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	GUTERL SURFACE (1) (F)			2012-05-07 / 945	MTF49	WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F2E090426

53 of 57

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79, METS

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2012-05-08
 Analytical Due Date: 2012-05-21
 Report Due Date: 2012-05-23
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 0

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER I
 9 GUTERL SURFACE (2) 2012-05-07 / 955 MTF5A WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06

F2E090426

54 of 57

F2E090426

CLIENT ANALYSIS SUMMARY

TestAmerica St. Louis
Storage Loc: R79,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2012-05-08

Project: 140415

Guterl Steel

Analytical Due Date: 2012-05-21

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-05-23

Client: 522706

Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 0

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	GUTERL SURFACE (2) (F)			2012-05-07 / 955	MTF5C	WATER

SAMPLE COMMENTS:

MG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
TL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
SB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
PB I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
VX I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NI I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
NA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
MN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
FE I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CU I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CR I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CO I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
BA I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AS I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AL I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
AG I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
ZN I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
CD I\$	SW846 6010C	WATER, 6010C Metals	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
HG O8	SW846 7470A	WATER, 7470 Mercury	19	METALS, TOTAL (Method exclusive) - Waters	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: C	WRK LOC	06

F2E090426

55 of 57

CUL 117

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of
Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TAL-4124 (10/97)

Client

Project Manager

Date

Chain of Custody Number

Address

Telephone Number (Area Code)/Fax Number

Lab Number

Page 1 of 1

City

State

Zip Code

Site Contact

Lab Contact

Analysis (Attach list if
more space is needed)

Project Name and Location (State)

Carrier/Waybill Number

Special Instructions/
Conditions of Receipt

Contract/Purchase Order/Quote No.

Matrix

Containers &
Preservatives

Sample I.D. No. and Description

Date

Time

Air

Aqueous

Sed.

Soil

Unpres.

H2SO4

HNO3

HCl

NaOH

ZnAc2

NaOH

ISO U

TOTAL U

Metals

LP, 2X2501 U.

(Containers for each sample may be combined on one line)

Guterl Seep (1)

7 May 12 9:05

X

X

X

X

1

1

1

Guterl Seep (1) (F)

7 May 12 9:05

X

X

X

X

1

1

1

Guterl Seep (2) (F)

7 May 12 9:15

X

X

X

X

1

1

1

Guterl Seep (2) (F)

7 May 12 9:15

X

X

X

X

1

1

1

Guterl Seep (3)

7 May 12 9:30

X

X

X

X

1

1

1

Guterl Seep (3) (F)

7 May 12 9:30

X

X

X

X

1

1

1

Guterl Surface (1)

7 May 12 9:45

X

X

X

X

1

1

1

Guterl Surface (1) (F)

7 May 12 9:45

X

X

X

X

1

1

1

Guterl Surface (2)

7 May 12 9:55

X

X

X

X

1

1

1

Guterl Surface (2) (F)

7 May 12 9:55

X

X

X

X

1

1

1

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client☒ Disposal By Lab☐ Archive For _____ Months(A fee may be assessed if samples are retained
longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days☒ Other Single Shot TAT

QC Requirements (Specify)

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Comments

TestAmerica St. Louis

CONDITION UPON RECEIPT FORM

Client: Shaw

Quote No: 89251

COC/RFA No: 192759

Initiated By: BA

Date: 5/8/12

Time: 09:5

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: Multiple Packages: 0 N

Shipping # (s):*

4485 0261 0948

Sample Temperature (s):**

1. Ambient

1. 4485 0261 0948	6.	1. Ambient	6.
2.	7.	2.	7.
3.	8.	3.	8.
4.	9.	4.	9.
5.	10.	5.	10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. Y N	Are there custody seals present on the cooler?	8. Y N	Are there custody seals present on bottles?
2. Y N N/A	Do custody seals on cooler appear to be tampered with?	9. Y N N/A	Do custody seals on bottles appear to be tampered with?
3. Y N	Were contents of cooler frisked after opening, but before unpacking?	10. Y N N/A	Was sample received with proper pH? (If not, make note below)
4. Y N	Sample received with Chain of Custody?	11. Y N N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N	Sample received in proper containers?
6. Y N	Was sample received broken?	13. Y N N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. Y N	Is sample volume sufficient for analysis?	14. Y N N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

Corrective Action:

☐ Client Contact Name:

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until:

Project Management Review:

Informed by:

If released, notify:

Date: 5/14/12

THIS FORM MUST BE COMPLETED AT THE TIME THE SAMPLES ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

Table of Contents - LOT # F2H090401-REVISED

COVER PAGE.....	1
CLIENT CHAIN OF CUSTODY.....	5
METALS-WATER-FORMS ONLY.....	67
URANIUM.....	119
Daily and RunLogs.....	161
ALPHAVISION JULY 2012.....	173
ALPHAVISION CALIBRATIONS.....	361
TOTAL # OF PAGES IN PACKAGE.....	672



TestAmerica Laboratories, Inc.


ANALYTICAL REPORT

REVISED

PROJECT NO. 140415

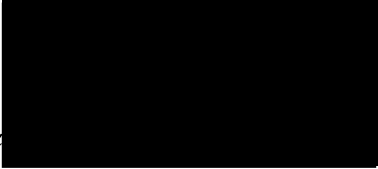
Guterl Steel

Lot #: F2H090401



Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.



Project Manager

September 11, 2012

Case Narrative
LOT NUMBER: F2H090401
Revised

This report contains the analytical results for the 22 samples received under chain of custody by TestAmerica in St. Louis on August 8, 2012. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.2 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

This report is revised to include Uranium 235/236 and Uranium 238 with the Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD) analysis.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

The following clean-up methods for Organic analyses may have been used on samples in this data set. Specific methods employed are documented on the batch extraction logs.

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup
Method 3665A: Sulfuric Acid/Permanganate Cleanup

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

There sample aliquot was reduced due to insufficient sample. The aliquot for F2H090401-3 was reduced to 100mL due to high solid content in the sample.

The Uranium samples (F2H090401-015, -016, and -022) did not meet the CRDL due to the reduced sample volume. The sample results are acceptable and will be reported for client review.

The MS and MSD recovery is outside the established QC limits. The analyte concentration in the original sample is greater than 4 times the amount spiked, making % recovery information statistically invalid. Method performance is demonstrated by acceptable LCS recovery. Results are provided with this narrative.

The Uranium samples (F2H090401-003, -004 and -007) did not meet the CRDL due to the reduced sample volume. The sample results are acceptable and will be reported for client review.

Affected Samples:

F2H090401 (1): A04DMW713D0004	F2H090401 (2): A04DMW708DD0004
F2H090401 (3): A04BMW704DD0004	F2H090401 (4): A04BMW605D0004
F2H090401 (5): A04BMW260004	F2H090401 (6): A04BMW707DD0004
F2H090401 (7): A04DMW604DD0004	F2H090401 (8): A04DMW709DD004
F2H090401 (9): A04DMW710D004	F2H090401 (10): A04DMW710DD004
F2H090401 (11): DUPLICATE 02	F2H090401 (12): A04DMW713D0004
F2H090401 (13): A04DMW708DD0004	F2H090401 (14): A04BMW704DD0004
F2H090401 (15): A04BMW605D0004	F2H090401 (16): A04BMW260004
F2H090401 (17): A04BMW707DD0004	F2H090401 (18): A04DMW604D0004
F2H090401 (19): A04DMW709DD004	F2H090401 (20): A04DMW710D004
F2H090401 (21): A04DMW710DD004	F2H090401 (22): DUPLICATE 02

There were no other nonconformances or observations noted with any analysis on this lot.

F2H090401

CLIENT ANALYSIS SUMMARY

Storage Loc: R66-68,METS

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2012-08-08

Project: 140415

Guterl Steel

Analytical Due Date: 2012-08-22

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-08-22

Client: 522706 Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 22

Report Type: D Expanded Deliverable

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	A04DMW713D0004			2012-08-03/ 1340	MV2Q3	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
2	A04DMW708DD0004			2012-08-03/ 1520	MV2Q4	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
3	A04BMW704DD0004			2012-08-06/ 920	MV2Q5	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
4	A04BMW605D0004			2012-08-06/ 1005	MV2Q6	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
5	A04BMW260004			2012-08-06/ 1145	MV2Q7	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06
SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
6	A04BMW707DD0004			2012-08-06/ 1225	MV2Q8	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A	WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A	WRK LOC 06
XX ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B	WRK LOC 06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A	WRK LOC 06

F2H090401**CLIENT ANALYSIS SUMMARY**Storage Loc: **R66-68,METS**

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2012-08-08
 Analytical Due Date: 2012-08-22
 Report Due Date: 2012-08-22
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 22

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	A04DMW604DD0004			2012-08-06 / 0	MV2Q9	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX ZV	RAD SCREEN		WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06
D UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
D XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06
S UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
S XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	A04DMW709DD004			2012-08-06 / 1520	MV2RA	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX ZV	RAD SCREEN		WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A04DMW710D004			2012-08-06 / 1545	MV2RC	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX ZV	RAD SCREEN		WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	A04DMW710DD004			2012-08-06 / 1555	MV2RD	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX ZV	RAD SCREEN		WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
11	DUPLICATE 02			2012-08-06 / 0	MV2RL	WATER
SAMPLE COMMENTS:						
UX I&	SW846 6020A		WATER, 6020 Total Uranium	GJ METALS, TOTAL - 2% HCL	D4 DOD QSM V4.X	PROT: A WRK LOC 06
XX ZV	RAD SCREEN		WATER, RAD SCREEN, RAD SCREEN, Special L	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: B WRK LOC 06
XX 2M	EML A-01-R MOD		WATER, A-01-R MOD, Iso U (L CT)	J2 Extraction Chromatography - Sequential Actinides	01 STANDARD TEST SET	PROT: A WRK LOC 06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
----------	------------------	---------	---------------	-------------------	-----------	---

F2H090401**CLIENT ANALYSIS SUMMARY**

Storage Loc: **R66-68,METS**
 Date Received: **2012-08-08**
 Analytical Due Date: **2012-08-22**
 Report Due Date: **2012-08-22**
 Report Type: **D** Expanded Deliverable
 EDD Code: **00**

Project Manager: **LMF** Quote #: **89251** SDG:
 Project: **140415** Guterl Steel
 PO#: **697886** Report to: XXXXXXXXXX
 Client: **522706** Shaw Environmental & Infrastructure Inc

#SMPS in LOT: 22

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

12 A04DMW713D0004 2012-08-03 / 1340 MV2RN WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

13 A04DMW708DD0004 2012-08-03 / 1520 MV2RP WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

14 A04BMW704DD0004 2012-08-06 / 920 MV2RQ WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

15 A04BMW605D0004 2012-08-06 / 1005 MV2RR WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

16 A04BMW260004 2012-08-06 / 1145 MV2RT WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

17 A04BMW707DD0004 2012-08-06 / 1225 MV2RV WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED WORKORDER !

18 A04DMW604D0004 2012-08-06 / 0 MV2RW WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06
UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

F2H090401**CLIENT ANALYSIS SUMMARY**Storage Loc: **R66-68,METS**

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2012-08-08
 Analytical Due Date: 2012-08-22
 Report Due Date: 2012-08-22

Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 22

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

S	UX	I&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
19	A04DMW709DD004			2012-08-06 / 1520	MV2RX	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
20	A04DMW710D004			2012-08-06 / 1545	MV2R1	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
21	A04DMW710DD004			2012-08-06 / 1555	MV2R2	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
22	DUPLICATE 02			2012-08-06 / 0	MV2R4	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

Chain of Custody Record

WLF
20

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

COC No. 20

TAL-4124 (1007)

Client STAN ENVIRONMENTAL INFRASTRUCTURE		Project Manager KARL VAN KEDREN, PG, PMP		Date 08/06/2012	Chain of Custody Number 191577
Address 5050 SECTION AVENUE		Telephone Number (Area Code)/Fax Number (513) 782-4745 / (513) 782-4803		Lab Number	Page 1 of 2
City CINCINNATI	State OH	Zip Code 45212	Site Contact Kevin Cronin	Lab Contact LYNN FUSSNER	Analysis (Attach list if more space is needed)

Project Name and Location (State) FORMER GUTHER SPECIALTY STEEL FABRICATION		Carrier/Waybill Number	Special Instructions/Conditions of Receipt
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date LC	Time	Matrix				Containers & Preservatives							TOTAL (FILLED) 250P	TOTAL (FILLED) 250P	ISOTOPIC (FILLED) 250P	ISOTOPIC (FILLED) 250P	Analysis (Attach list if more space is needed)
			Air	Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH					
A04 DMW 710 D 0204	8/1/12	1045		X					X					X	X	X	X	
A04 DMW 710 D 0204		1145																
A04 DMW 713 D 0204	08/03/12	1340		X					X					X	X	X	X	
A04 DMW 708 DD 0204		1520																
A04 Bmw 704 DD 0204	8/6/12	0920																
A04 Bmw 605 D 0204		1005																
A04 Bmw 26 0204		1145																
A04 Bmw 707 DD 0204		1225																
A04 DMW 604 D 0204 0004 on label																		
DUPLICATE C2																		
A04 DMW 604 D 0204 MS																		
A04 DMW 604 D 0204 MSD																		

Possible Hazard Identification	Sample Disposal	OC Requirements (Specify)
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required	Other	STANDARD
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days		
	Date	Time
	8/7/12	0940
	Date	Time
	8-7-12	12:30
	Date	Time
	8-7-12	17:19
	Date	Time
	8-7-12	05:40
	Date	Time
	8-7-12	12:30
	Date	Time
	8-8-12	0930

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s):

F2H090401

F2H080458

F2H090401

CUR Form #: 2 8 5

8.8.12

CONDITION UPON RECEIPT FORM

Client:

Shaw/TA Buffalo



Quote No:

89251

COC/RFA No:

191677, 190294, 480-5044.1

Initiated By:

En

Date:

8.8.12

Time:

0930

Shipping Information

Shipper:

FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

Y N

Shipping # (s):*

1. 4485 0261 9257

2. 9246

3.

4.

5.

6.

7.

8.

9.

10.

Sample Temperature (s):**

1. ambient

2.

3.

4.

5.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. Y N	Are there custody seals present on the cooler?	8. Y N	Are there custody seals present on bottles?
2. Y N N/A	Do custody seals on cooler appear to be tampered with?	9. Y N N/A	Do custody seals on bottles appear to be tampered with?
3. Y N	Were contents of cooler frisked after opening, but before unpacking?	10. Y N N/A	Was sample received with proper pH? (If not, make note below)
4. Y N	Sample received with Chain of Custody?	11. Y N N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N	Sample received in proper containers?
6. Y N	Was sample received broken?	13. Y N N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. Y N	Is sample volume sufficient for analysis?	14. Y N N/A	Was Internal COC/Workshare received?

For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

604 D004 on C-O-C is 604 0000 4 on one bottle; an MS for that sample is labeled A04BMW004D0004 MS but date/time are the same.

Did not rec'd. A04BMW7020D0004 total 4 bottles
 704 ↓ ↓ had pH of 7.
 Per LF preserved w/HND, lot K26024 to correct all bottles, also for 480-23448-1.

Corrective Action:

☐ Client Contact Name:☐ Sample(s) processed "as is"☐ Sample(s) on hold un

Project Management Rev

THIS FORM MUST BE COMPLET

THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

Informed by:

If released, notify:

Date:

5/13/12

METHODS SUMMARY

F2H090401

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Uranium by Alpha Spectroscopy ICP-MS (6020A)	EML A-01-R MOD SW846 6020A	

References:

EML	"ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F2H090401

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MV2Q3	001	A04DMW713D0004	08/03/12	13:40
MV2Q4	002	A04DMW708DD0004	08/03/12	15:20
MV2Q5	003	A04BMW704DD0004	08/06/12	09:20
MV2Q6	004	A04BMW605D0004	08/06/12	10:05
MV2Q7	005	A04BMW260004	08/06/12	11:45
MV2Q8	006	A04BMW707DD0004	08/06/12	12:25
MV2Q9	007	A04DMW604DD0004	08/06/12	
MV2RA	008	A04DMW709DD0004	08/06/12	15:20
MV2RC	009	A04DMW710D004	08/06/12	15:45
MV2RD	010	A04DMW710DD004	08/06/12	15:55
MV2RL	011	DUPLICATE 02	08/06/12	
MV2RN	012	A04DMW713D0004	08/03/12	13:40
MV2RP	013	A04DMW708DD0004	08/03/12	15:20
MV2RQ	014	A04BMW704DD0004	08/06/12	09:20
MV2RR	015	A04BMW605D0004	08/06/12	10:05
MV2RT	016	A04BMW260004	08/06/12	11:45
MV2RV	017	A04BMW707DD0004	08/06/12	12:25
MV2RW	018	A04DMW604D0004	08/06/12	
MV2RX	019	A04DMW709DD0004	08/06/12	15:20
MV2R1	020	A04DMW710D004	08/06/12	15:45
MV2R2	021	A04DMW710DD004	08/06/12	15:55
MV2R4	022	DUPLICATE 02	08/06/12	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0004

TOTAL Metals

Lot-Sample #...: F2H090401-001

Matrix.....: WATER

Date Sampled...: 08/03/12 13:40 Date Received...: 08/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2223062					
Uranium	ND	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q31AA
		Dilution Factor: 1		Analysis Time...: 21:27		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0004

TOTAL Metals

Lot-Sample #...: F2H090401-002

Matrix.....: WATER

Date Sampled...: 08/03/12 15:20 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	20.2	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q41AA
		Dilution Factor: 1		Analysis Time...: 21:34		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0004

TOTAL Metals

Lot-Sample #...: F2H090401-003

Matrix.....: WATER

Date Sampled...: 08/06/12 09:20 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	102	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q51AA
		Dilution Factor: 1		Analysis Time...: 21:40		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0004

TOTAL Metals

Lot-Sample #...: F2H090401-004

Matrix.....: WATER

Date Sampled...: 08/06/12 10:05 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	259	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q61AA
		Dilution Factor: 1		Analysis Time...: 21:47		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260004

TOTAL Metals

Lot-Sample #...: F2H090401-005

Matrix.....: WATER

Date Sampled...: 08/06/12 11:45 Date Received...: 08/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2223062					
Uranium	155	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q71AA
		Dilution Factor: 1		Analysis Time...: 21:54		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0004

TOTAL Metals

Lot-Sample #...: F2H090401-006

Matrix.....: WATER

Date Sampled...: 08/06/12 12:25 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	11.2	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q81AA
		Dilution Factor: 1		Analysis Time...: 22:00		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604DD0004

TOTAL Metals

Lot-Sample #...: F2H090401-007

Matrix.....: WATER

Date Sampled...: 08/06/12

Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	108	1	ug/L	SW846 6020A	08/10-08/16/12	MV2Q91AA
		Dilution Factor: 1		Analysis Time...: 22:07		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD004

TOTAL Metals

Lot-Sample #...: F2H090401-008

Matrix.....: WATER

Date Sampled...: 08/06/12 15:20 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	82.7	1	ug/L	SW846 6020A	08/10-08/16/12	MV2RA1AA
		Dilution Factor: 1		Analysis Time...: 22:54		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D004

TOTAL Metals

Lot-Sample #...: F2H090401-009

Matrix.....: WATER

Date Sampled...: 08/06/12 15:45 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	53.8	1	ug/L	SW846 6020A	08/10-08/16/12	MV2RC1AA
		Dilution Factor: 1		Analysis Time...: 23:01		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD004

TOTAL Metals

Lot-Sample #...: F2H090401-010

Matrix.....: WATER

Date Sampled...: 08/06/12 15:55 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	29.6	1	ug/L	SW846 6020A	08/10-08/16/12	MV2RD1AA
		Dilution Factor: 1		Analysis Time...: 23:08		

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 02

TOTAL Metals

Lot-Sample #...: F2H090401-011

Matrix.....: WATER

Date Sampled...: 08/06/12

Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223062						
Uranium	254	1	ug/L	SW846 6020A	08/10-08/16/12	MV2RL1AA
		Dilution Factor: 1		Analysis Time...: 23:14		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0004

DISSOLVED Metals

Lot-Sample #...: F2H090401-012

Matrix.....: WATER

Date Sampled...: 08/03/12 13:40 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	ND	1	ug/L	SW846 6020A	08/10-08/16/12	MV2RN1AC
		Dilution Factor: 1		Analysis Time...: 23:48		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0004

DISSOLVED Metals

Lot-Sample #...: F2H090401-013

Matrix.....: WATER

Date Sampled...: 08/03/12 15:20 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	19.3	1	ug/L	SW846 6020A	08/10-08/16/12	MV2RP1AC
		Dilution Factor: 1		Analysis Time...: 23:55		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0004

DISSOLVED Metals

Lot-Sample #...: F2H090401-014

Matrix.....: WATER

Date Sampled...: 08/06/12 09:20 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	68.1	1	ug/L	SW846 6020A	08/10-08/17/12	MV2RQ1AC
		Dilution Factor: 1		Analysis Time...: 00:02		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0004

DISSOLVED Metals

Lot-Sample #...: F2H090401-015

Matrix.....: WATER

Date Sampled...: 08/06/12 10:05 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	251	1	ug/L	SW846 6020A	08/10-08/17/12	MV2RR1AC
		Dilution Factor: 1		Analysis Time...: 00:08		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260004

DISSOLVED Metals

Lot-Sample #...: F2H090401-016

Matrix.....: WATER

Date Sampled...: 08/06/12 11:45 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	147	1	ug/L	SW846 6020A	08/10-08/17/12	MV2RT1AC
		Dilution Factor: 1		Analysis Time...: 00:15		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0004

DISSOLVED Metals

Lot-Sample #...: F2H090401-017

Matrix.....: WATER

Date Sampled...: 08/06/12 12:25 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	8.3	1	ug/L	SW846 6020A	08/10-08/17/12	MV2RV1AC
		Dilution Factor: 1		Analysis Time...: 00:22		

4

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0004

DISSOLVED Metals

Lot-Sample #...: F2H090401-018

Matrix.....: WATER

Date Sampled...: 08/06/12

Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	105	1	ug/L	SW846 6020A	08/10-08/17/12	MV2RW1AE
		Dilution Factor: 1		Analysis Time...: 00:29		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD004

DISSOLVED Metals

Lot-Sample #...: F2H090401-019

Matrix.....: WATER

Date Sampled...: 08/06/12 15:20 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	84.3	1	ug/L	SW846 6020A	08/10-08/17/12	MV2RX1AC
		Dilution Factor: 1		Analysis Time...: 01:15		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D004

DISSOLVED Metals

Lot-Sample #...: F2H090401-020

Matrix.....: WATER

Date Sampled...: 08/06/12 15:45 Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	52.3	1	ug/L	SW846 6020A	08/10-08/17/12	MV2R11AC
		Dilution Factor: 1		Analysis Time...: 01:22		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD004

DISSOLVED Metals

Lot-Sample #...: F2H090401-021

Matrix.....: WATER

Date Sampled...: 08/06/12 15:55 Date Received...: 08/08/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2223063					
Uranium	28.9	1	ug/L	SW846 6020A	08/10-08/17/12	MV2R21AC
		Dilution Factor: 1		Analysis Time...: 01:29		

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 02

DISSOLVED Metals

Lot-Sample #...: F2H090401-022

Matrix.....: WATER

Date Sampled...: 08/06/12

Date Received...: 08/08/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2223063						
Uranium	251	1	ug/L	SW846 6020A	08/10-08/17/12	MV2R41AC
		Dilution Factor: 1		Analysis Time...: 01:36		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2H090401

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MB Lot-Sample #: F2H100000-062 Prep Batch #...: 2223062						
Uranium	ND	1	ug/L	SW846 6020A	08/10-08/16/12	MV3PG1AA
		Dilution Factor: 1				
		Analysis Time...: 21:13				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: F2H090401

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F2H100000-063 Prep Batch #...: 2223063						
Uranium	ND	1	ug/L	SW846 6020A	08/10-08/16/12	MV3PJ1AA
Dilution Factor: 1						
Analysis Time...: 23:35						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2H090401

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------	----------------------------	---------------	---------------------------------------	---------------------

LCS Lot-Sample#: F2H100000-062 Prep Batch #...: 2223062

Uranium 98 (80 - 120) SW846 6020A 08/10-08/16/12 MV3PG1AC

Dilution Factor: 1

Analysis Time.: 21:20

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: F2H090401

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------	----------------------------	---------------	---------------------------------------	---------------------

LCS Lot-Sample#: F2H100000-063 Prep Batch #...: 2223063

Uranium 96 (80 - 120) SW846 6020A 08/10-08/16/12 MV3PJ1AC

Dilution Factor: 1

Analysis Time..: 23:41

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2H090401

Matrix.....: WATER

Date Sampled...: 08/06/12

Date Received...: 08/08/12

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>RPD</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MS Lot-Sample #:	F2H090401-007	Prep Batch #...	2223062			
Uranium	98	(80 - 120)		SW846 6020A	08/10-08/16/12	MV2Q91AE
	99	(80 - 120)	1.6 (0-20)	SW846 6020A	08/10-08/16/12	MV2Q91AF

Dilution Factor: 1

Analysis Time...: 22:34

NOTE(S) :

 Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: F2H090401

Matrix.....: WATER

Date Sampled...: 08/06/12

Date Received...: 08/08/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
-----------	---------------------	--------------------	-----	--------	--------	-------------------------------	-----------------

MS Lot-Sample #: F2H090401-018 Prep Batch #...: 2223063

Uranium 97 (80 - 120) SW846 6020A 08/10-08/17/12 MV2RW1AF

97 (80 - 120) 0.20 (0-20) SW846 6020A 08/10-08/17/12 MV2RW1AG

Dilution Factor: 1

Analysis Time...: 00:56

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0004

Radiochemistry

Lab Sample ID: F2H090401-001
 Work Order: MV2Q3
 Matrix: WATER

Date Collected: 08/03/12 1340
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 82
Uranium 234	0.127		0.097	0.100	0.090	08/13/12	08/15/12
Uranium 235/236	0.016	U	0.043	0.100	0.096	08/13/12	08/15/12
Uranium 238	0.093		0.084	0.100	0.089	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0004

Radiochemistry

Lab Sample ID: F2H090401-002
 Work Order: MV2Q4
 Matrix: WATER

Date Collected: 08/03/12 1520
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 83
Uranium 234	7.04		0.91	0.10	0.09	08/13/12	08/15/12
Uranium 235/236	0.40		0.19	0.10	0.06	08/13/12	08/15/12
Uranium 238	7.12		0.92	0.10	0.05	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0004

Radiochemistry

Lab Sample ID: F2H090401-003
 Work Order: MV2Q5
 Matrix: WATER

Date Collected: 08/06/12 0920
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 85
Uranium 234	32.7		3.7	0.1	0.2	08/13/12	08/15/12
Uranium 235/236	0.96		0.49	0.10	0.35	08/13/12	08/15/12
Uranium 238	26.1		3.1	0.1	0.4	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0004

Radiochemistry

Lab Sample ID: F2H090401-004
 Work Order: MV2Q6
 Matrix: WATER

Date Collected: 08/06/12 1005
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 46
Uranium 234	85.8		7.6	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	3.75		0.66	0.10	0.06	08/13/12	08/15/12
Uranium 238	82.6		7.3	0.1	0.05	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260004

Radiochemistry

Lab Sample ID: F2H090401-005

Date Collected: 08/06/12 1145

Work Order: MV2Q7

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L	Batch # 2226014		Yld % 63
Uranium 234	49.0		4.4	0.1	0.03	08/13/12	08/15/12
Uranium 235/236	2.48		0.45	0.10	0.08	08/13/12	08/15/12
Uranium 238	47.6		4.3	0.1	0.07	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0004

Radiochemistry

Lab Sample ID: F2H090401-006
 Work Order: MV2Q8
 Matrix: WATER

Date Collected: 08/06/12 1225
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 85
Uranium 234	14.8		1.4	0.1	0.09	08/13/12	08/15/12
Uranium 235/236	0.108		0.073	0.100	0.059	08/13/12	08/15/12
Uranium 238	3.55		0.47	0.10	0.10	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604DD0004

Radiochemistry

Lab Sample ID: F2H090401-007

Date Collected: 08/06/12 0000

Work Order: MV2Q9

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 69
Uranium 234	35.1		3.2	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	1.50		0.32	0.10	0.04	08/13/12	08/15/12
Uranium 238	35.2		3.2	0.1	0.07	08/13/12	08/15/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD004

Radiochemistry

Lab Sample ID: F2H090401-008
 Work Order: MV2RA
 Matrix: WATER

Date Collected: 08/06/12 1520
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 75
Uranium 234	28.4		2.8	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	1.83		0.44	0.10	0.10	08/13/12	08/15/12
Uranium 238	28.6		2.8	0.1	0.1	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D004

Radiochemistry

Lab Sample ID: F2H090401-009
 Work Order: MV2RC
 Matrix: WATER

Date Collected: 08/06/12 1545
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 81
Uranium 234	18.8		1.9	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	1.12		0.32	0.10	0.06	08/13/12	08/15/12
Uranium 238	18.2		1.9	0.1	0.09	08/13/12	08/15/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD004

Radiochemistry

Lab Sample ID: F2H090401-010
 Work Order: MV2RD
 Matrix: WATER

Date Collected: 08/06/12 1555
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 84
Uranium 234	8.79		0.94	0.10	0.08	08/13/12	08/15/12
Uranium 235/236	0.59		0.18	0.10	0.09	08/13/12	08/15/12
Uranium 238	9.6		1.0	0.1	0.08	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 02

Radiochemistry

Lab Sample ID: F2H090401-011
 Work Order: MV2RL
 Matrix: WATER

Date Collected: 08/06/12 0000
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226014	Yld % 51
Uranium 234	80.5		7.1	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	3.88		0.65	0.10	0.06	08/13/12	08/15/12
Uranium 238	78.7		7.0	0.1	0.09	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0004

Radiochemistry

Lab Sample ID: F2H090401-012

Date Collected: 08/03/12 1340

Work Order: MV2RN

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 75
Uranium 234	0.133		0.098	0.100	0.078	08/13/12	08/15/12
Uranium 235/236	0.0	U	0.011	0.100	0.058	08/13/12	08/15/12
Uranium 238	0.034	U	0.062	0.100	0.11	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0004

Radiochemistry

Lab Sample ID: F2H090401-013

Date Collected: 08/03/12 1520

Work Order: MV2RP

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 78
Uranium 234	7.26		0.94	0.10	0.10	08/13/12	08/15/12
Uranium 235/236	0.27		0.16	0.10	0.11	08/13/12	08/15/12
Uranium 238	6.68		0.88	0.10	0.09	08/13/12	08/15/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0004

Radiochemistry

Lab Sample ID: F2H090401-014
 Work Order: MV2RQ
 Matrix: WATER

Date Collected: 08/06/12 0920
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 73
Uranium 234	27.6		2.7	0.1	0.08	08/13/12	08/15/12
Uranium 235/236	0.81		0.28	0.10	0.06	08/13/12	08/15/12
Uranium 238	22.3		2.3	0.1	0.08	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0004

Radiochemistry

Lab Sample ID: F2H090401-015
 Work Order: MV2RR
 Matrix: WATER

Date Collected: 08/06/12 1005
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 47
Uranium 234	78.7		7.0	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	3.67		0.63	0.10	0.05	08/13/12	08/15/12
Uranium 238	77.5		6.9	0.1	0.1	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260004

Radiochemistry

Lab Sample ID: F2H090401-016
 Work Order: MV2RT
 Matrix: WATER

Date Collected: 08/06/12 1145
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 64
Uranium 234	46.6		4.2	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	1.87		0.38	0.10	0.08	08/13/12	08/15/12
Uranium 238	46.3		4.2	0.1	0.09	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0004

Radiochemistry

Lab Sample ID: F2H090401-017
 Work Order: MV2RV
 Matrix: WATER

Date Collected: 08/06/12 1225
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 92
Uranium 234	9.0		1.1	0.1	0.08	08/13/12	08/15/12
Uranium 235/236	0.129		0.098	0.100	0.050	08/13/12	08/15/12
Uranium 238	2.73		0.46	0.10	0.09	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0004

Radiochemistry

Lab Sample ID: F2H090401-018
 Work Order: MV2RW
 Matrix: WATER

Date Collected: 08/06/12 0000
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 75
Uranium 234	34.5		3.3	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	1.57		0.40	0.10	0.10	08/13/12	08/15/12
Uranium 238	33.5		3.2	0.1	0.1	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD004

Radiochemistry

Lab Sample ID: F2H090401-019

Date Collected: 08/06/12 1520

Work Order: MV2RX

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 72
Uranium 234	28.7		2.8	0.1	0.09	08/13/12	08/15/12
Uranium 235/236	1.66		0.43	0.10	0.11	08/13/12	08/15/12
Uranium 238	29.4		2.9	0.1	0.1	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D004

Radiochemistry

Lab Sample ID: F2H090401-020

Date Collected: 08/06/12 1545

Work Order: MV2R1

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 73
Uranium 234	19.9		1.9	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	1.08		0.27	0.10	0.15	08/13/12	08/15/12
Uranium 238	20.0		1.9	0.1	0.09	08/13/12	08/15/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD004

Radiochemistry

Lab Sample ID: F2H090401-021

Date Collected: 08/06/12 1555

Work Order: MV2R2

Date Received: 08/08/12 0930

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 81
Uranium 234	9.28		0.999	0.100	0.098	08/13/12	08/15/12
Uranium 235/236	0.43		0.15	0.10	0.04	08/13/12	08/15/12
Uranium 238	9.5		1.0	0.1	0.05	08/13/12	08/15/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 02

Radiochemistry

Lab Sample ID: F2H090401-022
 Work Order: MV2R4
 Matrix: WATER

Date Collected: 08/06/12 0000
 Date Received: 08/08/12 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2226015	Yld % 43
Uranium 234	91.3		8.1	0.1	0.1	08/13/12	08/15/12
Uranium 235/236	4.58		0.77	0.10	0.12	08/13/12	08/15/12
Uranium 238	89.8		8.0	0.1	0.1	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F2H090401
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2226014	Yld %	93 F2H130000-014B
Uranium 234	0.013	U	0.022	0.100	0.035	08/13/12	08/15/12
Uranium 235/236	-0.0024	U	0.0048	0.100	0.043	08/13/12	08/15/12
Uranium 238	0.0	U	0.0038	0.100	0.021	08/13/12	08/15/12
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2226015	Yld %	87 F2H130000-015B
Uranium 234	0.006	U	0.016	0.100	0.035	08/13/12	08/15/12
Uranium 235/236	0.0	U	0.0048	0.100	0.026	08/13/12	08/15/12
Uranium 238	0.006	U	0.016	0.100	0.035	08/13/12	08/15/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F2H090401
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2H130000-014C
Uranium 234	3.27	3.59	0.45	0.02	90	110	(84 - 120)
Uranium 238	3.39	3.38	0.43	0.04	90	100	(83 - 121)
Batch #:	2226014			Analysis Date:	08/15/12		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2H130000-015C
Uranium 234	3.27	3.29	0.42	0.04	92	101	(84 - 120)
Uranium 235/236	0.0	0.0	0.0	0.0	0.0	****	(-)
Uranium 238	3.39	3.24	0.42	0.04	92	95	(83 - 121)
Batch #:	2226015			Analysis Date:	08/15/12		

NOTE(S)

MDC is determined by instrument performance only
 Calculations are performed before rounding to avoid round-off error in calculated results

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F2H090401

Date Sampled: 08/06/12 0000

Matrix: WATER

Date Received: 08/08/12 0930

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID		
							% Yld	% Rec	QC Control Limits
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD				F2H090401-007
Uranium 234	6.53	38.4 a	3.5	71	35.1	3.2	69	50	a (65 - 146)
Spk2	6.53	43.9	4.0	64	35.1	3.2	69	135	(65 - 146)
						Precision:		13	%RPD
Uranium 238	6.78	38.7 a	3.5	71	35.2	3.2	69	51	a (68 - 143)
Spk2	6.78	43.2	3.9	64	35.2	3.2	69	118	(68 - 143)
						Precision:		11	%RPD
Batch #: 2226014			Analysis date: 08/15/12						
Iso URANIUM (LONG CT) DOE A			pCi/L		A-01-R MOD				F2H090401-018
Uranium 234	6.53	40.4	3.7	71	34.5	3.3	75	90	(65 - 146)
Spk2	6.53	39.1	3.6	71	34.5	3.3	75	71	(65 - 146)
						Precision:		3	%RPD
Uranium 238	6.78	40.9	3.7	71	33.5	3.2	75	109	(68 - 143)
Spk2	6.78	39.4	3.6	71	33.5	3.2	75	88	(68 - 143)
						Precision:		4	%RPD
Batch #: 2226015			Analysis date: 08/15/12						

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

a Spiked analyte outside of stated QC limits.

METALS SAMPLE AND QC SUMMARY RESULTS

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2Q3

Client ID: A04DMW713D0004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223062

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	0.23	U	1	ICPMS	8/16/2012	21:27

Comments: Lot #: F2H090401 Sample #: 1

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Sample Results****SDG:** Test**Lab Sample ID:** MV2Q4**Client ID:** A04DMW708DD0004**Matrix:** Water**Units:** ug/L**Prep Date:** 8/10/2012**Prep Batch:** 2223062**Weight:** 50**Volume:** 50**Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	20.2		1	ICPMS	8/16/2012	21:34

Comments: Lot #: F2H090401 Sample #: 2

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2Q5Client ID: A04BMW704DD0004Matrix: WaterUnits: ug/LPrep Date: 8/10/2012Prep Batch: 2223062Weight: 50Volume: 50Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	102		1	ICPMS	8/16/2012	21:40

Comments: Lot #: F2H090401 Sample #: 3

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Sample Results****SDG:** Test**Lab Sample ID:** MV2Q6**Client ID:** A04BMW605D0004**Matrix:** Water**Units:** ug/L**Prep Date:** 8/10/2012**Prep Batch:** 2223062**Weight:** 50**Volume:** 50**Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	259		1	ICPMS	8/16/2012	21:47

Comments: Lot #: F2H090401 Sample #: 4

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2Q7

Client ID: A04BMW260004

Matrix: Water **Units:** ug/L

Prep Date: 8/10/2012 **Prep Batch:** 2223062

Weight: 50 **Volume:** 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	155		1	ICPMS	8/16/2012	21:54

Comments: Lot #: F2H090401 Sample #: 5

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample ResultsSDG: Test**Lab Sample ID:** MV2Q8**Client ID:** A04BMW707DD0004**Matrix:** Water**Units:** ug/L**Prep Date:** 8/10/2012**Prep Batch:** 2223062**Weight:** 50**Volume:** 50**Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	11.2		1	ICPMS	8/16/2012	22:00

Comments: Lot #: F2H090401 Sample #: 6

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2Q9

Client ID: A04DMW604DD0004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223062

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	108		1	ICPMS	8/16/2012	22:07

Comments: Lot #: F2H090401 Sample #: 7

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Sample Results****SDG:** Test**Lab Sample ID:** MV2RA**Client ID:** A04DMW709DD004**Matrix:** Water**Units:** ug/L**Prep Date:** 8/10/2012**Prep Batch:** 2223062**Weight:** 50**Volume:** 50**Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	82.7		1	ICPMS	8/16/2012	22:54

Comments: Lot #: F2H090401 Sample #: 8

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RC

Client ID: A04DMW710D004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223062

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	53.8		1	ICPMS	8/16/2012	23:01

Comments: Lot #: F2H090401 Sample #: 9

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Sample Results****SDG:** Test**Lab Sample ID:** MV2RD**Client ID:** A04DMW710DD004**Matrix:** Water**Units:** ug/L**Prep Date:** 8/10/2012**Prep Batch:** 2223062**Weight:** 50**Volume:** 50**Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	29.6		1	ICPMS	8/16/2012	23:08

Comments: Lot #: F2H090401 Sample #: 10

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RL

Client ID: DUPLICATE 02

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223062

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	254		1	ICPMS	8/16/2012	23:14

Comments: Lot #: F2H090401 Sample #: 11

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2R1

Client ID: A04DMW710D004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	52.3		1	ICPMS	8/17/2012	1:22

Comments: Lot #: F2H090401 Sample #: 20

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample ResultsSDG: TestLab Sample ID: MV2R2Client ID: A04DMW710DD004Matrix: WaterUnits: ug/LPrep Date: 8/10/2012Prep Batch: 2223063Weight: 50Volume: 50Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	28.9		1	ICPMS	8/17/2012	1:29

Comments: Lot #: F2H090401 Sample #: 21

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2R4

Client ID: DUPLICATE 02

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	251		1	ICPMS	8/17/2012	1:36

Comments: Lot #: F2H090401 Sample #: 22

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results **SDG:** Test

Lab Sample ID: MV2RN **Client ID:** A04DMW713D0004
Matrix: Water **Units:** ug/L **Prep Date:** 8/10/2012 **Prep Batch:** 2223063
Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	0.23	U	1	ICPMS	8/16/2012	23:48

Comments: Lot #: F2H090401 Sample #: 12

6.05.2

U Result is less than the IDL
B Result is between IDL and RL
E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RP

Client ID: A04DMW708DD0004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	19.3		1	ICPMS	8/16/2012	23:55

Comments: Lot #: F2H090401 Sample #: 13

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results **SDG:** Test

Lab Sample ID: MV2RQ **Client ID:** A04BMW704DD0004
Matrix: Water **Units:** ug/L **Prep Date:** 8/10/2012 **Prep Batch:** 2223063
Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	68.1		1	ICPMS	8/17/2012	0:02

Comments: Lot #: F2H090401 Sample #: 14

6.05.2

- U Result is less than the IDL
- B Result is between IDL and RL
- E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RR

Client ID: A04BMW605D0004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	251		1	ICPMS	8/17/2012	0:08

Comments: Lot #: F2H090401 Sample #: 15

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RT

Client ID: A04BMW260004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	147		1	ICPMS	8/17/2012	0:15

Comments: Lot #: F2H090401 Sample #: 16

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RV

Client ID: A04BMW707DD0004

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	8.3		1	ICPMS	8/17/2012	0:22

Comments: Lot #: F2H090401 Sample #: 17

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form I Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample Results

SDG: Test

Lab Sample ID: MV2RWClient ID: A04DMW604D0004Matrix: WaterUnits: ug/LPrep Date: 8/10/2012Prep Batch: 2223063Weight: 50Volume: 50Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	105		1	ICPMS	8/17/2012	0:29

Comments: Lot #: F2H090401 Sample #: 18

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Sample ResultsSDG: TestLab Sample ID: MV2RXClient ID: A04DMW709DD004Matrix: WaterUnits: ug/LPrep Date: 8/10/2012Prep Batch: 2223063Weight: 50Volume: 50Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	84.3		1	ICPMS	8/17/2012	1:15

Comments: Lot #: F2H090401 Sample #: 19

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

E Serial dilution percent difference not within limits

Form 1 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Initial Calibration Verification Standard

SDG: Test

Instrument: ICPMSUnits: ug/LChart Number: 081612A2.csvAcceptable Range: 90% - 110%Standard Source: INORGANIC VENTURESStandard ID: See Standards Log

Element	WL/ Mass	True Conc	ICV 8/16/2012 18:38														
			Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec
Uranium	238	100.000	102.596		102.6												

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Continuing Calibration Verification

SDG: Test

Instrument: ICPMS

Units: ug/L

Chart Number: 081612A2.csv

Acceptable Range: 90% - 110%

Standard Source: INORGANIC VENTURES

Standard ID: See Standards Log

Element	WL/ Mass	True Conc	CCV 8/16/2012 19:12			CCV 8/16/2012 20:06			CCV 8/16/2012 21:00			CCV 8/16/2012 22:21			CCV 8/16/2012 23:21		
			% Found Q Rec			% Found Q Rec			% Found Q Rec			% Found Q Rec			% Found Q Rec		
			Found	Q	Rec	Found	Q	Rec	Found	Q	Rec	Found	Q	Rec	Found	Q	Rec
Uranium	238	100.0	100.715		100.7	100.045		100.0	100.231		100.2	96.948		96.9	96.424		96.4

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Continuing Calibration Verification

SDG: Test

Instrument: ICPMSUnits: ug/LChart Number: 081612A2.csvAcceptable Range: 90% - 110%Standard Source: INORGANIC VENTURESStandard ID: See Standards Log

Element	WL/ Mass	True Conc	CCV 8/17/2012 0:42			CCV 8/17/2012 1:42								
			Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec
Uranium	238	100.0	95.556		95.6	94.256		94.3						

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Contract Required Detection Limit Standard

SDG: Test

Instrument: ICPMS

Units: ug/L

Chart Number: 081612A2.csv

Acceptable Range: 80% - 120%

Standard Source: Inorganic Ventures

Standard ID: See Standards Log

Element	WL/ Mass	True Conc	CRI 8/16/2012 18:52														
			Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec
Uranium	238	1.000	1.000		100.0												

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Initial Calibration Blank Results****SDG:** Test**Instrument:** ICPMS**Units:** ug/L**Chart Number:** 081612A2.csv**Standard Source:****Standard ID:**

			ICB 8/16/2012 18:45				
Element	WL/ Mass	Report Limit	Found Q	Found Q	Found Q	Found Q	Found Q
Uranium	238	1.000	0.23 U				

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Continuing Calibration Blank Results

SDG: Test

Instrument: ICPMS

Units: ug/L

Chart Number: 081612A2.csv

Standard Source:

Standard ID:

Element	WL/ Mass	Report Limit	CCB 8/16/2012 19:19	CCB 8/16/2012 20:13	CCB 8/16/2012 21:07	CCB 8/16/2012 22:27	CCB 8/16/2012 23:28
			Found Q	Found Q	Found Q	Found Q	Found Q
Uranium	238	1.000	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Continuing Calibration Blank Results

SDG: Test

Instrument: ICPMS

Units: ug/L

Chart Number: 081612A2.csv

Standard Source:

Standard ID:

Element	WL/ Mass	Report Limit	CCB 8/17/2012 0:49	CCB 8/17/2012 1:49			
			Found Q	Found Q	Found Q	Found Q	Found Q
Uranium	238	1.000	0.23 U	0.23 U			

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Preparation Blank Results****SDG:** Test**Lab Sample ID:** MV3PGB**Matrix:** Water **Units:** ug/L **Prep Date:** 8/10/2012 **Prep Batch:** 2223062**Weight:** 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	0.23	U	1	ICPMS	8/16/2012	21:13

Comments: Lot #: F2H090401

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Preparation Blank Results

SDG: Test

Lab Sample ID: MV3PJBMatrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223063Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Uranium	238	0.23	1.0	0.23	U	1	ICPMS	8/16/2012	23:35

Comments: Lot #: F2H090401

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Interference Check Standard A

SDG: Test

Instrument: ICPMS

Units: ug/L

Chart Number: 081612A2.csv

Acceptable Range: 80% - 120%

Standard Source: Inorganic Ventures

Standard ID: See Standards Log

				ICSA 8/16/2012 18:59				
Element	WL/ Mass	Rpting Limit	True Conc	Found Q	Found Q	Found Q	Found Q	Found Q
Uranium	238	1		-0.005 U				

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Interference Check Standard AB

SDG: Test

Instrument: ICPMS

Units: ug/L

Chart Number: 081612A2.csv

Acceptable Range: 80% - 120%

Standard Source: Inorganic Ventures

Standard ID: See Standards Log

Element	WL/ Mass	True Conc	ICSAB 8/16/2012 19:05														
			Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec	Found	Q	% Rec
Uranium	238	100.000	101.116		101.1												

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Matrix Spike Sample Results

SDG: Test

Spike Sample ID: MV2Q9S

Original Sample ID: MV2Q9 Client ID: A04DMW604DD0004 S

Matrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223062

Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Uranium	238	108		1080		1000	97.6	1	1	ICPMS	8/16/2012	22:07	8/16/2012	22:34

Comments: Lot #: F2H090401 Sample #: 7

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Matrix Spike Sample Results

SDG: Test

Spike Sample ID: MV2RWS

Original Sample ID: MV2RW Client ID: A04DMW604D0004 S

Matrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223063

Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Uranium	238	105		1080		1000	97.0	1	1	ICPMS	8/17/2012	0:29	8/17/2012	0:56

Comments: Lot #: F2H090401 Sample #: 18

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Matrix Spike Duplicate Sample Results****SDG:** Test**Spike Sample ID:** MV2Q9D**Original Sample ID:** MV2Q9 **Client ID:** A04DMW604DD0004 D**Matrix:** Water **Units:** ug/L **Prep Date:** 8/10/2012 **Prep Batch:** 2223062**Weight:** 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Uranium	238	108		1100		1000	99.3	1	1	ICPMS	8/16/2012	22:07	8/16/2012	22:41

Comments: Lot #: F2H090401 Sample #: 7

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

SDG: Test

Spike Sample ID: MV2RWD

Original Sample ID: MV2RW

Client ID: A04DMW604D0004 D

Matrix: Water

Units: ug/L

Prep Date: 8/10/2012

Prep Batch: 2223063

Weight: 50

Volume: 50

Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Uranium	238	105		1070		1000	96.8	1	1	ICPMS	8/17/2012	0:29	8/17/2012	1:02

Comments: Lot #: F2H090401 Sample #: 18

6.05.2

U Result is less than the IDL

B Result is between IDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

SDG: Test

Matrix Spike Duplicate Sample ID: MV2Q9DMatrix Spike Sample ID: MV2Q9S Client ID: A04DMW604DD0004 DMatrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223062Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	% RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Uranium	238	1080		1100		1.589	1	1	ICPMS	8/16/2012	22:34	8/16/2012	22:41

Comments: Lot #: F2H090401 Sample #: 7

6.05.2

U Result is less than the IDL
 B Result is between IDL and RL
 N Spike recovery failed
 NC Percent recovery was not calculated

Form 6 Equivalent

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

SDG: Test

Matrix Spike Duplicate Sample ID: MV2RWDMatrix Spike Sample ID: MV2RWS Client ID: A04DMW604D0004 DMatrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223063Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	% RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Uranium	238	1080		1070		0.203	1	1	ICPMS	8/17/2012	0:56	8/17/2012	1:02

Comments: Lot #: F2H090401 Sample #: 18

6.05.2

- U Result is less than the IDL
- B Result is between IDL and RL
- N Spike recovery failed
- NC Percent recovery was not calculated
- * Duplicate analysis RPD was not within limits

Form 6 Equivalent

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Laboratory Control Sample Results****SDG:** Test**Lab Sample ID:** MV3PGC**Matrix:** Water **Units:** ug/L **Prep Date:** 8/10/2012 **Prep Batch:** 2223062**Weight:** 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Uranium	238	1000	985	98.486		80-120	1	ICPMS	8/16/2012	21:20

Comments: Lot #: F2H090401

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Laboratory Control Sample Results

SDG: Test

Lab Sample ID: MV3PJCMatrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223063Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Uranium	238	1000	965	96.513		80-120	1	ICPMS	8/16/2012	23:41

Comments: Lot #: F2H090401

6.05.2

LOT # F2H090401-REV

U Result is less than the IDL

B Result is between IDL and RL

Form 7 Equivalent

108 of 672

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Serial Dilution RPD Report

SDG: Test

Serial Dilution Sample ID: MV2Q9V

Original Sample ID: MV2Q9 Client ID: A04DMW604DD0004 V

Matrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223062

Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Uranium	238	108		104		3.938	1	5	ICPMS	8/16/2012	22:07	8/16/2012	22:14

Comments:

6.05.2

U Result is less than the IDL

Form 9 Equivalent

B Result is between IDL and RL

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Serial Dilution RPD Report

SDG: Test

Serial Dilution Sample ID: MV2RWV

Original Sample ID: MV2RW Client ID: A04DMW604D0004 V

Matrix: Water Units: ug/L Prep Date: 8/10/2012 Prep Batch: 2223063

Weight: 50 Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Uranium	238	105		107		1.614	1	5	ICPMS	8/17/2012	0:29	8/17/2012	0:35

Comments:

6.05.2

U Result is less than the IDL

Form 9 Equivalent

B Result is between IDL and RL

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Instrument Detection Limits****SDG:** Test**Instrument:** ICPMS**Units:** ug/L

Element	Mass	Reporting Limit	MDL	Date of MDL
Uranium	238	1.0	0.23	2/22/2012

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Linear Dynamic Ranges****SDG:** Test**Instrument:** ICPMS**Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Uranium	238.00	2000	8/16/2012

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Preparation Log****SDG:** Test**Preparation Batch:** 2223062 **Instrument:** ICPMS **Matrix:** Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
MV3PGB	8/10/2012	50	50	NA
MV3PGC	8/10/2012	50	50	NA
MV2Q3	8/10/2012	50	50	NA
MV2Q4	8/10/2012	50	50	NA
MV2Q5	8/10/2012	50	50	NA
MV2Q6	8/10/2012	50	50	NA
MV2Q7	8/10/2012	50	50	NA
MV2Q8	8/10/2012	50	50	NA
MV2Q9	8/10/2012	50	50	NA
MV2Q9D	8/10/2012	50	50	NA
MV2Q9S	8/10/2012	50	50	NA
MV2RA	8/10/2012	50	50	NA
MV2RC	8/10/2012	50	50	NA
MV2RD	8/10/2012	50	50	NA
MV2RL	8/10/2012	50	50	NA

TESTAMERICA-ST. LOUIS**Metals Data Reporting Form****Preparation Log****SDG:** Test**Preparation Batch:** 2223063**Instrument:** ICPMS**Matrix:** Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
MV3PJB	8/10/2012	50	50	NA
MV3PJC	8/10/2012	50	50	NA
MV2R1	8/10/2012	50	50	NA
MV2R2	8/10/2012	50	50	NA
MV2R4	8/10/2012	50	50	NA
MV2RN	8/10/2012	50	50	NA
MV2RP	8/10/2012	50	50	NA
MV2RQ	8/10/2012	50	50	NA
MV2RR	8/10/2012	50	50	NA
MV2RT	8/10/2012	50	50	NA
MV2RV	8/10/2012	50	50	NA
MV2RW	8/10/2012	50	50	NA
MV2RWD	8/10/2012	50	50	NA
MV2RWS	8/10/2012	50	50	NA
MV2RX	8/10/2012	50	50	NA

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Instrument Runlog

SDG: Test

Instrument: ICPMSChart Number: 081612A2.csv

Lab Sample Name	Client Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ		8/16/2012	15:43
ZZZZZZ		8/16/2012	15:50
ZZZZZZ		8/16/2012	15:57
ZZZZZZ		8/16/2012	16:04
ZZZZZZ		8/16/2012	16:10
ZZZZZZ		8/16/2012	16:17
ZZZZZZ		8/16/2012	16:24
ZZZZZZ		8/16/2012	16:30
ZZZZZZ		8/16/2012	16:37
ZZZZZZ		8/16/2012	16:44
ZZZZZZ		8/16/2012	16:51
ZZZZZZ		8/16/2012	16:57
ZZZZZZ		8/16/2012	17:04
ZZZZZZ		8/16/2012	17:11
ZZZZZZ		8/16/2012	17:17
ZZZZZZ		8/16/2012	17:24
ZZZZZZ		8/16/2012	17:31
ZZZZZZ		8/16/2012	17:38
ZZZZZZ		8/16/2012	17:44
ZZZZZZ		8/16/2012	17:51
ZZZZZZ		8/16/2012	17:58
ZZZZZZ		8/16/2012	18:05
CAL BLK		8/16/2012	18:11
CAL 1		8/16/2012	18:18
CAL 2		8/16/2012	18:25
CAL 3		8/16/2012	18:32
ICV		8/16/2012	18:38
ICB		8/16/2012	18:45
CRI		8/16/2012	18:52
ICSA		8/16/2012	18:59
ICSAB		8/16/2012	19:05
CCV		8/16/2012	19:12
CCB		8/16/2012	19:19
ZZZZZZ		8/16/2012	19:26
ZZZZZZ		8/16/2012	19:32
ZZZZZZ		8/16/2012	19:39
ZZZZZZ		8/16/2012	19:46
ZZZZZZ		8/16/2012	19:52
ZZZZZZ		8/16/2012	19:59

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Instrument Runlog

SDG: Test

Instrument: ICPMSChart Number: 081612A2.csv

Lab Sample Name	Client Sample Name	Date of Analysis	Time of Analysis
CCV		8/16/2012	20:06
CCB		8/16/2012	20:13
ZZZZZZ		8/16/2012	20:19
ZZZZZZ		8/16/2012	20:26
ZZZZZZ		8/16/2012	20:33
ZZZZZZ		8/16/2012	20:40
ZZZZZZ		8/16/2012	20:46
ZZZZZZ		8/16/2012	20:53
CCV		8/16/2012	21:00
CCB		8/16/2012	21:07
MV3PGB		8/16/2012	21:13
MV3PGC		8/16/2012	21:20
MV2Q3	A04DMW713D0004	8/16/2012	21:27
MV2Q4	A04DMW708DD0004	8/16/2012	21:34
MV2Q5	A04BMW704DD0004	8/16/2012	21:40
MV2Q6	A04BMW605D0004	8/16/2012	21:47
MV2Q7	A04BMW260004	8/16/2012	21:54
MV2Q8	A04BMW707DD0004	8/16/2012	22:00
MV2Q9	A04DMW604DD0004	8/16/2012	22:07
MV2Q9V	A04DMW604DD0004 V	8/16/2012	22:14
CCV		8/16/2012	22:21
CCB		8/16/2012	22:27
MV2Q9S	A04DMW604DD0004 S	8/16/2012	22:34
MV2Q9D	A04DMW604DD0004 D	8/16/2012	22:41
ZZZZZZ		8/16/2012	22:47
MV2RA	A04DMW709DD004	8/16/2012	22:54
MV2RC	A04DMW710D004	8/16/2012	23:01
MV2RD	A04DMW710DD004	8/16/2012	23:08
MV2RL	DUPLICATE 02	8/16/2012	23:14
CCV		8/16/2012	23:21
CCB		8/16/2012	23:28
MV3PJB		8/16/2012	23:35
MV3PJC		8/16/2012	23:41
MV2RN	A04DMW713D0004	8/16/2012	23:48
MV2RP	A04DMW708DD0004	8/16/2012	23:55
MV2RQ	A04BMW704DD0004	8/17/2012	0:02
MV2RR	A04BMW605D0004	8/17/2012	0:08
MV2RT	A04BMW260004	8/17/2012	0:15
MV2RV	A04BMW707DD0004	8/17/2012	0:22

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Instrument Runlog

SDG: Test

Instrument: ICPMS

Chart Number: 081612A2.csv

Lab Sample Name	Client Sample Name	Date of Analysis	Time of Analysis
MV2RW	A04DMW604D0004	8/17/2012	0:29
MV2RWV	A04DMW604D0004 V	8/17/2012	0:35
CCV		8/17/2012	0:42
CCB		8/17/2012	0:49
MV2RWS	A04DMW604D0004 S	8/17/2012	0:56
MV2RWD	A04DMW604D0004 D	8/17/2012	1:02
ZZZZZZ		8/17/2012	1:09
MV2RX	A04DMW709DD004	8/17/2012	1:15
MV2R1	A04DMW710D004	8/17/2012	1:22
MV2R2	A04DMW710DD004	8/17/2012	1:29
MV2R4	DUPLICATE 02	8/17/2012	1:36
CCV		8/17/2012	1:42
CCB		8/17/2012	1:49
ZZZZZZ		8/17/2012	1:56
ZZZZZZ		8/17/2012	2:03
ZZZZZZ		8/17/2012	2:09
ZZZZZZ		8/17/2012	2:16
ZZZZZZ		8/17/2012	2:23
ZZZZZZ		8/17/2012	2:30
ZZZZZZ		8/17/2012	2:37
ZZZZZZ		8/17/2012	2:43
ZZZZZZ		8/17/2012	2:50
ZZZZZZ		8/17/2012	2:57
ZZZZZZ		8/17/2012	3:04
ZZZZZZ		8/17/2012	3:10
ZZZZZZ		8/17/2012	3:17
ZZZZZZ		8/17/2012	3:24
ZZZZZZ		8/17/2012	3:31
ZZZZZZ		8/17/2012	3:37
ZZZZZZ		8/17/2012	3:44
ZZZZZZ		8/17/2012	3:51
ZZZZZZ		8/17/2012	3:57
ZZZZZZ		8/17/2012	4:04
ZZZZZZ		8/17/2012	4:11
ZZZZZZ		8/17/2012	4:18
ZZZZZZ		8/17/2012	4:24
ZZZZZZ		8/17/2012	4:31
ZZZZZZ		8/17/2012	4:38
ZZZZZZ		8/17/2012	4:45

TESTAMERICA-ST. LOUIS

Metals Data Reporting Form

Instrument Runlog

SDG: Test

Instrument: ICPMSChart Number: 081612A2.csv

Lab Sample Name	Client Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ		8/17/2012	4:51
ZZZZZZ		8/17/2012	4:58
ZZZZZZ		8/17/2012	5:05
ZZZZZZ		8/17/2012	5:11
ZZZZZZ		8/17/2012	5:18
ZZZZZZ		8/17/2012	5:25
ZZZZZZ		8/17/2012	5:32
ZZZZZZ		8/17/2012	5:38
ZZZZZZ		8/17/2012	5:45
ZZZZZZ		8/17/2012	5:52
ZZZZZZ		8/17/2012	5:59
ZZZZZZ		8/17/2012	6:05
ZZZZZZ		8/17/2012	6:12
ZZZZZZ		8/17/2012	6:19
ZZZZZZ		8/17/2012	6:26
ZZZZZZ		8/17/2012	6:32
ZZZZZZ		8/17/2012	6:39
ZZZZZZ		8/17/2012	6:46
ZZZZZZ		8/17/2012	6:53
ZZZZZZ		8/17/2012	6:59
ZZZZZZ		8/17/2012	7:06
ZZZZZZ		8/17/2012	7:13
ZZZZZZ		8/17/2012	7:20
ZZZZZZ		8/17/2012	7:26
ZZZZZZ		8/17/2012	7:33
ZZZZZZ		8/17/2012	7:40
ZZZZZZ		8/17/2012	7:47
ZZZZZZ		8/17/2012	7:54

Alpha Spectroscopy

Uranium

Analysis Report for Alpha Spectroscopy

Batch: 2226014 Operator: 3166

Sample ID	Work Order #	Aliquot	Dilution	Sigma	Instrument	RunDateTime	RunDuration	TracerID	TracerAnalyte	TracerAdded	TracerYield	TruncYld	Decay
F2H090401-001	MV2Q31AC	500.0500 mL	1.00	2.00	AV43	8 / 15 / 12 15:48	240.00	Rad11-0087	U-232	6.979E+000	82.46%	False	False
				<u>Analyte</u>			<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232			5.755E+000 pCi/L	6.573E-001	8.159E-001	1.330E-001	4.801E-002		
				U-234			1.267E-001 pCi/L	9.633E-002	9.692E-002	8.967E-002	2.780E-002		
				U-235			1.577E-002 pCi/L	4.335E-002	4.337E-002	9.557E-002	2.446E-002		
				U-238			9.275E-002 pCi/L	8.347E-002	8.383E-002	8.950E-002	2.774E-002		
F2H090401-002	MV2Q41AC	500.4000 mL	1.00	2.00	AV44	8 / 15 / 12 15:48	240.00	Rad11-0087	U-232	6.974E+000	83.45%	False	False
				<u>Analyte</u>			<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232			5.820E+000 pCi/L	6.567E-001	8.187E-001	1.178E-001	3.922E-002		
				U-234			7.042E+000 pCi/L	6.906E-001	9.093E-001	8.973E-002	2.781E-002		
				U-235			3.998E-001 pCi/L	1.834E-001	1.865E-001	5.694E-002	2.447E-002		
				U-238			7.121E+000 pCi/L	6.933E-001	9.157E-001	4.566E-002	1.963E-002		
F2H090401-003	MV2Q51AC	100.2200 mL	1.00	2.00	AV49	8 / 15 / 12 23:46	400.00	Rad11-0087	U-232	3.482E+001	85.47%	False	False
				<u>Analyte</u>			<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232			2.976E+001 pCi/L	2.392E+000	3.460E+000	3.084E-001	9.529E-002		
				U-234			3.274E+001 pCi/L	2.429E+000	3.669E+000	2.355E-001	6.757E-002		
				U-235			9.613E-001 pCi/L	4.797E-001	4.864E-001	3.517E-001	1.189E-001		
				U-238			2.609E+001 pCi/L	2.170E+000	3.084E+000	3.753E-001	1.508E-001		
F2H090401-004	MV2Q61AC	500.3000 mL	1.00	2.00	AV50	8 / 15 / 12 23:46	400.00	Rad11-0087	U-232	6.976E+000	45.91%	False	False
				<u>Analyte</u>			<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232			3.202E+000 pCi/L	6.757E-001	7.273E-001	1.511E-001	5.343E-002		
				U-234			8.577E+001 pCi/L	2.474E+000	7.618E+000	1.120E-001	3.789E-002		
				U-235			3.752E+000 pCi/L	5.772E-001	6.576E-001	6.007E-002	3.334E-002		
				U-238			8.256E+001 pCi/L	2.425E+000	7.346E+000	4.818E-002	2.674E-002		
F2H090401-005	MV2Q71AC	500.0600 mL	1.00	2.00	AV51	8 / 15 / 12 23:46	400.00	Rad11-0087	U-232	6.979E+000	62.97%	False	False
				<u>Analyte</u>			<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232			4.395E+000 pCi/L	5.710E-001	6.800E-001	1.303E-001	5.037E-002		
				U-234			4.902E+001 pCi/L	1.579E+000	4.410E+000	3.440E-002	1.909E-002		
				U-235			2.477E+000 pCi/L	3.967E-001	4.479E-001	8.279E-002	2.376E-002		
				U-238			4.760E+001 pCi/L	1.554E+000	4.290E+000	6.640E-002	1.905E-002		
F2H090401-006	MV2Q81AC	500.2000 mL	1.00	2.00	AV52	8 / 15 / 12 23:46	400.00	Rad11-0087	U-232	6.977E+000	85.26%	False	False
				<u>Analyte</u>			<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232			5.949E+000 pCi/L	4.830E-001	6.950E-001	1.100E-001	4.514E-002		
				U-234			1.476E+001 pCi/L	7.336E-001	1.440E+000	8.958E-002	3.861E-002		
				U-235			1.084E-001 pCi/L	7.215E-002	7.273E-002	5.920E-002	1.699E-002		
				U-238			3.547E+000 pCi/L	3.620E-001	4.688E-001	1.040E-001	4.719E-002		

Sample ID	Work Order #	Aliquot	Dilution	Sigma	Instrument	RunDate	Time	RunDuration	TracerID	TracerAnalyte	TracerAdded	TracerYield	TruncYld	Decay
F2H090401-007	MV2Q91AC	500.3400 mL	1.00	2.00	AV53	8 / 15 / 12	23:46	400.00	Rad11-0087	U-232	6.975E+000	69.34%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					4.836E+000 pCi/L		5.461E-001	6.806E-001	3.463E-002	1.756E-002		
		U-234					3.511E+001 pCi/L		1.285E+000	3.217E+000	1.301E-001	5.841E-002		
		U-235					1.503E+000 pCi/L		2.962E-001	3.220E-001	3.949E-002	2.192E-002		
		U-238					3.519E+001 pCi/L		1.284E+000	3.222E+000	7.351E-002	2.486E-002		
F2H090401-007D	MV2Q91AH	500.3500 mL	1.00	2.00	AV54	8 / 15 / 12	23:46	400.00	Rad11-0087	U-232	6.975E+000	63.57%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					4.434E+000 pCi/L		5.701E-001	6.810E-001	1.300E-001	5.024E-002		
		U-234					4.392E+001 pCi/L		1.493E+000	3.980E+000	3.431E-002	1.904E-002		
		U-238					4.320E+001 pCi/L		1.479E+000	3.919E+000	8.965E-002	3.291E-002		
F2H090401-007S	MV2Q91AG	500.2600 mL	1.00	2.00	AV55	8 / 15 / 12	23:46	400.00	Rad11-0087	U-232	6.976E+000	70.87%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					4.944E+000 pCi/L		5.467E-001	6.865E-001	9.911E-002	3.505E-002		
		U-234					3.839E+001 pCi/L		1.341E+000	3.493E+000	9.780E-002	3.929E-002		
		U-238					3.866E+001 pCi/L		1.345E+000	3.515E+000	1.151E-001	4.960E-002		
F2H090401-008	MV2RA1AC	500.0800 mL	1.00	2.00	AV57	8 / 15 / 12	15:48	240.00	Rad11-0087	U-232	6.979E+000	74.71%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					5.214E+000 pCi/L		6.839E-001	8.121E-001	1.750E-001	7.004E-002		
		U-234					2.843E+001 pCi/L		1.439E+000	2.788E+000	9.663E-002	2.995E-002		
		U-235					1.830E+000 pCi/L		4.080E-001	4.360E-001	1.030E-001	2.635E-002		
		U-238					2.855E+001 pCi/L		1.441E+000	2.798E+000	1.071E-001	3.661E-002		
F2H090401-009	MV2RC1AC	500.0800 mL	1.00	2.00	AV60	8 / 15 / 12	15:48	240.00	Rad11-0087	U-232	6.979E+000	81.06%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					5.657E+000 pCi/L		6.647E-001	8.171E-001	1.287E-001	4.486E-002		
		U-234					1.877E+001 pCi/L		1.140E+000	1.946E+000	1.019E-001	3.485E-002		
		U-235					1.119E+000 pCi/L		3.104E-001	3.243E-001	5.824E-002	2.504E-002		
		U-238					1.824E+001 pCi/L		1.122E+000	1.899E+000	9.161E-002	2.840E-002		
F2H090401-010	MV2RD1AC	500.1000 mL	1.00	2.00	AV61	8 / 15 / 12	23:46	400.00	Rad11-0087	U-232	6.978E+000	83.66%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					5.838E+000 pCi/L		4.972E-001	6.984E-001	9.901E-002	3.827E-002		
		U-234					8.789E+000 pCi/L		5.837E-001	9.411E-001	8.073E-002	3.243E-002		
		U-235					5.859E-001 pCi/L		1.709E-001	1.778E-001	8.515E-002	3.126E-002		
		U-238					9.610E+000 pCi/L		6.096E-001	1.012E+000	8.057E-002	3.237E-002		
F2H090401-011	MV2RL1AC	500.3800 mL	1.00	2.00	AV63	8 / 15 / 12	23:46	400.00	Rad11-0087	U-232	6.975E+000	50.97%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232					3.555E+000 pCi/L		6.480E-001	7.135E-001	1.675E-001	6.475E-002		
		U-234					8.048E+001 pCi/L		2.294E+000	7.139E+000	1.026E-001	3.471E-002		
		U-235					3.884E+000 pCi/L		5.621E-001	6.500E-001	5.503E-002	3.054E-002		
		U-238					7.866E+001 pCi/L		2.265E+000	6.985E+000	8.536E-002	2.449E-002		
F2H130000-014B	MV35G1AA	1000.0000 mL	1.00	2.00	AV119	8 / 15 / 12	15:48	240.00	Rad11-0087	U-232	3.490E+000	92.63%	False	False
		<u>Analyte</u>					<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		

Sample ID	Work Order #	Aliquot	Dilution	Sigma	Instrument	RunDateTime	RunDuration	TracerID	TracerAnalyte	TracerAdded	TracerYield	TruncYld	Decay																								
F2H130000-014C	MV35G1AC	1000.0000 mL	1.00	2.00	AV120	8 / 15 / 12 15:48	240.00	Rad11-0087	U-232	3.490E+000	90.32%	False	False																								
														U-232	3.233E+000	pCi/L	3.122E-001	4.138E-001	4.916E-002	1.536E-002																	
														U-234	1.338E-002	pCi/L	2.196E-002	2.199E-002	3.476E-002	8.894E-003																	
														U-235	-2.379E-003	pCi/L	4.758E-003	4.762E-003	4.325E-002	1.107E-002																	
U-238	0.000E+000	pCi/L	3.816E-003	3.816E-003	2.065E-002	8.877E-003																															
<table><tr><th><u>Analyte</u></th><th><u>Activity</u></th><th><u>CountUnc</u></th><th><u>TotalUnc</u></th><th><u>MDA</u></th><th><u>DLC</u></th></tr><tr><td>U-232</td><td>3.152E+000</td><td>pCi/L</td><td>3.152E-001</td><td>4.117E-001</td><td>3.871E-002</td></tr><tr><td>U-234</td><td>3.590E+000</td><td>pCi/L</td><td>3.348E-001</td><td>4.506E-001</td><td>2.112E-002</td></tr><tr><td>U-238</td><td>3.379E+000</td><td>pCi/L</td><td>3.246E-001</td><td>4.312E-001</td><td>3.541E-002</td></tr></table>														<u>Analyte</u>	<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>	U-232	3.152E+000	pCi/L	3.152E-001	4.117E-001	3.871E-002	U-234	3.590E+000	pCi/L	3.348E-001	4.506E-001	2.112E-002	U-238	3.379E+000	pCi/L	3.246E-001	4.312E-001	3.541E-002
<u>Analyte</u>	<u>Activity</u>	<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>																																
U-232	3.152E+000	pCi/L	3.152E-001	4.117E-001	3.871E-002																																
U-234	3.590E+000	pCi/L	3.348E-001	4.506E-001	2.112E-002																																
U-238	3.379E+000	pCi/L	3.246E-001	4.312E-001	3.541E-002																																

Laboratory Control Sample Information

Sample ID	WRKNO	Analyte	Activity	StdAdded	Recovery	LCL	UCL	ZFactor
F2H130000-014C	MV35G1AC	U-234	3.590E+000	3.265E+000	109.96%	84.00	120.00	1.0675
	MV35G1AC	U-238	3.379E+000	3.390E+000	99.66%	83.00	121.00	-0.0372

Sample Duplicate Information

Sample ID	Analyte	Sample Activity	Dup Sample ID	Dup Activity	RPD	RER	DER	Qualifier	ZFactor
F2H090401-007S	U-234	3.839E+001	F2H090401-007D	4.392E+001	13.44%	7.403E-001	2.089E+000		2.0894 J
F2H090401-007S	U-238	3.866E+001	F2H090401-007D	4.320E+001	11.09%	6.104E-001	1.724E+000		1.7239

Matrix Spike Information

SampleID	SampMSID	Analyte	Sample Activity	MS Activity	StdAdded	MSRecovery
F2H090401-007	F2H090401-007S	U-238	3.519E+001	3.866E+001	6.777E+000	51.29% (68-143)
F2H090401-007	F2H090401-007D	U-234	3.511E+001	4.392E+001	6.526E+000	135.09%
F2H090401-007	F2H090401-007D	U-238	3.519E+001	4.320E+001	6.775E+000	118.27%
F2H090401-007	F2H090401-007S	U-234	3.511E+001	3.839E+001	6.527E+000	50.31% (65-146)

Blanks Information

SampleID	WRKNO	Analyte	Activity	UncTotal	ZFactor
F2H130000-014B	MV35G1AA	U-234	1.338E-002	2.199E-002	1.2170
F2H130000-014B	MV35G1AA	U-235	-2.379E-003	4.762E-003	-0.9991
F2H130000-014B	MV35G1AA	U-238	0.000E+000	3.816E-003	0.0000

Sample Name: F2H090401-001

SampleType: Sample

: MV2Q31AC

Sample Collection Date: 8/3/2012 1:40:00PM

Batch Name: 2226014

AnalysisID: 535615

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 82.46%

Acquisition

Detector: AV43

Serial Number: 50-051c5

Acquisition Start Date: 8/15/2012 3:48:31PM

Live Time: 240.00 min.

Real Time: 240.04 min.

Background Date: 7/24/2012 9:07:02PM

Background Info: Sample: ICB;AV43; Det: AV43; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-9794;AV43-20120607

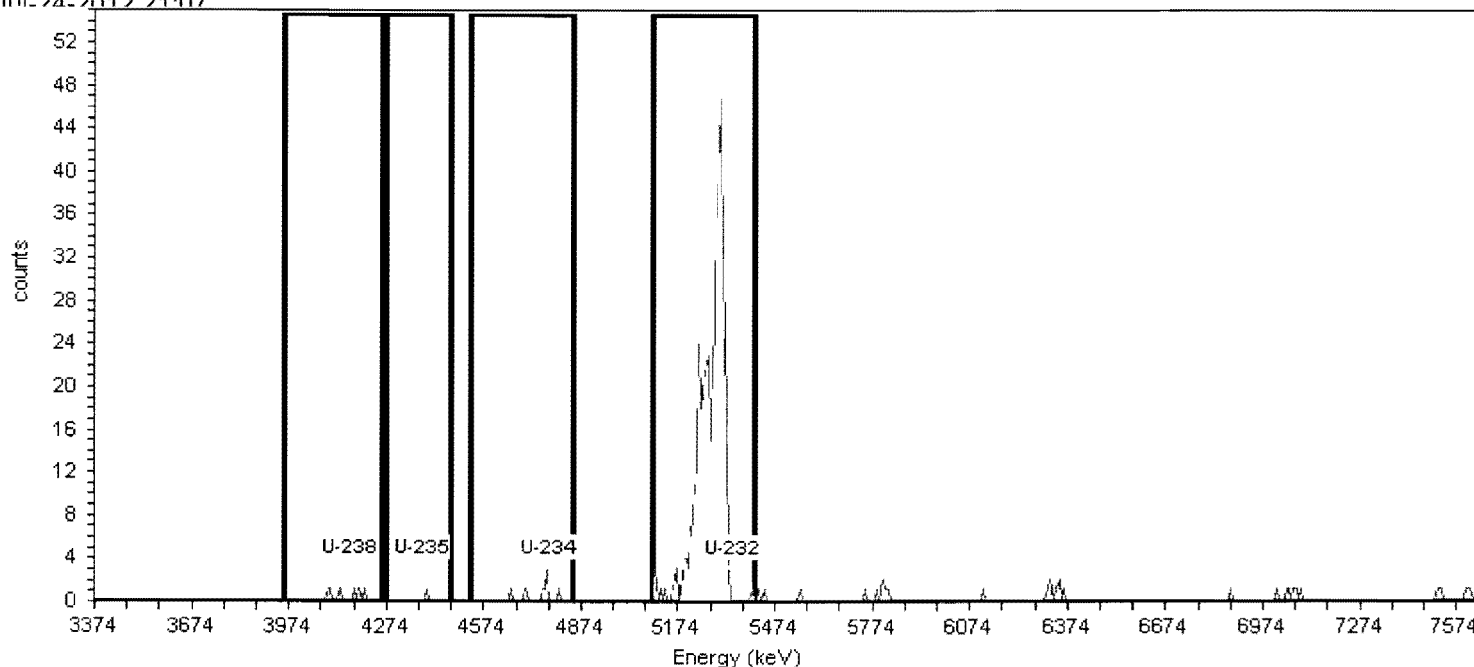
Calibration Date: 6/7/2012 7:50:31PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.99% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:46:04PM

MDA Constants: $K_{\alpha} = 1.65$, $K_{\beta} = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	131.549	100.0	6	0.5000	5.50	9.275E-002	8.347E-002	8.38E-002	2.774E-002	8.950E-002
U-235	4381.179	4269.316	4470.670	18.260	80.2	1	0.2500	0.75	1.577E-002	4.335E-002	4.34E-002	2.446E-002	9.557E-002
U-234	4776.430	4530.331	4851.005	45.784	99.8	8	0.5000	7.50	1.267E-001	9.633E-002	9.69E-002	2.780E-002	8.967E-002
U-232	5343.203	5097.104	5410.321	85.213	100.1	380	1.5000	378.50	5.755E+000	6.573E-001	8.16E-001	4.801E-002	1.330E-001

Sample Name: F2H090401-002

Sample Type: Sample

: MV2Q41AC

Sample Collection Date: 8/3/2012 3:20:00PM

Batch Name: 2226014

AnalysisID: 535616

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5004L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 83.45%

Acquisition

Detector: AV44

Serial Number: 50-051JJ1

Acquisition Start Date: 8/15/2012 3:48:32PM

Live Time: 240.00 min.

Real Time: 240.04 min.

Background Date: 7/24/2012 9:07:03PM

Background Info: Sample: ICB;AV44; Det: AV44; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-9795;AV44-20120610

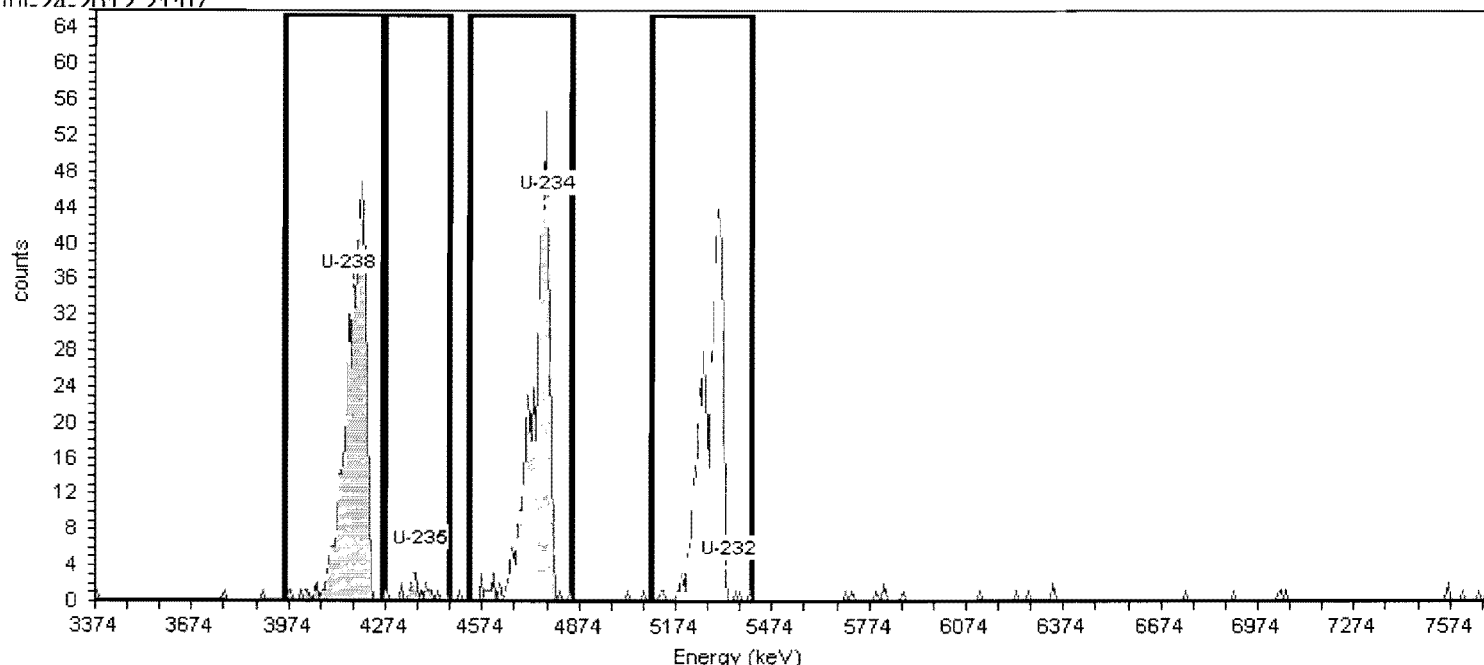
Calibration Date: 6/11/2012 3:27:57PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.64% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:46:04PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	68.398	100.0	422	0.0000	422.00	7.121E+000	6.933E-001	9.16E-001	1.963E-002	4.566E-002
U-235	4381.179	4269.316	4470.670	22.149	80.2	19	0.0000	19.00	3.998E-001	1.834E-001	1.86E-001	2.447E-002	5.694E-002
U-234	4776.430	4530.331	4851.005	57.258	99.8	417	0.5000	416.50	7.042E+000	6.906E-001	9.09E-001	2.781E-002	8.973E-002
U-232	5343.203	5097.104	5410.321	87.616	100.1	379	1.0000	378.00	5.820E+000	6.567E-001	8.19E-001	3.922E-002	1.178E-001

Sample Name: F2H090401-003

SampleType: Sample

: MV2Q51AC

Sample Collection Date: 8/6/2012 9:20:00AM

Batch Name: 2226014

AnalysisID: 535788

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.1002L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 85.47%

Acquisition

Detector: AV49

Serial Number: 46-022AA3

Acquisition Start Date: 8/15/2012 11:46:28PM

Live Time: 400.00 min.

Real Time: 400.04 min.

Background Date: 7/24/2012 9:07:08PM

Background Info: Sample: ICB;AV49; Det: AV49; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-7107;AV49-20120610

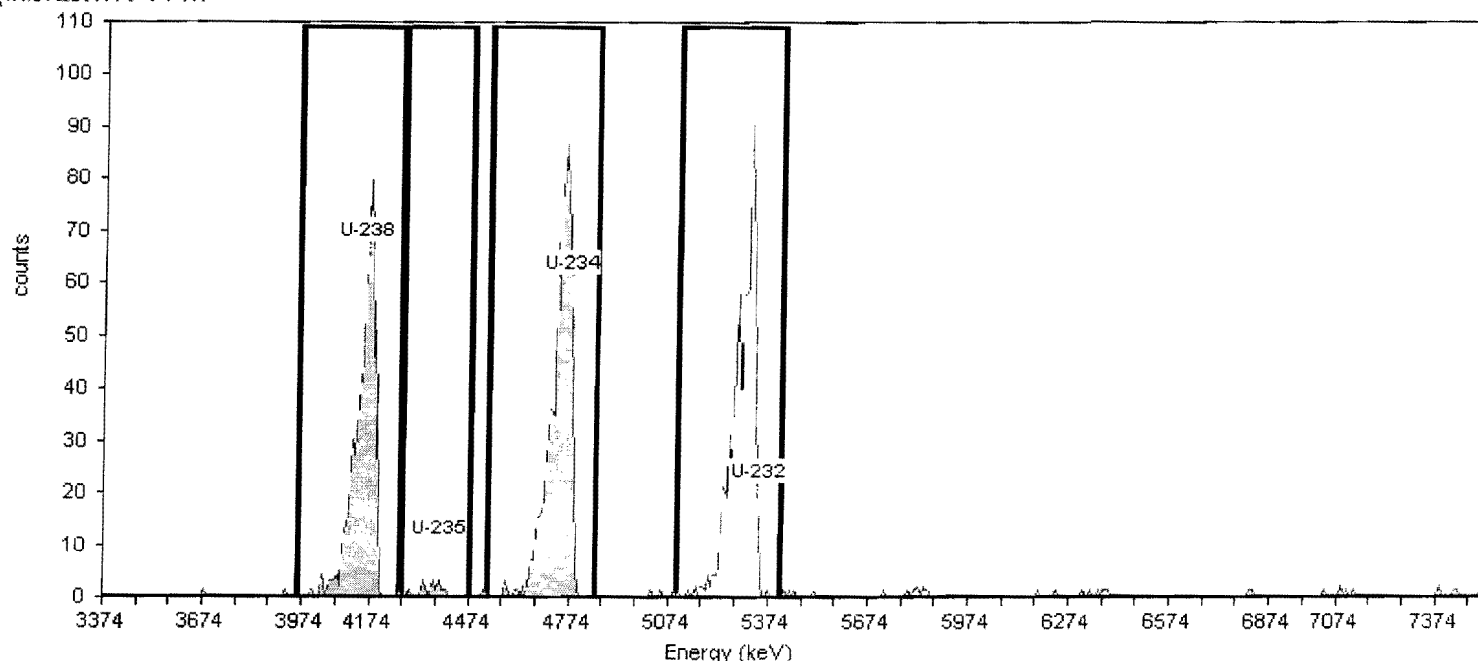
Calibration Date: 6/10/2012 8:17:41PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.27% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	59.971	100.0	583	2.0833	580.92	2.609E+001	2.170E+000	3.08E+000	1.508E-001	3.753E-001
U-235	4381.179	4269.316	4470.670	65.988	80.2	18	0.8333	17.17	9.613E-001	4.797E-001	4.86E-001	1.189E-001	3.517E-001
U-234	4776.430	4530.331	4851.005	61.224	99.8	728	0.4167	727.58	3.274E+001	2.429E+000	3.67E+000	6.757E-002	2.355E-001
U-232	5343.203	5097.104	5410.321	73.479	100.1	710	0.8333	709.17	2.976E+001	2.392E+000	3.46E+000	9.529E-002	3.084E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:55:54AM 8/16/2012

Sample Name: F2H090401-004

SampleType: Sample

: MV2Q61AC

Sample Collection Date: 8/6/2012 10:05:00AM

Batch Name: 2226014

AnalysisID: 535789

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5003L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 45.91%

Acquisition

Detector: AV50

Serial Number: 50-060W2

Acquisition Start Date: 8/15/2012 11:46:30PM

Live Time: 400.00 min.

Real Time: 400.04 min.

Background Date: 7/25/2012 4:09:54PM

Background Info: Sample: ICB;AV50; Det: AV50; Spectrum #1;

Jul 25, 2012 16:09

Calibration Name: IC-8874;AV50-20120610

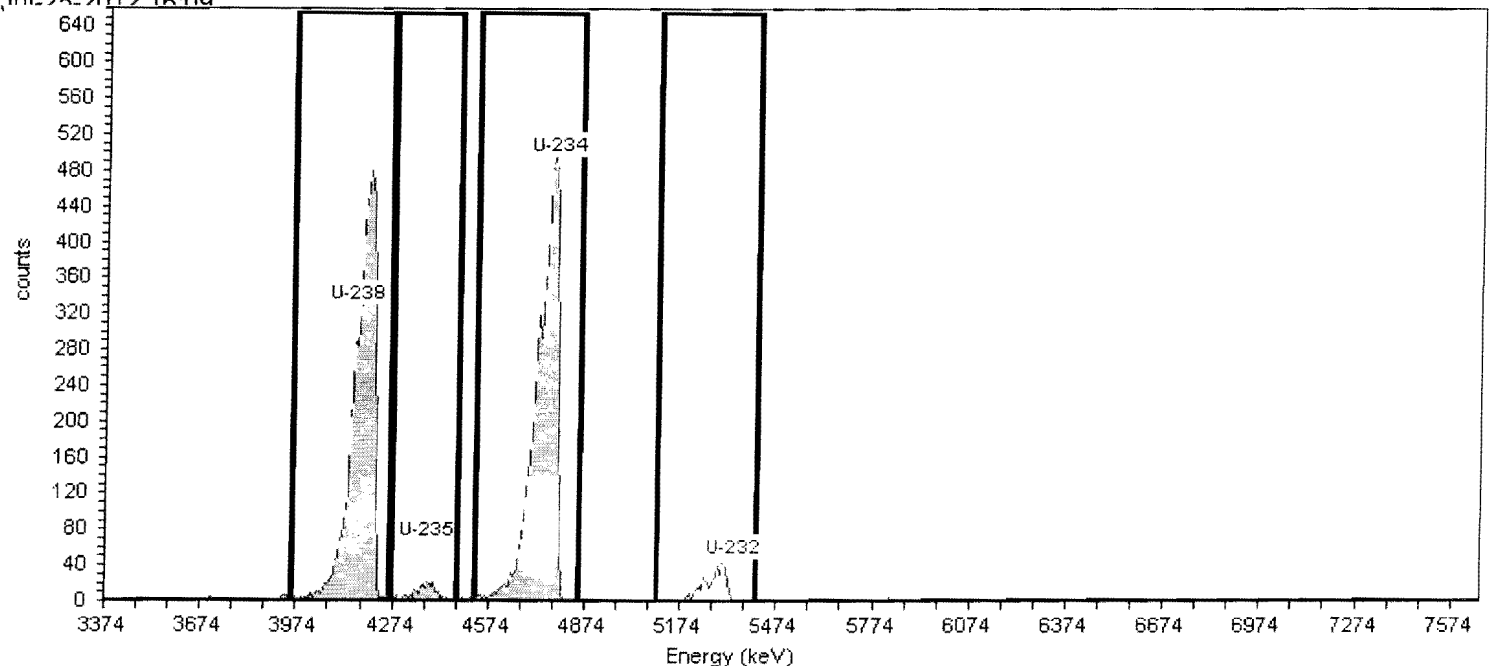
Calibration Date: 6/10/2012 8:17:58PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.54% +/- 0.39% TPU(2 sigma)

**General Analysis**

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	68.722	100.0	4637	0.0000	4637.00	8.256E+001	2.425E+000	7.35E+000	2.674E-002	4.818E-002
U-235	4381.179	4269.316	4470.670	56.250	80.2	169	0.0000	169.00	3.752E+000	5.772E-001	6.58E-001	3.334E-002	6.007E-002
U-234	4776.430	4530.331	4851.005	75.076	99.8	4809	0.8333	4808.17	8.577E+001	2.474E+000	7.62E+000	3.789E-002	1.120E-001
U-232	5343.203	5097.104	5410.321	80.092	100.1	360	1.6667	358.33	3.202E+000	6.757E-001	7.27E-001	5.343E-002	1.511E-001

Sample Name: F2H090401-005

SampleType: Sample

: MV2Q71AC

Sample Collection Date: 8/6/2012 11:45:00AM

Batch Name: 2226014

AnalysisID: 535790

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 62.97%

Acquisition

Detector: AV51

Serial Number: 48-10911

Acquisition Start Date: 8/15/2012 11:46:31PM

Live Time: 400.00 min.

Real Time: 400.03 min.

Background Date: 7/24/2012 9:07:10PM

Background Info: Sample: ICB;AV51; Det: AV51; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-8875;AV51-20120610

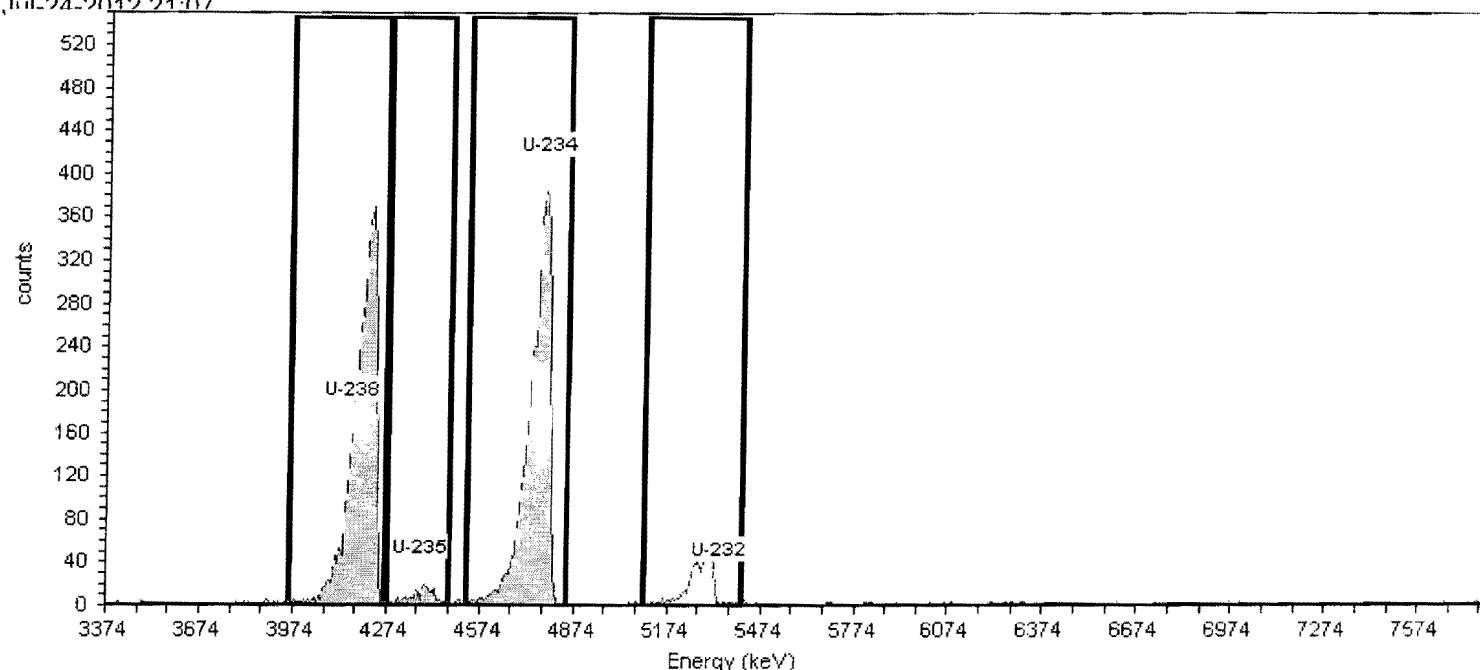
Calibration Date: 6/10/2012 8:18:12PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.19% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	42.560	100.0	3752	0.4167	3751.58	4.760E+001	1.554E+000	4.29E+000	1.905E-002	6.640E-002
U-235	4381.179	4269.316	4470.670	69.998	80.2	157	0.4167	156.58	2.477E+000	3.967E-001	4.48E-001	2.376E-002	8.279E-002
U-234	4776.430	4530.331	4851.005	72.087	99.8	3856	0.0000	3856.00	4.902E+001	1.579E+000	4.41E+000	1.909E-002	3.440E-002
U-232	5343.203	5097.104	5410.321	77.873	100.1	506	2.9167	503.08	4.395E+000	5.710E-001	6.80E-001	5.037E-002	1.303E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:56:06AM 8/16/2012

Sample Name: F2H090401-006

Sample Type: Sample

: MV2Q81AC

Sample Collection Date: 8/6/2012 12:25:00PM

Batch Name: 2226014

AnalysisID: 535791

Sample

Spectrum #1 Analysis #1

Sample Volume: 0.5002L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 85.26%

Acquisition

Detector: AV52

Serial Number:

Acquisition Start Date: 8/15/2012 11:46:34PM

Live Time: 400.00 min.

Real Time: 400.03 min.

Background Date: 7/25/2012 4:09:55PM

Background Info: Sample: ICB;AV52; Det: AV52; Spectrum #1;

Jul-25-2012 16:00

Calibration Name: IC-8876;AV52-20120610

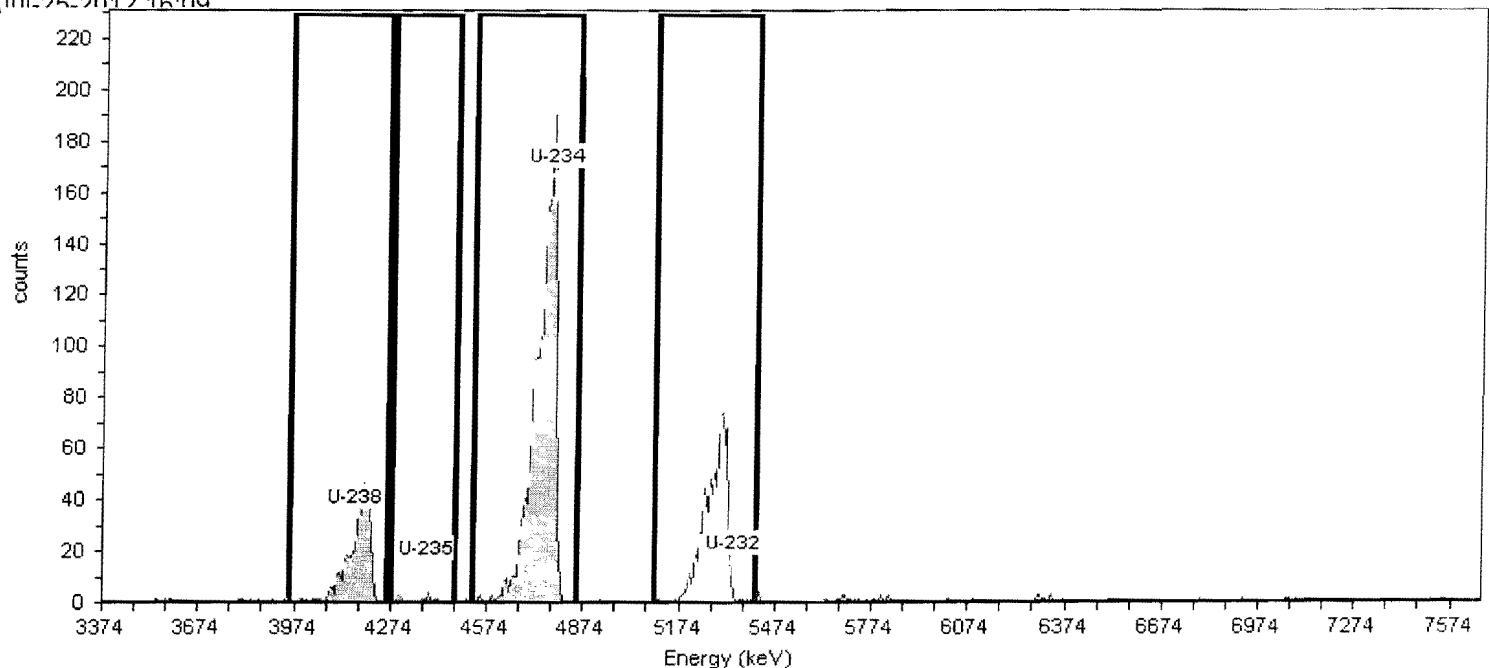
Calibration Date: 6/10/2012 8:18:26PM

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Energy Cal: Quadratic = 0.0000 keV / Ch²

Efficiency: 29.11% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	62.186	100.0	396	5.0000	391.00	3.547E+000	3.620E-001	4.69E-001	4.719E-002	1.040E-001
U-235	4381.179	4269.316	4470.670	102.542	80.2	10	0.4167	9.58	1.084E-001	7.215E-002	7.27E-002	1.699E-002	5.920E-002
U-234	4776.430	4530.331	4851.005	70.454	99.8	1627	3.3333	1623.67	1.476E+001	7.336E-001	1.44E+000	3.861E-002	8.958E-002
U-232	5343.203	5097.104	5410.321	80.806	100.1	708	4.5833	703.42	5.949E+000	4.830E-001	6.95E-001	4.514E-002	1.100E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:56:12AM 8/16/2012

Sample Name: F2H090401-007

Sample Type: Sample

: MV2Q91AC

Sample Collection Date: 8/6/2012 12:00:00AM

Batch Name: 2226014

Analysis ID: 535792

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5003L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 69.34%

Acquisition

Detector: AV53

Serial Number: 50-051A6

Acquisition Start Date: 8/15/2012 11:46:35PM

Live Time: 400.00 min.

Real Time: 400.03 min.

Background Date: 7/24/2012 9:07:12PM

Background Info: Sample: ICB;AV53; Det: AV53; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-8877;AV53-20120610

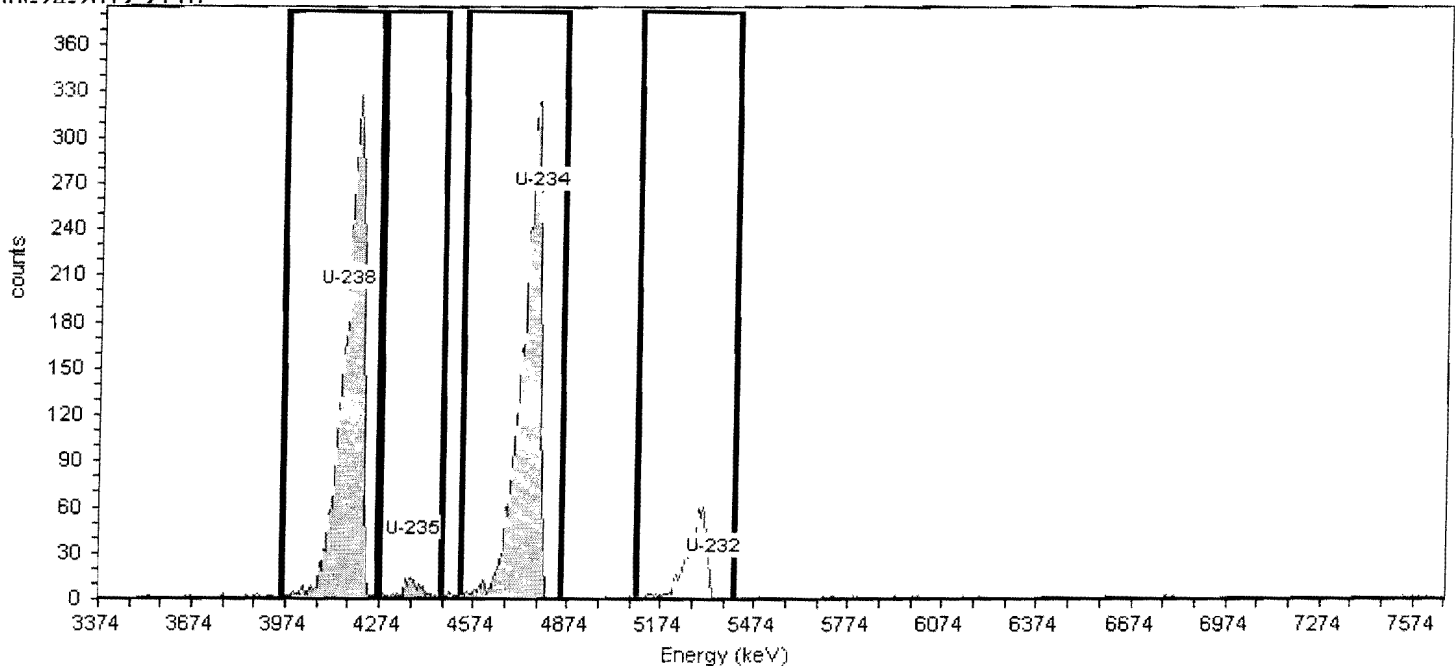
Calibration Date: 6/10/2012 8:18:38PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.73% +/- 0.32% TPU(2 sigma)

**General Analysis**

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	67.134	100.0	3007	0.8333	3006.17	3.519E+001	1.284E+000	3.22E+000	2.486E-002	7.351E-002
U-235	4381.179	4269.316	4470.670	57.930	80.2	103	0.0000	103.00	1.503E+000	2.962E-001	3.22E-001	2.192E-002	3.949E-002
U-234	4776.430	4530.331	4851.005	65.450	99.8	2998	4.5833	2993.42	3.511E+001	1.285E+000	3.22E+000	5.841E-002	1.301E-001
U-232	5343.203	5097.104	5410.321	65.289	100.1	545	0.0000	545.00	4.836E+000	5.461E-001	6.81E-001	1.756E-002	3.463E-002

Alpha-Spectroscopy
Analysis ReportTestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:56:18AM 8/16/2012

Sample Name: F2H090401-007D

Sample Type: Sample

: MV2Q91AH

Sample Collection Date: 8/6/2012 12:00:00AM

Batch Name: 2226014

AnalysisID: 535793

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5004L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 63.57%

Acquisition

Detector: AV54

Serial Number: 48-046116

Acquisition Start Date: 8/15/2012 11:46:37PM

Live Time: 400.00 min.

Real Time: 400.03 min.

Background Date: 7/27/2012 10:53:52AM

Background Info: Sample: ICB;AV54; Det: AV54; Spectrum #1;

Jul-27-2012 10:53

Calibration Name: IC-9520;AV54-20120610

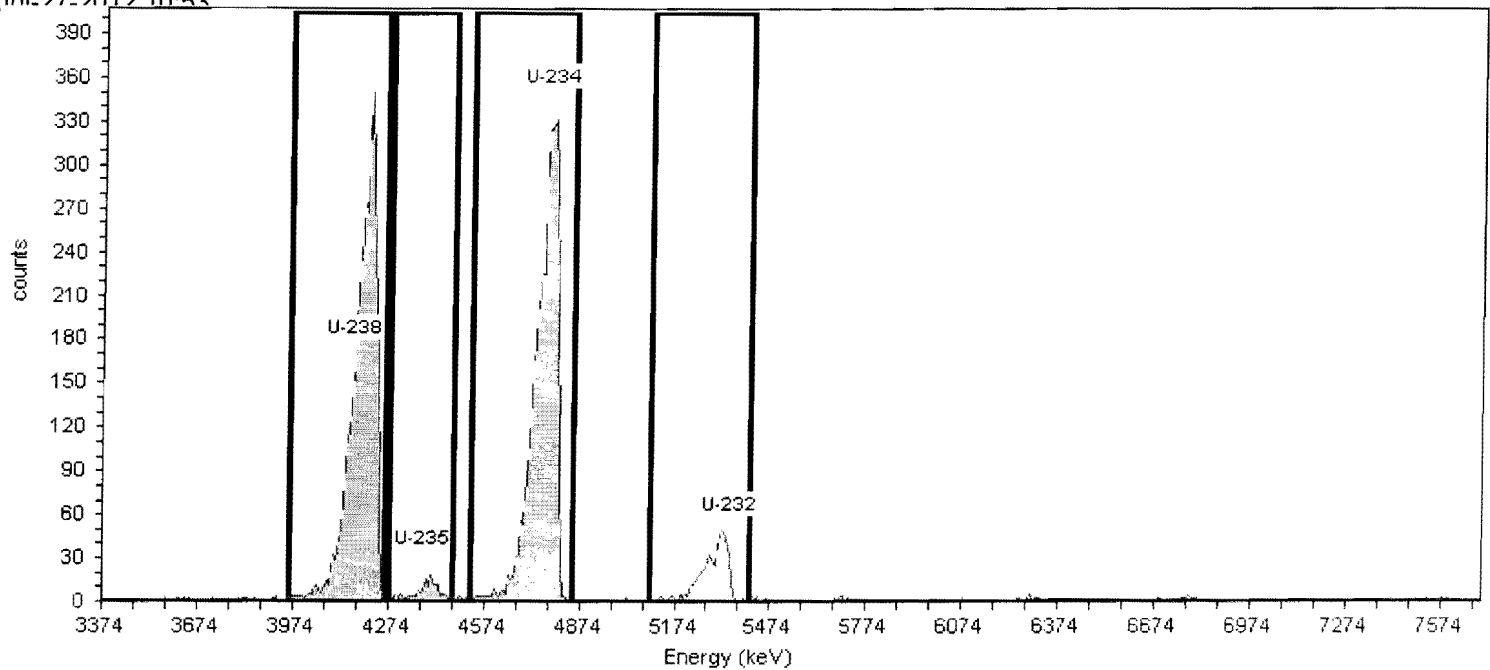
Calibration Date: 6/10/2012 8:18:52PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.98% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	58.001	100.0	3415	1.2500	3413.75	4.320E+001	1.479E+000	3.92E+000	3.291E-002	8.965E-002
U-235	4381.179	4269.316	4470.670	50.981	80.2	131	0.4167	130.58	2.060E+000	3.614E-001	4.01E-001	2.369E-002	8.258E-002
U-234	4776.430	4530.331	4851.005	73.766	99.8	3464	0.0000	3464.00	4.392E+001	1.493E+000	3.98E+000	1.904E-002	3.431E-002
U-232	5343.203	5097.104	5410.321	82.564	100.1	507	2.9167	504.08	4.434E+000	5.701E-001	6.81E-001	5.024E-002	1.300E-001

Sample Name: F2H090401-007S

SampleType: Sample

: MV2Q91AG

Sample Collection Date: 8/6/2012 12:00:00AM

Batch Name: 2226014

AnalysisID: 535785

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5003L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 70.87%

Acquisition

Detector: AV55

Serial Number: 50-051C2

Acquisition Start Date: 8/15/2012 11:46:38PM

Live Time: 400.00 min.

Real Time: 400.03 min.

Background Date: 7/24/2012 9:07:13PM

Background Info: Sample: ICB;AV55; Det: AV55; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-8879;AV55-20120610

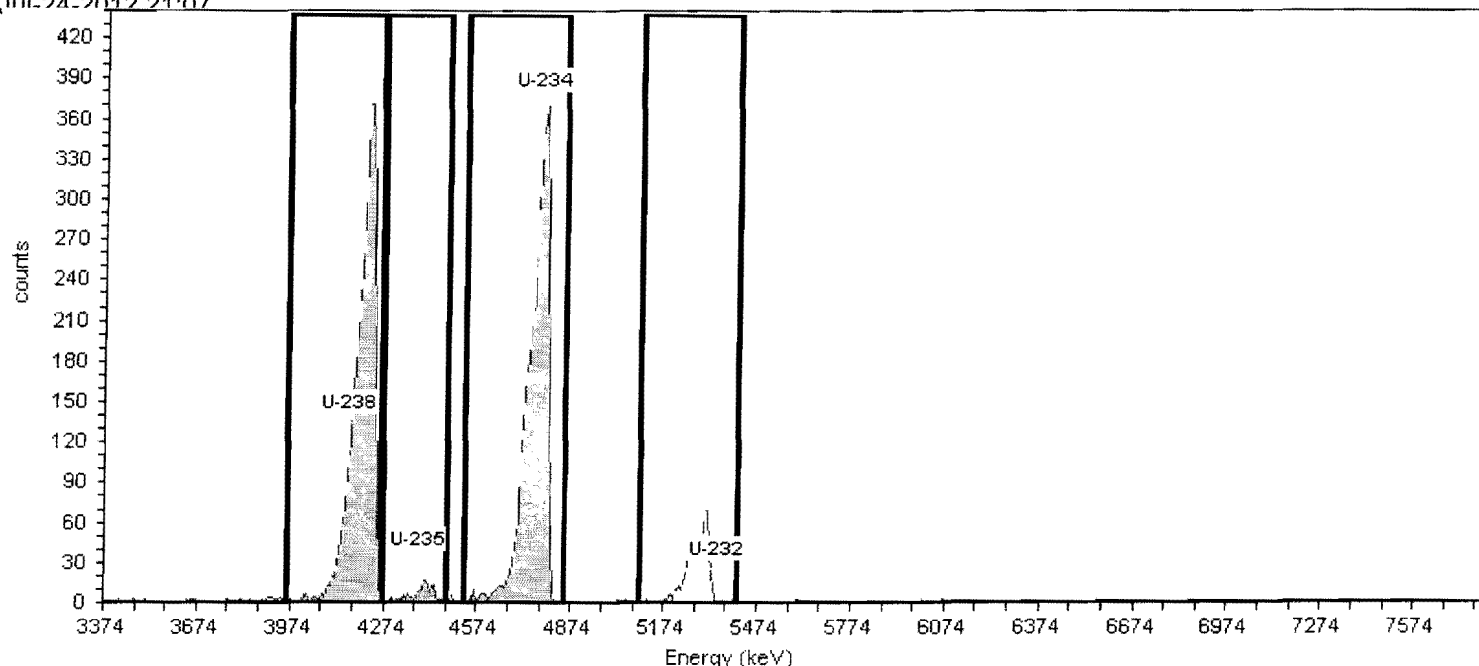
Calibration Date: 6/10/2012 8:19:03PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.20% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	UncCount pCi/L	2.00 Sigma TPU pCi/L	Critical Level pCi/L	MDA pCi/L
U-238	4157.453	3956.099	4261.858	21.888	100.0	3314	3.3333	3310.67	3.866E+001	1.345E+000	3.52E+000	4.960E-002	1.151E-001
U-235	4381.179	4269.316	4470.670	56.426	80.2	117	0.8333	116.17	1.692E+000	3.155E-001	3.46E-001	3.092E-002	9.146E-002
U-234	4776.430	4530.331	4851.005	69.599	99.8	3283	2.0833	3280.92	3.839E+001	1.341E+000	3.49E+000	3.929E-002	9.780E-002
U-232	5343.203	5097.104	5410.321	79.368	100.1	548	1.6667	546.33	4.944E+000	5.467E-001	6.87E-001	3.505E-002	9.911E-002

Sample Name: F2H090401-008

Sample Type: Sample

: MV2RA1AC

Sample Collection Date: 8/6/2012 3:20:00PM

Batch Name: 2226014

AnalysisID: 535624

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 74.71%

Acquisition

Detector: AV57

Serial Number: 48-158EE3

Acquisition Start Date: 8/15/2012 3:48:39PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/24/2012 9:07:15PM

Background Info: Sample: ICB;AV57; Det: AV57; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-9793;AV57-20120610

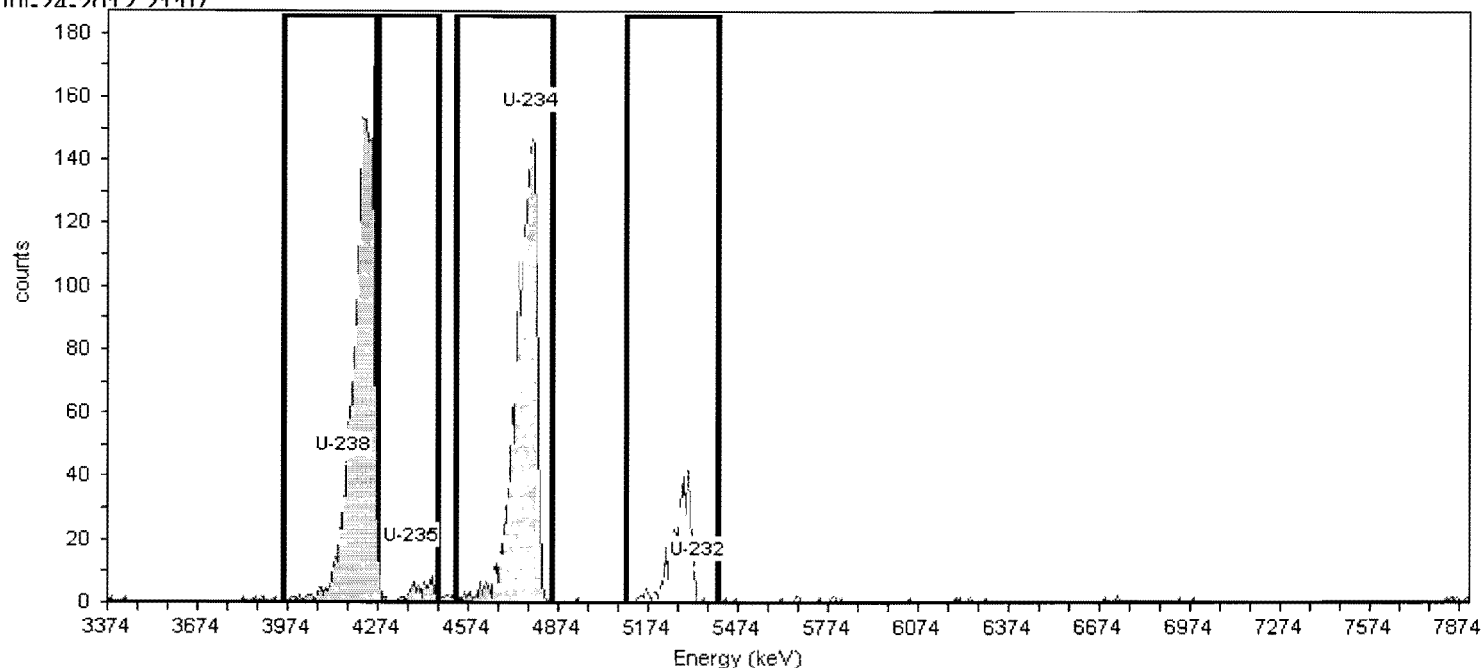
Calibration Date: 6/10/2012 8:19:29PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.64% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:46:04PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	38.636	100.0	1572	0.7500	1571.25	2.855E+001	1.441E+000	2.80E+000	3.661E-002	1.071E-001
U-235	4381.179	4269.316	4470.670	.000	80.2	81	0.2500	80.75	1.830E+000	4.080E-001	4.36E-001	2.635E-002	1.030E-001
U-234	4776.430	4530.331	4851.005	86.516	99.8	1562	0.5000	1561.50	2.843E+001	1.439E+000	2.79E+000	2.995E-002	9.663E-002
U-232	5343.203	5097.104	5410.321	69.106	100.1	354	2.7500	351.25	5.214E+000	6.839E-001	8.12E-001	7.004E-002	1.750E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
7:50:10PM 8/15/2012

Sample Name: F2H090401-009

Sample Type: Sample

: MV2RC1AC

Sample Collection Date: 8/6/2012 3:45:00PM

Batch Name: 2226014

Analysis ID: 535625

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 81.06%

Acquisition

Detector: AV60

Serial Number: 49-027117

Acquisition Start Date: 8/15/2012 3:48:40PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/24/2012 9:07:18PM

Background Info: Sample: ICB;AV60; Det: AV60; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-9817;AV60-20120610

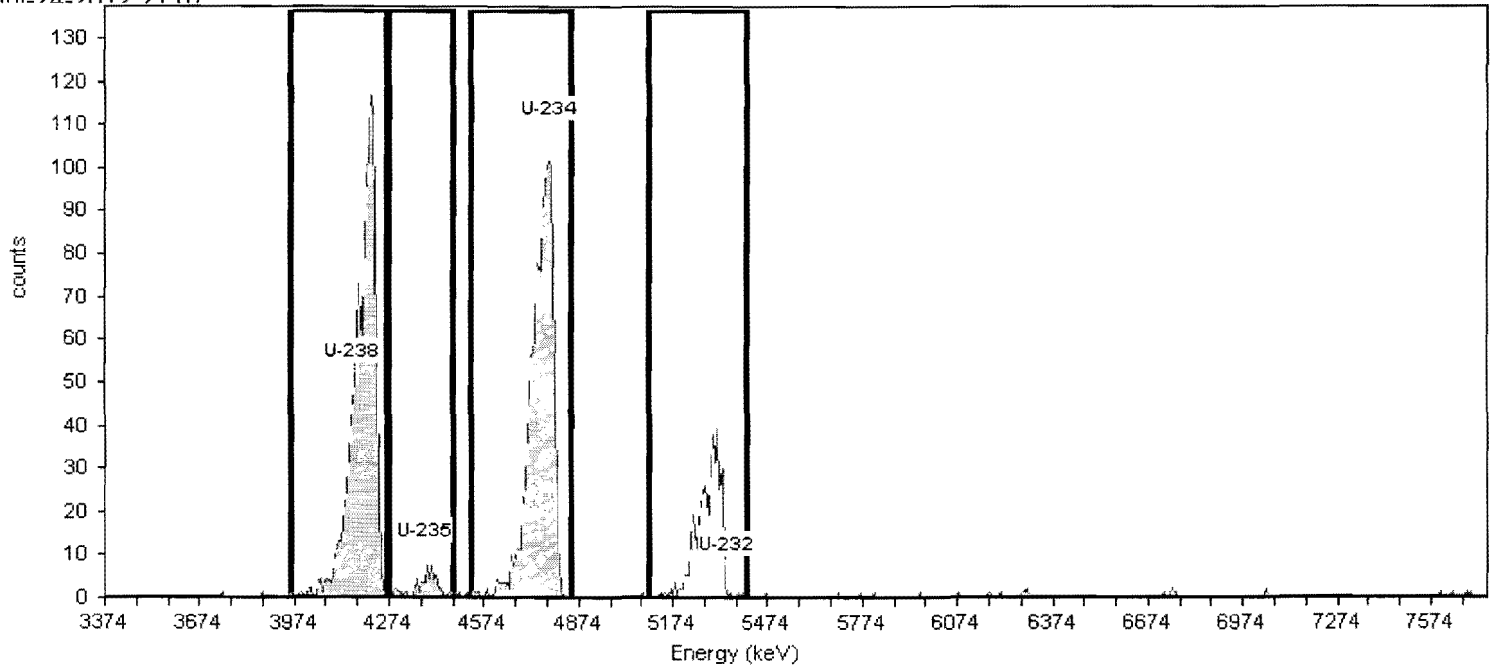
Calibration Date: 6/10/2012 8:19:43PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.82% +/- 0.32% TPU(2 sigma)

**General Analysis**

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:46:04PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Results Summary (ROI)													
Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	42.715	100.0	1057	0.5000	1056.50	1.824E+001	1.122E+000	1.90E+000	2.840E-002	9.161E-002
U-235	4381.179	4269.316	4470.670	47.258	80.2	52	0.0000	52.00	1.119E+000	3.104E-001	3.24E-001	2.504E-002	5.824E-002
U-234	4776.430	4530.331	4851.005	78.977	99.8	1086	0.7500	1085.25	1.877E+001	1.140E+000	1.95E+000	3.485E-002	1.019E-001
U-232	5343.203	5097.104	5410.321	82.229	100.1	371	1.2500	369.75	5.657E+000	6.647E-001	8.17E-001	4.486E-002	1.287E-001

Sample Name: F2H090401-010

SampleType: Sample

: MV2RD1AC

Sample Collection Date: 8/6/2012 3:55:00PM

Batch Name: 2226014

AnalysisID: 535786

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 83.66%

Acquisition

Detector: AV61

Serial Number: 5-051JJ3

Acquisition Start Date: 8/15/2012 11:46:40PM

Live Time: 400.00 min.

Real Time: 400.04 min.

Background Date: 7/24/2012 9:07:19PM

Background Info: Sample: ICB;AV61; Det: AV61; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-9884;AV61-20120610

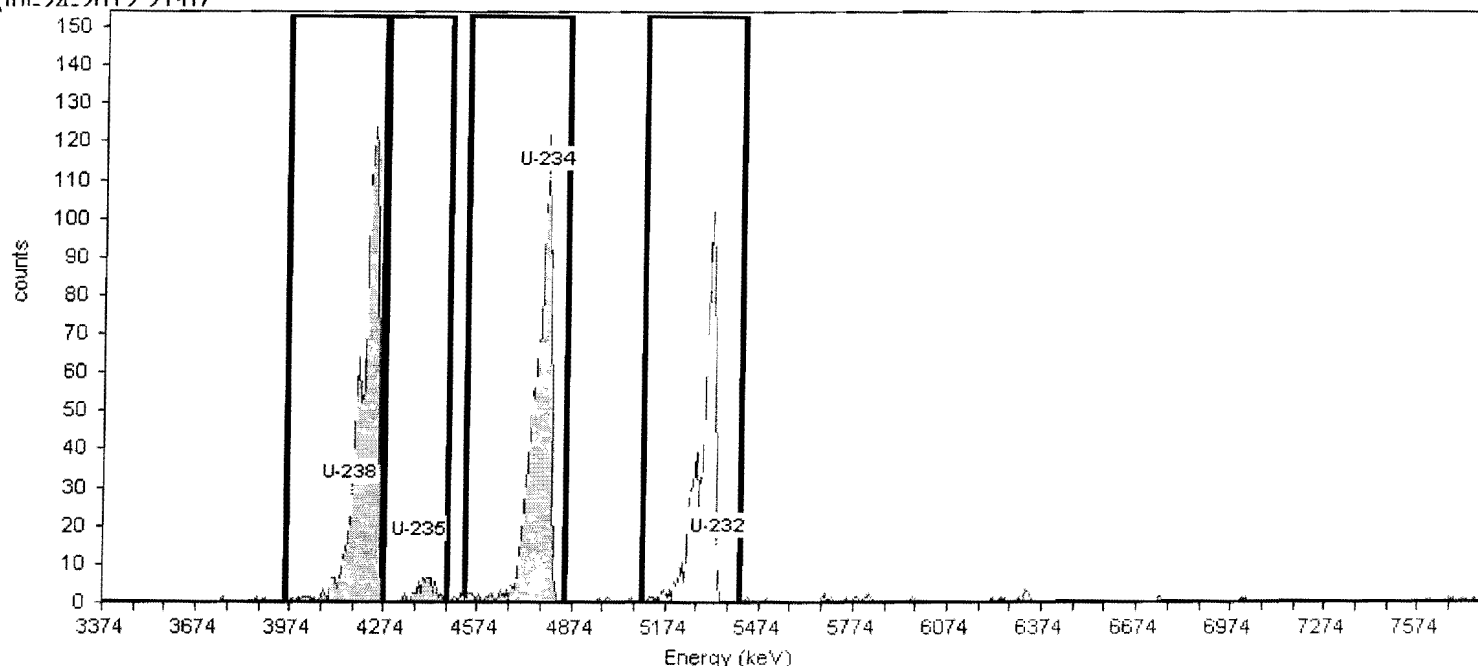
Calibration Date: 6/10/2012 8:19:46PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.92% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak	ROI	ROI	FWHM	B.R.	Nucleide Summary (ROI)					2.00 Sigma		Critical	MDA
	Energy	Start	End			%	Gross	Bkgd	Net	Activity	UncCount	TPU	Level	
	keV	keV	keV	keV	%	Counts	Counts	Counts	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	
U-238	4157.453	3956.099	4261.858	29.013	100.0	999	2.0833	996.92	9.610E+000	6.096E-001	1.01E+000	3.237E-002	8.057E-002	
U-235	4381.179	4269.316	4470.670	68.037	80.2	50	1.2500	48.75	5.859E-001	1.709E-001	1.78E-001	3.126E-002	8.515E-002	
U-234	4776.430	4530.331	4851.005	63.636	99.8	912	2.0833	909.92	8.789E+000	5.837E-001	9.41E-001	3.243E-002	8.073E-002	
U-232	5343.203	5097.104	5410.321	52.389	100.1	665	2.9167	662.08	5.838E+000	4.972E-001	6.98E-001	3.827E-002	9.901E-002	

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:55:42AM 8/16/2012

Sample Name: F2H090401-011

Sample Type: Sample

: MV2RL1AC

Sample Collection Date: 8/6/2012 12:00:00AM

Batch Name: 2226014

AnalysisID: 535787

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5004L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 50.97%

Acquisition

Detector: AV63

Serial Number: 47-029ff2

Acquisition Start Date: 8/15/2012 11:46:41PM

Live Time: 400.00 min.

Real Time: 400.04 min.

Background Date: 7/24/2012 9:07:21PM

Background Info: Sample: ICB;AV63; Det: AV63; Spectrum #1;

Jul 24 2012 21:07

Calibration Name: IC-9886;AV63-20120610

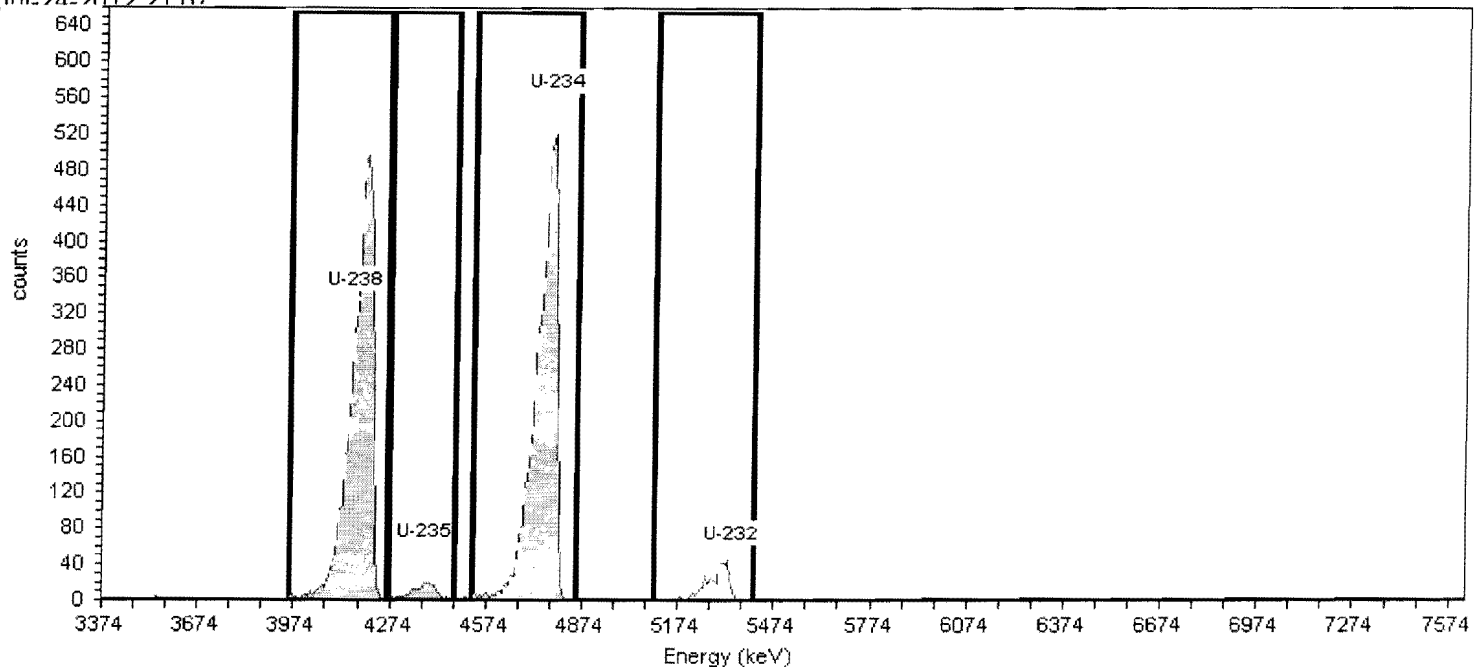
Calibration Date: 6/10/2012 8:19:57PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.07% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:44:31PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	66.505	100.0	4823	0.4167	4822.58	7.866E+001	2.265E+000	6.98E+000	2.449E-002	8.536E-002
U-235	4381.179	4269.316	4470.670	80.229	80.2	191	0.0000	191.00	3.884E+000	5.621E-001	6.50E-001	3.054E-002	5.503E-002
U-234	4776.430	4530.331	4851.005	70.453	99.8	4925	0.8333	4924.17	8.048E+001	2.294E+000	7.14E+000	3.471E-002	1.026E-001
U-232	5343.203	5097.104	5410.321	81.553	100.1	394	2.9167	391.08	3.555E+000	6.480E-001	7.13E-001	6.475E-002	1.675E-001

Sample Name: F2H130000-014B

SampleType: Blank

: MV35G1AA

Sample Collection Date: 8/3/2012 1:40:00PM

Batch Name: 2226014

AnalysisID: 535613

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Detector: AV119

Serial Number: 49-037G6

Acquisition Start Date: 8/15/2012 3:48:12PM

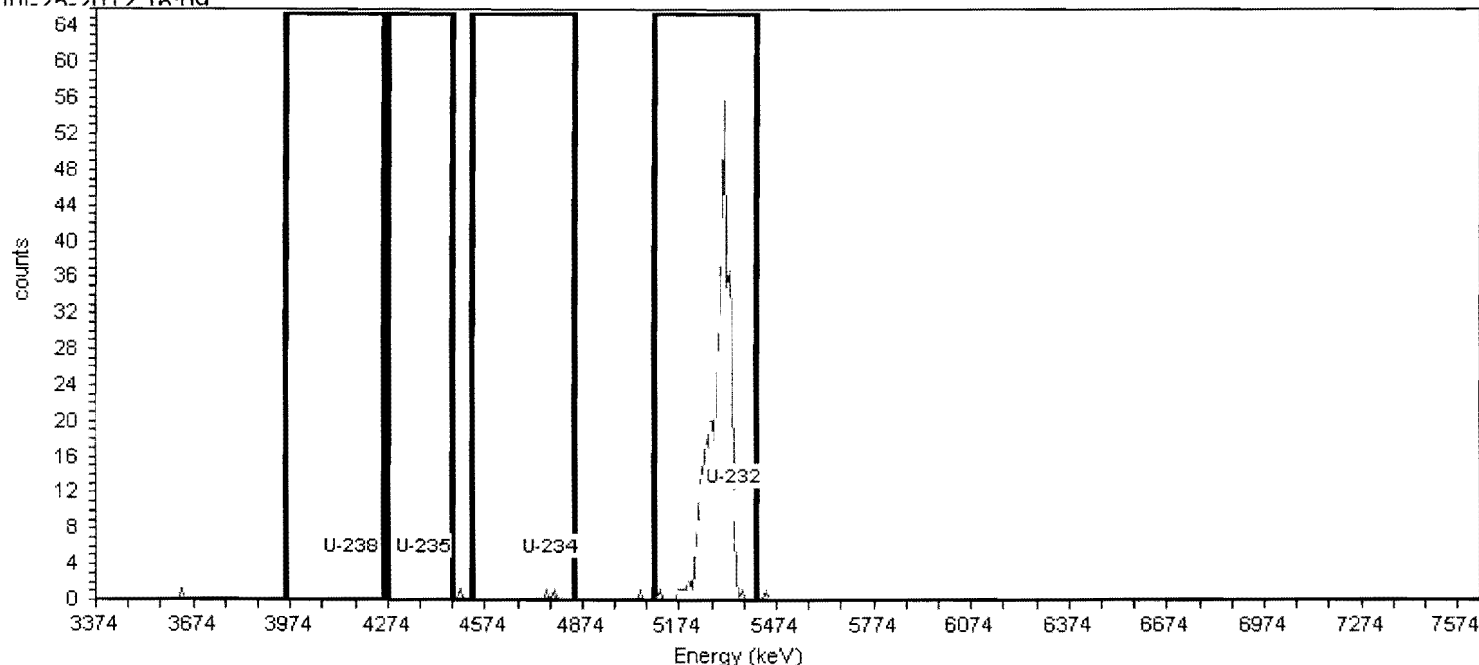
Live Time: 240.00 min.

Real Time: 240.00 min.

Background Date: 7/25/2012 4:09:51PM

Background Info: Sample: ICB;AV119; Det: AV119; Spectrum #1;

Jul 25 2012 16:09



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:46:04PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	UncCount pCi/L	2.00 Sigma TPU pCi/L	Critical Level pCi/L	MDA pCi/L
U-238	4157.453	3956.099	4261.858	.000	100.0	0	0.0000	0.00	0.000E+000	7.631E-003	7.63E-003	8.877E-003	2.065E-002
U-235	4381.179	4269.316	4470.670	.000	80.2	0	0.2500	-0.25	-2.379E-003	4.758E-003	4.76E-003	1.107E-002	4.325E-002
U-234	4776.430	4530.331	4851.005	40.552	99.8	2	0.2500	1.75	1.338E-002	2.196E-002	2.20E-002	8.894E-003	3.476E-002
U-232	5343.203	5097.104	5410.321	59.832	100.1	419	0.7500	418.25	3.233E+000	3.122E-001	4.14E-001	1.536E-002	4.916E-002

Sample Name: F2H130000-014C

SampleType: Control

: MV35G1AC

Sample Collection Date: 8/3/2012 1:40:00PM

Batch Name: 2226014

AnalysisID: 535614

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Detector: AV120

Serial Number: 49-037W3

Acquisition Start Date: 8/15/2012 3:48:13PM

Live Time: 240.00 min.

Real Time: 240.00 min.

Background Date: 7/24/2012 9:06:31PM

Background Info: Sample: ICB;AV120; Det: AV120; Spectrum #1;

Int-24-2012-21-06

Sample

Spectrum #1 Analysis #1

Sample Volume : 1.0000L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 90.32%

Acquisition

Calibration Name: IC-9817;AV120-20120608

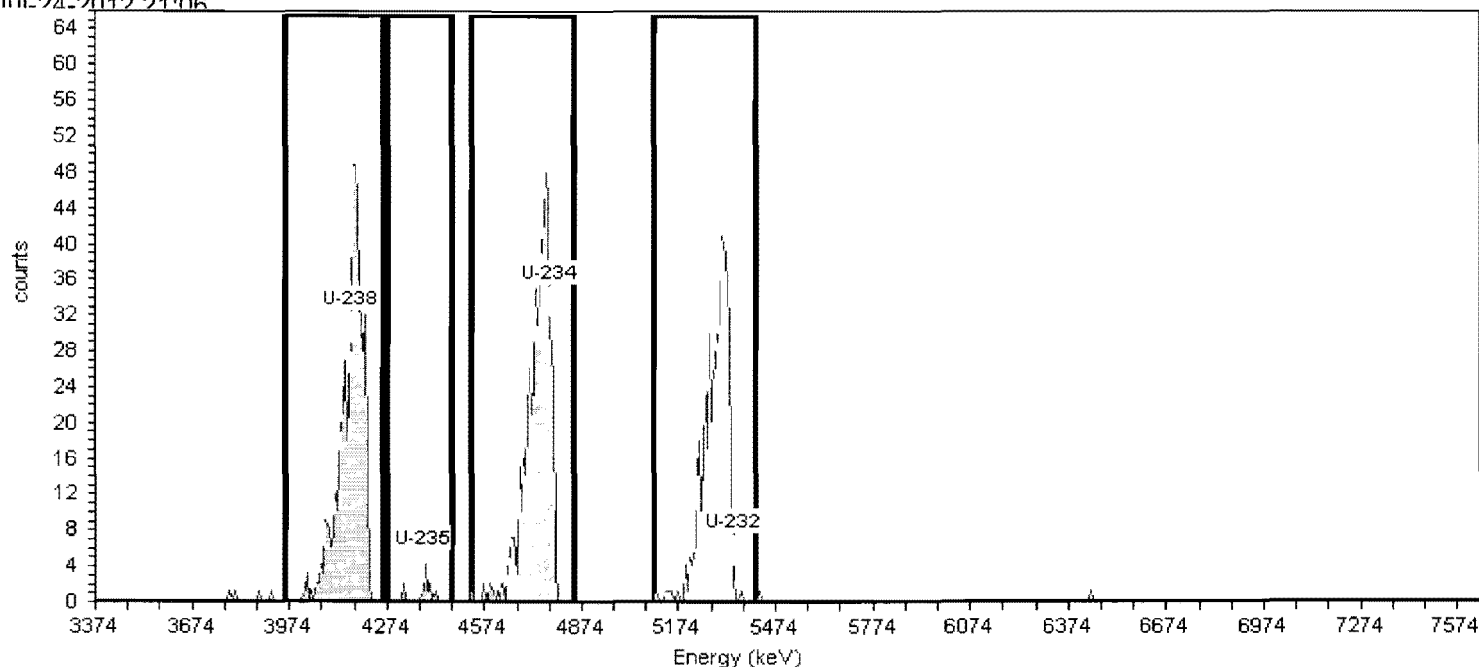
Calibration Date: 6/8/2012 8:47:18AM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.68% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:46:04PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma UncCount pCi/L	TPU pCi/L	Critical Level pCi/L	MDA pCi/L
U-238	4157.453	3956.099	4261.858	63.935	100.0	434	0.2500	433.75	3.379E+000	3.246E-001	4.31E-001	9.061E-003	3.541E-002
U-235	4381.179	4269.316	4470.670	21.923	80.2	11	0.2500	10.75	1.044E-001	6.461E-002	6.52E-002	1.130E-002	4.415E-002
U-234	4776.430	4530.331	4851.005	69.437	99.8	460	0.0000	460.00	3.590E+000	3.348E-001	4.51E-001	9.079E-003	2.112E-002
U-232	5343.203	5097.104	5410.321	82.711	100.1	410	0.2500	409.75	3.152E+000	3.152E-001	4.12E-001	9.054E-003	3.871E-002

240mins LL

8/22/12

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Prep Report for Uranium, Isotopic by Alpha SpectroscopyBatch: 2226014Prep Analyst: 403651

<u>SampID</u>	<u>WRKNO</u>	<u>Aliquot</u>	<u>Dilution</u>	<u>Adj Aliquot</u>	<u>TracerID</u>	<u>TracerAnalyte</u>	<u>TracerAliquot</u>	<u>Low Level</u>
F2H090401-001	MV2Q31AC	5.0005E+002 mL	1.00	5.0005E+002 mL	Rad11-0087	U-232	0.10	N
		43						
F2H090401-002	MV2Q41AC	5.0040E+002 mL	1.00	5.0040E+002 mL	Rad11-0087	U-232	0.10	N
		44						
F2H090401-003	MV2Q51AC	1.0022E+002 mL	1.00	1.0022E+002 mL	Rad11-0087	U-232	0.10	N
		49				400 min RC = 49		
F2H090401-004	MV2Q61AC	5.0030E+002 mL	1.00	5.0030E+002 mL	Rad11-0087	U-232	0.10	N
		50				400 min RC = 50		
F2H090401-005	MV2Q71AC	5.0006E+002 mL	1.00	5.0006E+002 mL	Rad11-0087	U-232	0.10	N
		51				400 min RC = 51		
F2H090401-006	MV2Q81AC	5.0020E+002 mL	1.00	5.0020E+002 mL	Rad11-0087	U-232	0.10	N
		52				400 min RC = 52		
F2H090401-007	MV2Q91AC	5.0034E+002 mL	1.00	5.0034E+002 mL	Rad11-0087	U-232	0.10	N
		53				400 min RC = 53		
F2H090401-007D	MV2Q91AH	5.0035E+002 mL	1.00	5.0035E+002 mL	Rad11-0087	U-232	0.10	N
		54				400 min RC = 54		
F2H090401-007S	MV2Q91AG	5.0026E+002 mL	1.00	5.0026E+002 mL	Rad11-0087	U-232	0.10	N
		55				400 min RC = 55		
F2H090401-008	MV2RA1AC	5.0008E+002 mL	1.00	5.0008E+002 mL	Rad11-0087	U-232	0.10	N
		57						
F2H090401-009	MV2RC1AC	5.0008E+002 mL	1.00	5.0008E+002 mL	Rad11-0087	U-232	0.10	N
		60						
F2H090401-010	MV2RD1AC	5.0010E+002 mL	1.00	5.0010E+002 mL	Rad11-0087	U-232	0.10	N
		61				400 min RC = 61		
F2H090401-011	MV2RL1AC	5.0038E+002 mL	1.00	5.0038E+002 mL	Rad11-0087	U-232	0.10	N
		63				400 min RC = 63		
F2H130000-014B	MV35G1AA	1.0000E+003 mL	1.00	1.0000E+003 mL	Rad11-0087	U-232	0.10	N
		119						
F2H130000-014C	MV35G1AC	1.0000E+003 mL	1.00	1.0000E+003 mL	Rad11-0087	U-232	0.10	N
		120						

SampID	WRKNO	Aliquot	Dilution	Adj Aliquot	TracerID	TracerAnalyte	TracerAliquot	Low Level
--------	-------	---------	----------	-------------	----------	---------------	---------------	-----------

Spike Information

Sample ID	Standard ID	Analyte	Std Conc	Aliquot	Ref Date	StdAdded
F2H090401-007D	Rad12-0005	U-234	7.249E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.526E+000 pCi/L
F2H090401-007D	Rad12-0005	U-238	7.526E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.775E+000 pCi/L
F2H090401-007S	Rad12-0005	U-234	7.249E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.527E+000 pCi/L
F2H090401-007S	Rad12-0005	U-238	7.526E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.777E+000 pCi/L
F2H130000-014C	Rad12-0005	U-234	7.249E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	3.265E+000 pCi/L
F2H130000-014C	Rad12-0005	U-238	7.526E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	3.390E+000 pCi/L

Spike Added By

Spike Date

Standard Operating Procedures

SOPNumber	Title	Revision
<input type="checkbox"/> ST-RC-0002	Planchet Preparation For Radiochemistry And Radiological Screening Analysis	10.00
<input type="checkbox"/> ST-RC-0003	Drying And Grinding Of Soil And Solid Samples	11.00
<input type="checkbox"/> ST-RC-0004	Preparation Of Soil, Sludge, Filter, Biota and Oil/Grease Samples For Radiochemical Analysis	19.00
<input type="checkbox"/> ST-RC-0014	Bulk Drying and Grinding of Soil and Solid Samples	0.00
<input checked="" type="checkbox"/> ST-RC-0100	Actinide Coprecipitation	14.00
<input checked="" type="checkbox"/> ST-RC-0238	Isotopic Uranium by Eichrom UTEVA Resin for Various Matrices	12.00
<input type="checkbox"/> ST-RC-0240	Isotopic Americium, Curium, Plutonium, Thorium, and Uranium in Various Matrices by Eichrom Separation Resin	12.00
<input type="checkbox"/> ST-RC-0241	Isotopic Americium, Plutonium, Curium, and Uranium in Various Matrices by Eichrom Uteva and Tru Resins (with V	9.00
<input type="checkbox"/> ST-RC-0242	Isotopic Thorium, Plutonium and Uranium in Various Matrices by Eichrome Separation Resin	14.00
<input type="checkbox"/> ST-RC-0246	Isotopic Americium, Curium and Uranium in Various Matrices by Eichrom Separation Resins	5.00
<input checked="" type="checkbox"/> ST-RD-0210	Alpha Spectroscopy Analysis	8.00

Co

Date

Precip Date

Reviewed By

Review Date

Analysis Completed By

Release Date

Receipt Date

Balance ID / Initials / Date

Analysis Report for Alpha Spectroscopy

Batch: 2226015 Operator: 3166

Sample ID	Work Order #	Aliquot	Dilution	Sigma	Instrument	RunDateTime	RunDuration	TracerID	TracerAnalyte	TracerAdded	TracerYield	TruncYld	Decay
F2H090401-012	MV2RN1AA	500.1500 mL	1.00	2.00	AV64	8/15/12 15:53	240.00	Rad11-0087	U-232	6.978E+000	74.63%	False	False
		<u>Analyte</u>				<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232				5.208E+000 pCi/L		6.635E-001	7.948E-001	1.596E-001	6.297E-002		
		U-234				1.330E-001 pCi/L		9.749E-002	9.812E-002	7.802E-002	1.997E-002		
		U-235				0.000E+000 pCi/L		1.068E-002	1.068E-002	5.780E-002	2.485E-002		
		U-238				3.426E-002 pCi/L		6.177E-002	6.184E-002	1.094E-001	3.986E-002		
F2H090401-013	MV2RP1AA	500.0700 mL	1.00	2.00	AV65	8/15/12 15:53	240.00	Rad11-0087	U-232	6.979E+000	78.47%	False	False
		<u>Analyte</u>				<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232				5.476E+000 pCi/L		6.655E-001	8.090E-001	1.117E-001	3.489E-002		
		U-234				7.264E+000 pCi/L		7.112E-001	9.370E-001	1.023E-001	3.499E-002		
		U-235				2.701E-001 pCi/L		1.566E-001	1.582E-001	1.147E-001	3.555E-002		
		U-238				6.682E+000 pCi/L		6.812E-001	8.826E-001	9.198E-002	2.851E-002		
F2H090401-014	MV2RQ1AA	500.0300 mL	1.00	2.00	AV66	8/15/12 15:53	240.00	Rad11-0087	U-232	6.979E+000	72.82%	False	False
		<u>Analyte</u>				<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232				5.083E+000 pCi/L		6.800E-001	8.029E-001	1.051E-001	2.976E-002		
		U-234				2.761E+001 pCi/L		1.416E+000	2.717E+000	8.247E-002	2.111E-002		
		U-235				8.128E-001 pCi/L		2.709E-001	2.794E-001	6.110E-002	2.626E-002		
		U-238				2.225E+001 pCi/L		1.270E+000	2.260E+000	8.231E-002	2.106E-002		
F2H090401-015	MV2RR1AA	500.1100 mL	1.00	2.00	AV67	8/15/12 23:44	400.00	Rad11-0087	U-232	6.978E+000	47.10%	False	False
		<u>Analyte</u>				<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232				3.287E+000 pCi/L		6.466E-001	7.031E-001	1.821E-001	7.287E-002		
		U-234				7.865E+001 pCi/L		2.260E+000	6.982E+000	1.356E-001	5.447E-002		
		U-235				3.674E+000 pCi/L		5.446E-001	6.260E-001	5.462E-002	3.031E-002		
		U-238				7.753E+001 pCi/L		2.241E+000	6.887E+000	1.017E-001	3.438E-002		
F2H090401-016	MV2RT1AA	500.1400 mL	1.00	2.00	AV68	8/15/12 23:44	400.00	Rad11-0087	U-232	6.978E+000	63.90%	False	False
		<u>Analyte</u>				<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232				4.459E+000 pCi/L		5.755E-001	6.867E-001	1.447E-001	5.789E-002		
		U-234				4.658E+001 pCi/L		1.550E+000	4.208E+000	1.270E-001	5.473E-002		
		U-235				1.869E+000 pCi/L		3.471E-001	3.810E-001	8.392E-002	2.408E-002		
		U-238				4.631E+001 pCi/L		1.544E+000	4.185E+000	9.110E-002	3.345E-002		
F2H090401-017	MV2RV1AA	500.1300 mL	1.00	2.00	AV69	8/15/12 15:53	240.00	Rad11-0087	U-232	6.978E+000	91.88%	False	False
		<u>Analyte</u>				<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
		U-232				6.412E+000 pCi/L		6.144E-001	8.170E-001	8.582E-002	2.431E-002		
		U-234				9.018E+000 pCi/L		7.315E-001	1.053E+000	7.865E-002	2.438E-002		
		U-235				1.291E-001 pCi/L		9.758E-002	9.818E-002	4.990E-002	2.145E-002		
		U-238				2.725E+000 pCi/L		4.025E-001	4.631E-001	8.714E-002	2.980E-002		

Sample ID	Work Order #	Aliquot	Dilution	Sigma	Instrument	RunDateTime	RunDuration	TracerID	TracerAnalyte	TracerAdded	TracerYield	TruncYld	Decay
F2H090401-018	MV2RW1AA	500.3900 mL	1.00	2.00	AV70	8 / 15 / 12 15:53		240.00Rad11-0087	U-232	6.974E+000	74.90%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	5.224E+000 pCi/L		6.845E-001	8.131E-001	1.280E-001	4.261E-002		
					U-234	3.448E+001 pCi/L		1.592E+000	3.305E+000	9.747E-002	3.021E-002		
					U-235	1.571E+000 pCi/L		3.799E-001	4.021E-001	1.039E-001	2.658E-002		
					U-238	3.346E+001 pCi/L		1.567E+000	3.218E+000	9.727E-002	3.015E-002		
F2H090401-018D	MV2RW1AD	500.3500 mL	1.00	2.00	AV71	8 / 15 / 12 23:44		400.00Rad11-0087	U-232	6.975E+000	70.66%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	4.928E+000 pCi/L		5.431E-001	6.829E-001	9.784E-002	3.460E-002		
					U-234	3.912E+001 pCi/L		1.345E+000	3.551E+000	3.126E-002	1.735E-002		
					U-238	3.941E+001 pCi/L		1.349E+000	3.574E+000	8.948E-002	3.462E-002		
F2H090401-018S	MV2RW1AC	500.1200 mL	1.00	2.00	AV74	8 / 15 / 12 23:44		400.00Rad11-0087	U-232	6.978E+000	71.10%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	4.961E+000 pCi/L		5.478E-001	6.883E-001	9.950E-002	3.518E-002		
					U-234	4.037E+001 pCi/L		1.378E+000	3.660E+000	7.378E-002	2.495E-002		
					U-238	4.087E+001 pCi/L		1.384E+000	3.702E+000	3.173E-002	1.761E-002		
F2H090401-019	MV2RX1AA	500.0600 mL	1.00	2.00	AV75	8 / 15 / 12 15:53		240.00Rad11-0087	U-232	6.979E+000	71.74%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	5.007E+000 pCi/L		7.100E-001	8.252E-001	1.375E-001	4.579E-002		
					U-234	2.872E+001 pCi/L		1.506E+000	2.844E+000	8.972E-002	2.296E-002		
					U-235	1.664E+000 pCi/L		4.053E-001	4.287E-001	1.116E-001	2.857E-002		
					U-238	2.940E+001 pCi/L		1.522E+000	2.901E+000	1.045E-001	3.241E-002		
F2H090401-020	MV2R11AA	500.2400 mL	1.00	2.00	AV76	8 / 15 / 12 23:44		400.00Rad11-0087	U-232	6.976E+000	72.60%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	5.065E+000 pCi/L		5.398E-001	6.873E-001	9.663E-002	3.417E-002		
					U-234	1.990E+001 pCi/L		9.541E-001	1.925E+000	1.072E-001	4.533E-002		
					U-235	1.083E+000 pCi/L		2.565E-001	2.721E-001	1.461E-001	6.396E-002		
					U-238	2.001E+001 pCi/L		9.553E-001	1.933E+000	8.838E-002	3.420E-002		
F2H090401-021	MV2R21AA	500.0500 mL	1.00	2.00	AV77	8 / 15 / 12 23:44		400.00Rad11-0087	U-232	6.979E+000	80.60%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	5.625E+000 pCi/L		5.173E-001	7.006E-001	9.548E-002	3.505E-002		
					U-234	9.276E+000 pCi/L		6.247E-001	9.987E-001	9.834E-002	4.159E-002		
					U-235	4.299E-001 pCi/L		1.497E-001	1.540E-001	3.525E-002	1.956E-002		
					U-238	9.503E+000 pCi/L		6.304E-001	1.017E+000	5.468E-002	1.569E-002		
F2H090401-022	MV2R41AA	500.0600 mL	1.00	2.00	AV78	8 / 15 / 12 23:44		400.00Rad11-0087	U-232	6.979E+000	42.90%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
					U-232	2.994E+000 pCi/L		6.979E-001	7.419E-001	1.092E-001	2.862E-002		
					U-234	9.133E+001 pCi/L		2.643E+000	8.115E+000	1.201E-001	4.059E-002		
					U-235	4.581E+000 pCi/L		6.612E-001	7.650E-001	1.245E-001	3.572E-002		
					U-238	8.981E+001 pCi/L		2.618E+000	7.985E+000	1.351E-001	4.962E-002		
F2H130000-015B	MV35H1AA	1000.0000 mL	1.00	2.00	AV121	8 / 15 / 12 15:52		240.00Rad11-0087	U-232	3.490E+000	86.74%	False	False
					<u>Analyte</u>	<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		

<u>Sample ID</u>	<u>Work Order #</u>	<u>Aliquot</u>	<u>Dilution</u>	<u>Sigma</u>	<u>Instrument</u>	<u>RunDateTime</u>	<u>RunDuration</u>	<u>TracerID</u>	<u>TracerAnalyte</u>	<u>TracerAdded</u>	<u>TracerYield</u>	<u>TruncYld</u>	<u>Decay</u>
				U-232		3.027E+000	pCi/L	3.126E-001	4.029E-001	3.806E-002	8.901E-003		
				U-234		5.756E-003	pCi/L	1.582E-002	1.583E-002	3.488E-002	8.926E-003		
				U-235		0.000E+000	pCi/L	4.775E-003	4.775E-003	2.584E-002	1.111E-002		
				U-238		5.744E-003	pCi/L	1.579E-002	1.580E-002	3.481E-002	8.909E-003		
F2H130000-015C	MV35H1AC	1000.0000	1.00	2.00	AV122	8 / 15 / 12 15:52	240.00	Rad11-0087	U-232	3.490E+000	91.95%	False	False
		mL		<u>Analyte</u>		<u>Activity</u>		<u>CountUnc</u>	<u>TotalUnc</u>	<u>MDA</u>	<u>DLC</u>		
				U-232		3.209E+000	pCi/L	3.118E-001	4.122E-001	3.788E-002	8.859E-003		
				U-234		3.288E+000	pCi/L	3.172E-001	4.206E-001	4.053E-002	1.256E-002		
				U-238		3.236E+000	pCi/L	3.143E-001	4.155E-001	4.045E-002	1.254E-002		

Laboratory Control Sample Information

Sample ID	WRKNO	Analyte	Activity	StdAdded	Recovery	LCL	UCL	ZFactor
F2H130000-015C	MV35H1AC	U-234	3.288E+000	3.265E+000	100.69%	84.00	120.00	0.0764
	MV35H1AC	U-238	3.236E+000	3.390E+000	95.44%	83.00	121.00	-0.5134

Sample Duplicate Information

Sample ID	Analyte	Sample Activity	Dup Sample ID	Dup Activity	RPD	RER	DER	Qualifier	ZFactor
F2H090401-018S	U-234	4.037E+001	F2H090401-018D	3.912E+001	3.13%	1.723E-001	4.874E-001		0.4874
F2H090401-018S	U-238	4.087E+001	F2H090401-018D	3.941E+001	3.65%	2.011E-001	5.687E-001		0.5687

Matrix Spike Information

SampID	SampMSID	Analyte	Sample Activity	MS Activity	StdAdded	MSRecovery
F2H090401-018	F2H090401-018S	U-238	3.346E+001	4.087E+001	6.779E+000	109.33% 68-143
F2H090401-018	F2H090401-018D	U-234	3.448E+001	3.912E+001	6.526E+000	71.14% 65-146
F2H090401-018	F2H090401-018D	U-238	3.346E+001	3.941E+001	6.775E+000	87.78% 68-143
F2H090401-018	F2H090401-018S	U-234	3.448E+001	4.037E+001	6.529E+000	90.14% 65-146

Blanks Information

SampID	WRKNO	Analyte	Activity	UncTotal	ZFactor
F2H130000-015B	MV35H1AA	U-234	5.756E-003	1.583E-002	0.7273
F2H130000-015B	MV35H1AA	U-235	0.000E+000	4.775E-003	0.0000
F2H130000-015B	MV35H1AA	U-238	5.744E-003	1.580E-002	0.7273

Sample Comments for Batch: **2226015**TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: F2H090401 **PM:** LMF
Client: 522706 **Shaw Environmental & Infrastructure Inc**
QuoteNo: 89251 **Site:** Guterl Steel
ReptDate: 20120808 **TICFlag:** N
AnalDueDate: 20120822 **QualFlag:** Y
RptDueDate: 20120822
Report Type: D **Expanded Deliverable**

F2H090401012

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RN1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RN1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RN1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401013

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RP1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RP1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RP1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401014

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RQ1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RQ1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RQ1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401015

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RR1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RR1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RR1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401016

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RT1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RT1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RT1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401017

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RV1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RV1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RV1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401018

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RW1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RW1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RW1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401019

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2RX1AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2RX1AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2RX1AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401020

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2R11AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2R11AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2R11AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401021

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**

MV2R21AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2R21AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2R21AA Uranium 238 1E-01 pCi/L 2M A-01-R

F2H090401022

Extraction: H& **Extraction Chromatography, Sequential Actinides (Dissolved)**
WRKNO **Analyte** **RL** **Method** **MDL**
MV2R41AA Uranium 234 1E-01 pCi/L 2M A-01-R
MV2R41AA Uranium 235/236 1E-01 pCi/L 2M A-01-R
MV2R41AA Uranium 238 1E-01 pCi/L 2M A-01-R

Comments

DoD QSM 4.1
please use 6020 for total uranium instead of 200.8

Sample Comments

Sample Name: F2H090401-012

Sample Type: Sample

: MV2RN1AA

Sample Collection Date: 8/3/2012 1:40:00PM

Batch Name: 2226015

Analysis ID: 535628

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5002L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 74.63%

Acquisition

Detector: AV64

Serial Number: 47-029ee4

Acquisition Start Date: 8/15/2012 3:53:25PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/25/2012 4:09:57PM

Background Info: Sample: ICB;AV64; Det: AV64; Spectrum #1;

Jul-25-2012 16:00

Calibration Name: IC-7107;AV64-20120610

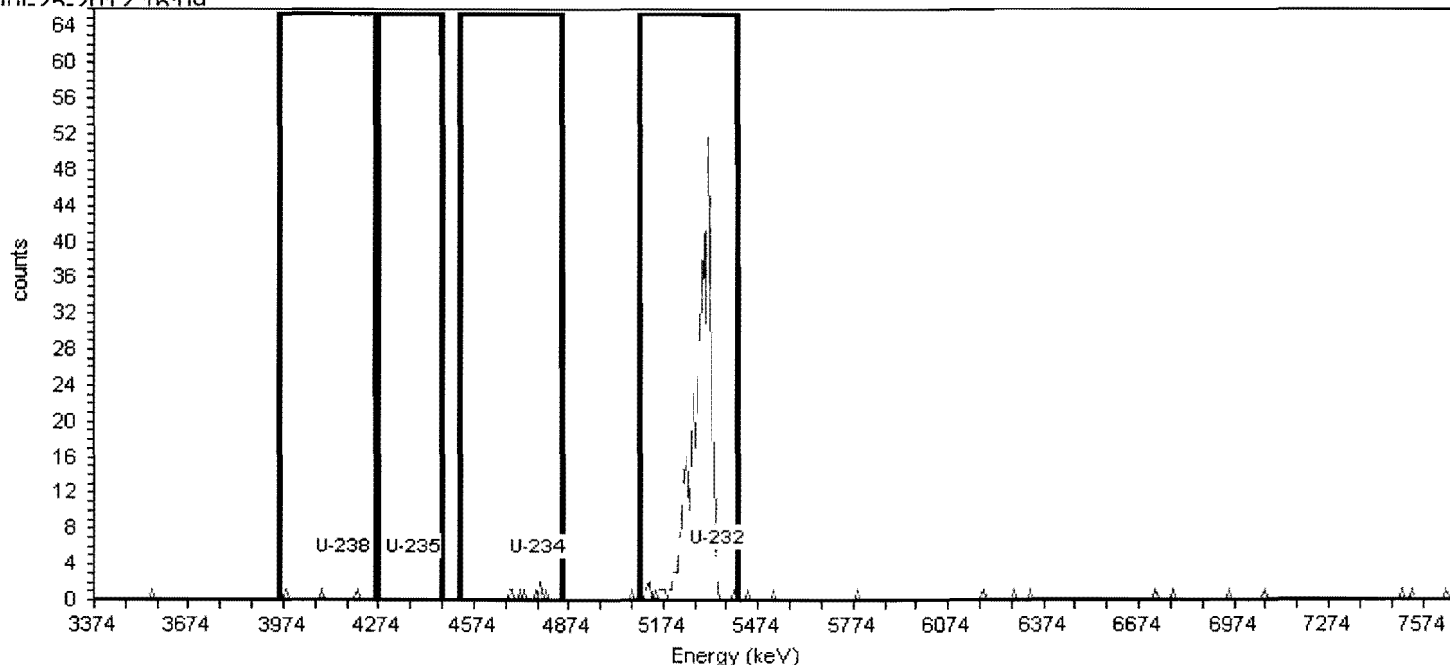
Calibration Date: 6/11/2012 3:30:09PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.35% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:50:52PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	UncCount pCi/L	2.00 Sigma TPU pCi/L	Critical Level pCi/L	MDA pCi/L
U-238	4157.453	3956.099	4261.858	28.500	100.0	3	1.0000	2.00	3.426E-002	6.177E-002	6.18E-002	3.986E-002	1.094E-001
U-235	4381.179	4269.316	4470.670	.000	80.2	0	0.0000	0.00	0.000E+000	2.136E-002	2.14E-002	2.485E-002	5.780E-002
U-234	4776.430	4530.331	4851.005	120.223	99.8	8	0.2500	7.75	1.330E-001	9.749E-002	9.81E-002	1.997E-002	7.802E-002
U-232	5343.203	5097.104	5410.321	59.407	100.1	375	2.5000	372.50	5.208E+000	6.635E-001	7.95E-001	6.297E-002	1.596E-001

Sample

Sample Name: F2H090401-013

Sample Type: Sample

: MV2RP1AA

Sample Collection Date: 8/3/2012 3:20:00PM

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Batch Name: 2226015

AnalysisID: 535629

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 78.47%

Acquisition

Detector: AV65

Serial Number: 44-049JJ1

Acquisition Start Date: 8/15/2012 3:53:26PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/24/2012 9:07:24PM

Background Info: Sample: ICB;AV65; Det: AV65; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-8874;AV65-20120610

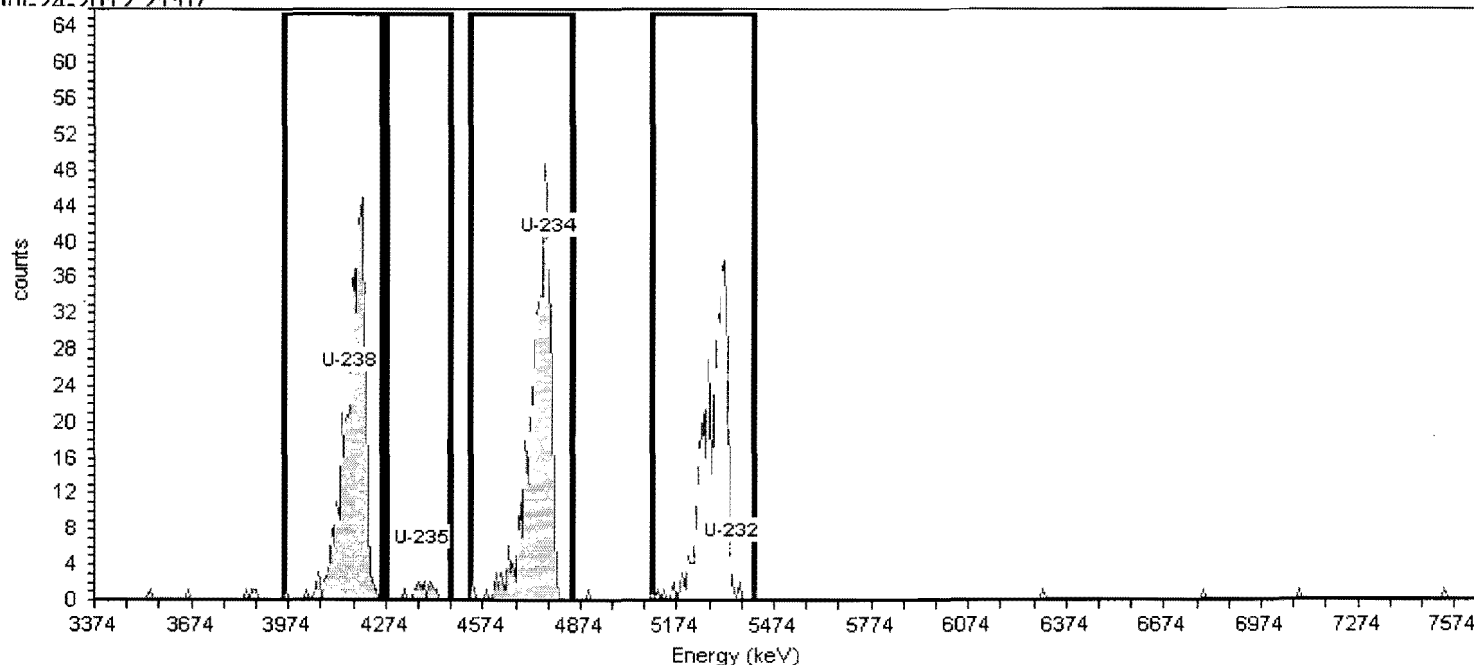
Calibration Date: 6/11/2012 3:30:33PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.59% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:50:52PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	UncCount pCi/L	2.00 Sigma TPU pCi/L	Critical Level pCi/L	MDA pCi/L
U-238	4157.453	3956.099	4261.858	67.032	100.0	386	0.5000	385.50	6.682E+000	6.812E-001	8.83E-001	2.851E-002	9.198E-002
U-235	4381.179	4269.316	4470.670	30.295	80.2	13	0.5000	12.50	2.701E-001	1.566E-001	1.58E-001	3.555E-002	1.147E-001
U-234	4776.430	4530.331	4851.005	65.486	99.8	419	0.7500	418.25	7.264E+000	7.112E-001	9.37E-001	3.499E-002	1.023E-001
U-232	5343.203	5097.104	5410.321	87.804	100.1	369	0.7500	368.25	5.476E+000	6.655E-001	8.09E-001	3.489E-002	1.117E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
7:53:38PM 8/15/2012

Sample Name: F2H090401-014

Sample Type: Sample

: MV2RQ1AA

Sample Collection Date: 8/6/2012 9:20:00AM

Batch Name: 2226015

AnalysisID: 535630

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5000L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 72.82%

Acquisition

Detector: AV66

Serial Number: 48-158EE2

Acquisition Start Date: 8/15/2012 3:53:27PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/24/2012 9:07:26PM

Background Info: Sample: ICB;AV66; Det: AV66; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-8875;AV66-20120610

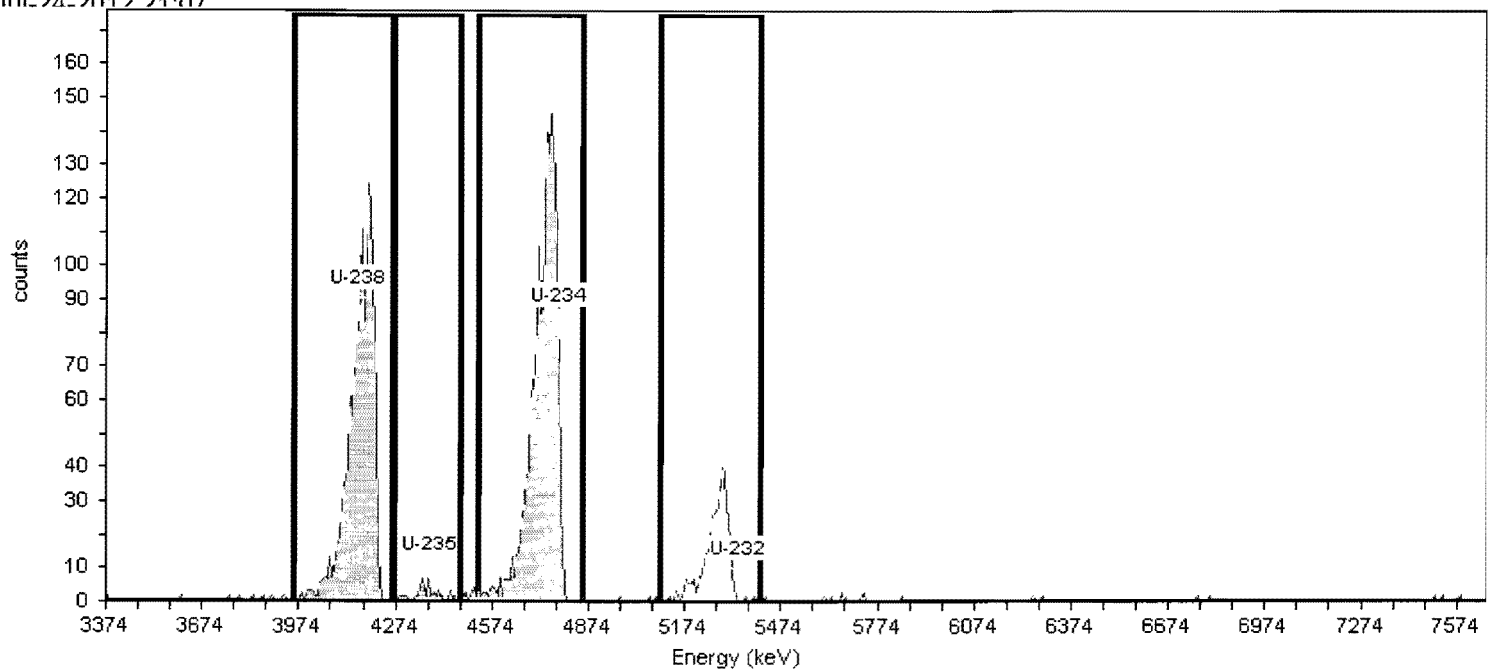
Calibration Date: 6/11/2012 3:30:58PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.46% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:50:52PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	78.952	100.0	1229	0.2500	1228.75	2.225E+001	1.270E+000	2.26E+000	2.106E-002	8.231E-002
U-235	4381.179	4269.316	4470.670	40.831	80.2	36	0.0000	36.00	8.128E-001	2.709E-001	2.79E-001	2.626E-002	6.110E-002
U-234	4776.430	4530.331	4851.005	75.352	99.8	1522	0.2500	1521.75	2.761E+001	1.416E+000	2.72E+000	2.111E-002	8.247E-002
U-232	5343.203	5097.104	5410.321	65.165	100.1	353	0.5000	352.50	5.083E+000	6.800E-001	8.03E-001	2.976E-002	1.051E-001

Sample Name: F2H090401-015
SampleType: Sample
: MV2RR1AA
Sample Collection Date: 8/6/2012 10:05:00AM

Sample

Spectrum #1 Analysis #1
Sample Volume : 0.5001L
Aliquot: N/A Aliquot Fraction: N/A

Batch Name: 2226015
AnalysisID: 535778

Batch

Analyst: 60040

Tracer Name: Rad11-0087_U232_Unclean
Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM
Tracer Ref. Date: 4/7/2003 11:00:15AM

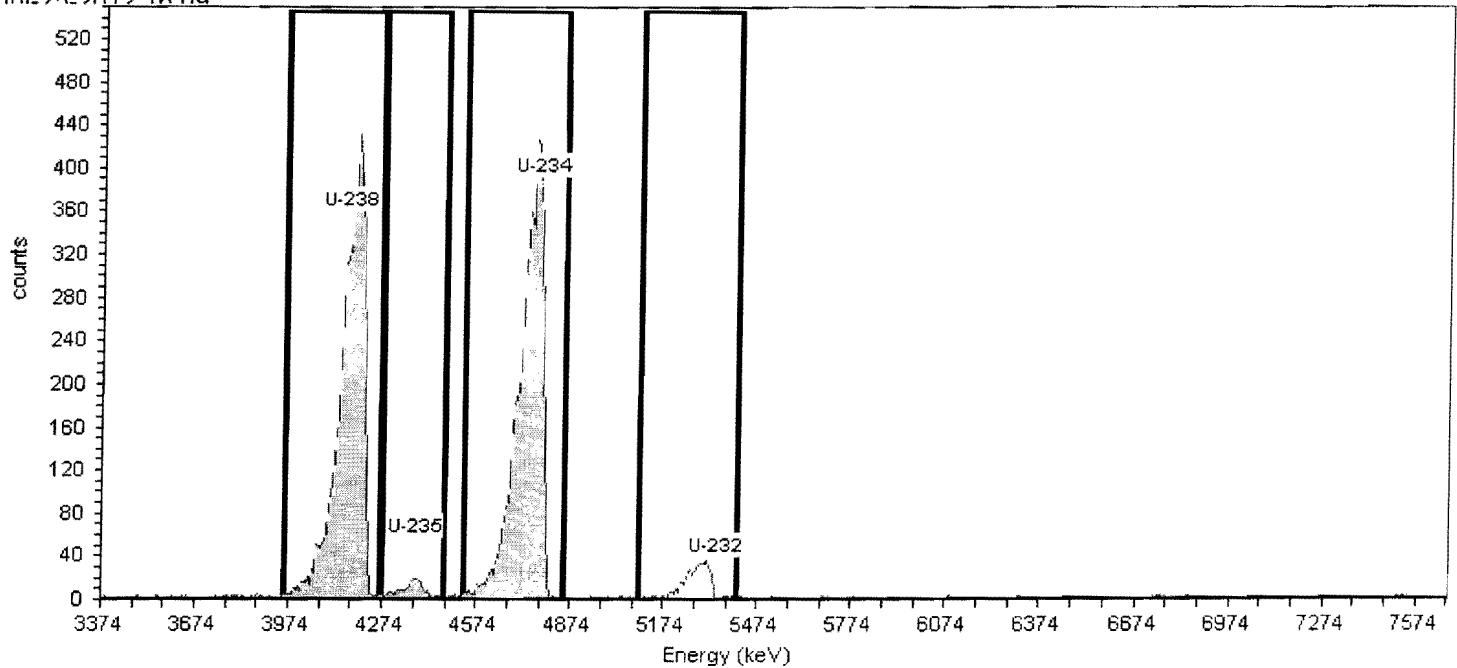
Tracer

Tracer Nuclide: U-232
Tracer Recovery: 47.10%

Detector: AV67
Serial Number: 48-046117
Acquisition Start Date: 8/15/2012 11:44:20PM
Live Time: 400.00 min.
Real Time: 400.05 min.
Background Date: 7/25/2012 4:09:59PM
Background Info: Sample: ICB;AV67; Det: AV67; Spectrum #1;
Jul-25-2012 16:09

Acquisition

Calibration Name: IC-8876;AV67-20120610
Calibration Date: 6/11/2012 3:31:27PM
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Energy Cal: Quadratic = 0.0000 keV / Ch²
Efficiency: 29.53% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI
Decay Correction: 8/15/2012 11:42:50PM
MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	78.222	100.0	4790	0.8333	4789.17	7.753E+001	2.241E+000	6.89E+000	3.438E-002	1.017E-001
U-235	4381.179	4269.316	4470.670	51.582	80.2	182	0.0000	182.00	3.674E+000	5.446E-001	6.26E-001	3.031E-002	5.462E-002
U-234	4776.430	4530.331	4851.005	80.866	99.8	4851	2.0833	4848.92	7.865E+001	2.260E+000	6.98E+000	5.447E-002	1.356E-001
U-232	5343.203	5097.104	5410.321	85.030	100.1	398	3.7500	394.25	3.287E+000	6.466E-001	7.03E-001	7.287E-002	1.821E-001

Sample Name: F2H090401-016

SampleType: Sample
: MV2RT1AA

Sample Collection Date: 8/6/2012 11:45:00AM

Batch Name: 2226015

AnalysisID: 535779

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A **Aliquot Fraction:** N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 63.90%

Acquisition

Detector: AV68

Serial Number: 48-45884

Acquisition Start Date: 8/15/2012 11:44:22PM

Live Time: 400.00 min.

Real Time: 400.05 min.

Background Date: 7/24/2012 9:07:30PM

Background Info: Sample: ICB;AV68; Det: AV68; Spectrum #1;

Int. 24.2012 21:07

Calibration Name: IC-8877;AV68-20120610

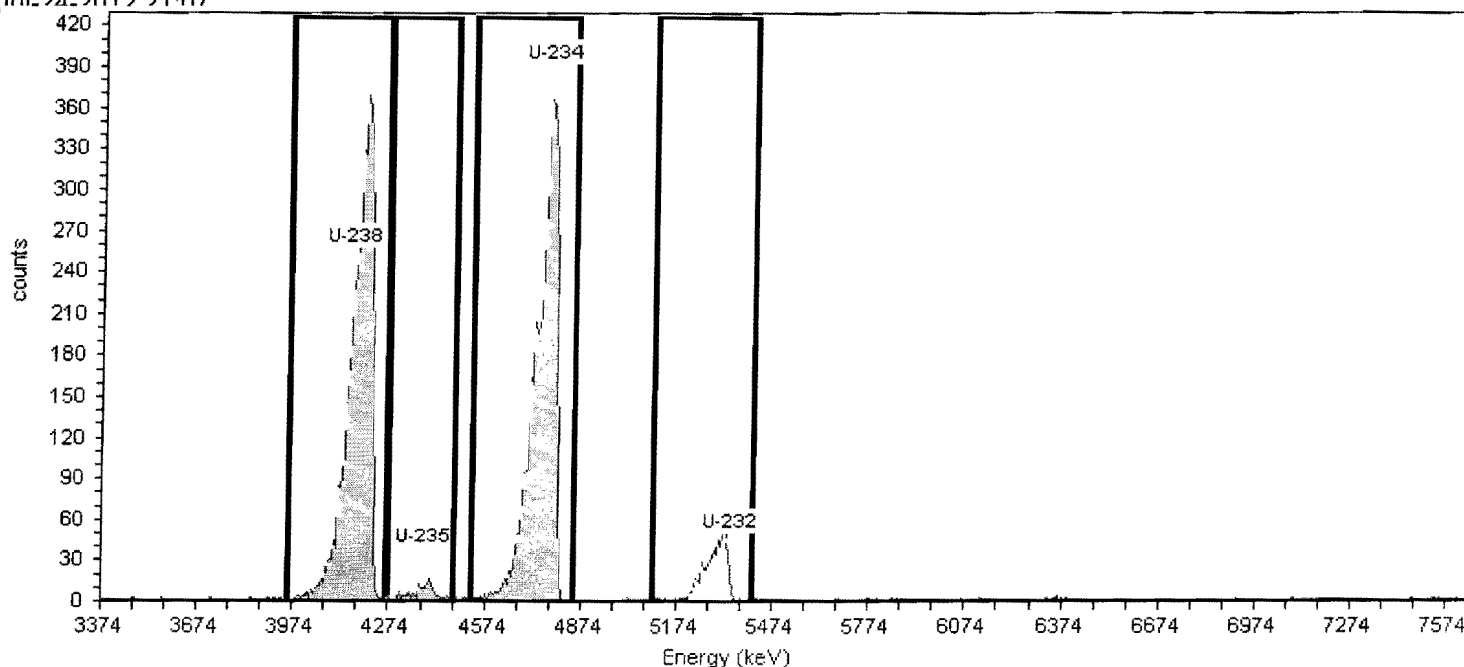
Calibration Date: 6/11/2012 3:31:53PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.40% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:42:50PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	71.633	100.0	3602	1.2500	3600.75	4.631E+001	1.544E+000	4.18E+000	3.345E-002	9.110E-002
U-235	4381.179	4269.316	4470.670	51.664	80.2	117	0.4167	116.58	1.869E+000	3.471E-001	3.81E-001	2.408E-002	8.392E-002
U-234	4776.430	4530.331	4851.005	75.188	99.8	3618	3.3333	3614.67	4.658E+001	1.550E+000	4.21E+000	5.473E-002	1.270E-001
U-232	5343.203	5097.104	5410.321	80.600	100.1	500	3.7500	496.25	4.459E+000	5.755E-001	6.87E-001	5.789E-002	1.447E-001

Sample Name: F2H090401-017

SampleType: Sample

: MV2RV1AA

Sample Collection Date: 8/6/2012 12:25:00PM

Batch Name: 2226015

AnalysisID: 535633

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 91.88%

Acquisition

Detector: AV69

Serial Number: 49-155DD5

Acquisition Start Date: 8/15/2012 3:53:32PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/24/2012 9:07:31PM

Background Info: Sample: ICB;AV69; Det: AV69; Spectrum #1;

Jul 24 2012 21:07

Calibration Name: ICV-8877;AV69-20120611a

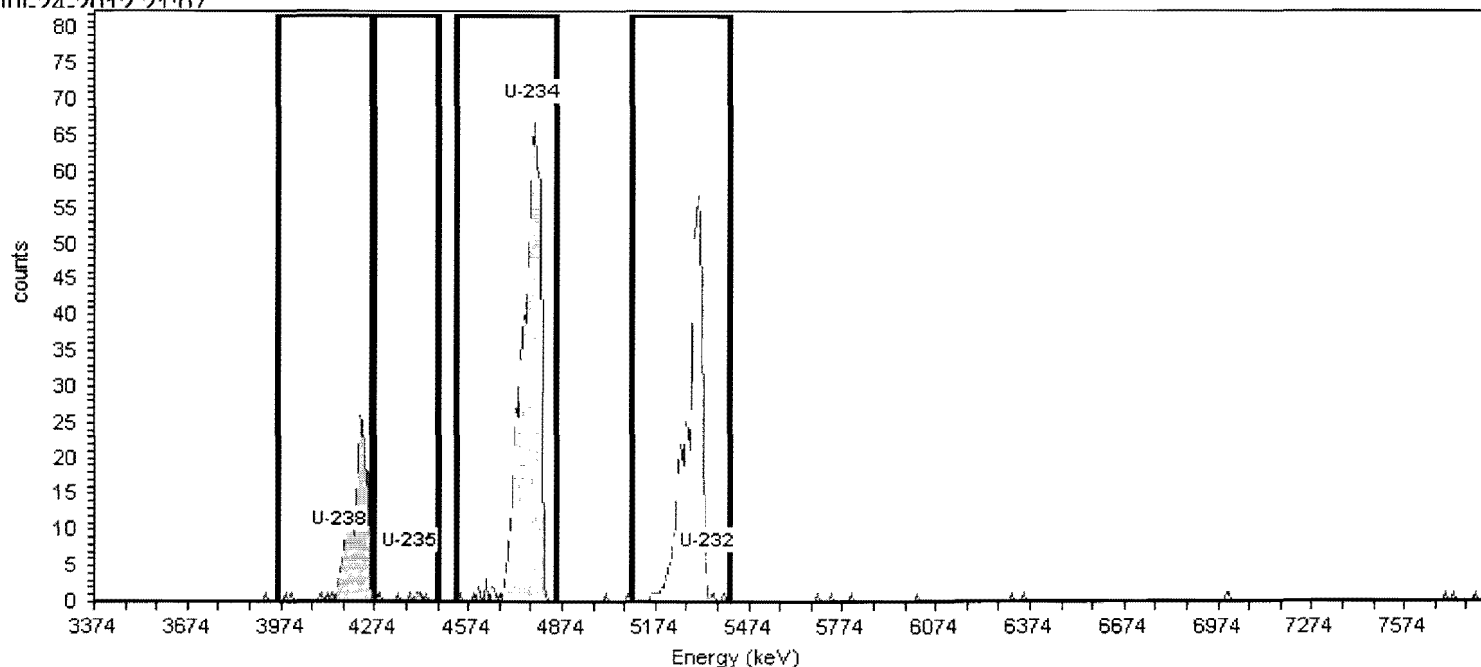
Calibration Date: 6/11/2012 4:44:35PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.62% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:50:52PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	30.290	100.0	185	0.7500	184.25	2.725E+000	4.025E-001	4.63E-001	2.980E-002	8.714E-002
U-235	4381.179	4269.316	4470.670	24.729	80.2	7	0.0000	7.00	1.291E-001	9.758E-002	9.82E-002	2.145E-002	4.990E-002
U-234	4776.430	4530.331	4851.005	69.424	99.8	609	0.5000	608.50	9.018E+000	7.315E-001	1.05E+000	2.438E-002	7.865E-002
U-232	5343.203	5097.104	5410.321	58.160	100.1	432	0.5000	431.50	6.412E+000	6.144E-001	8.17E-001	2.431E-002	8.582E-002

Sample

Sample Name: F2H090401-018

Sample Type: Sample

: MV2RW1AA

Sample Collection Date: 8/6/2012 12:00:00AM

Batch Name: 2226015

AnalysisID: 535634

Spectrum #1 Analysis #1

Sample Volume: 0.5004L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 74.90%

Acquisition

Detector: AV70

Serial Number: 48-158FF1

Acquisition Start Date: 8/15/2012 3:53:33PM

Live Time: 240.00 min.

Real Time: 240.01 min.

Background Date: 7/24/2012 9:07:33PM

Background Info: Sample: ICB;AV70; Det: AV70; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-8879;AV70-20120610

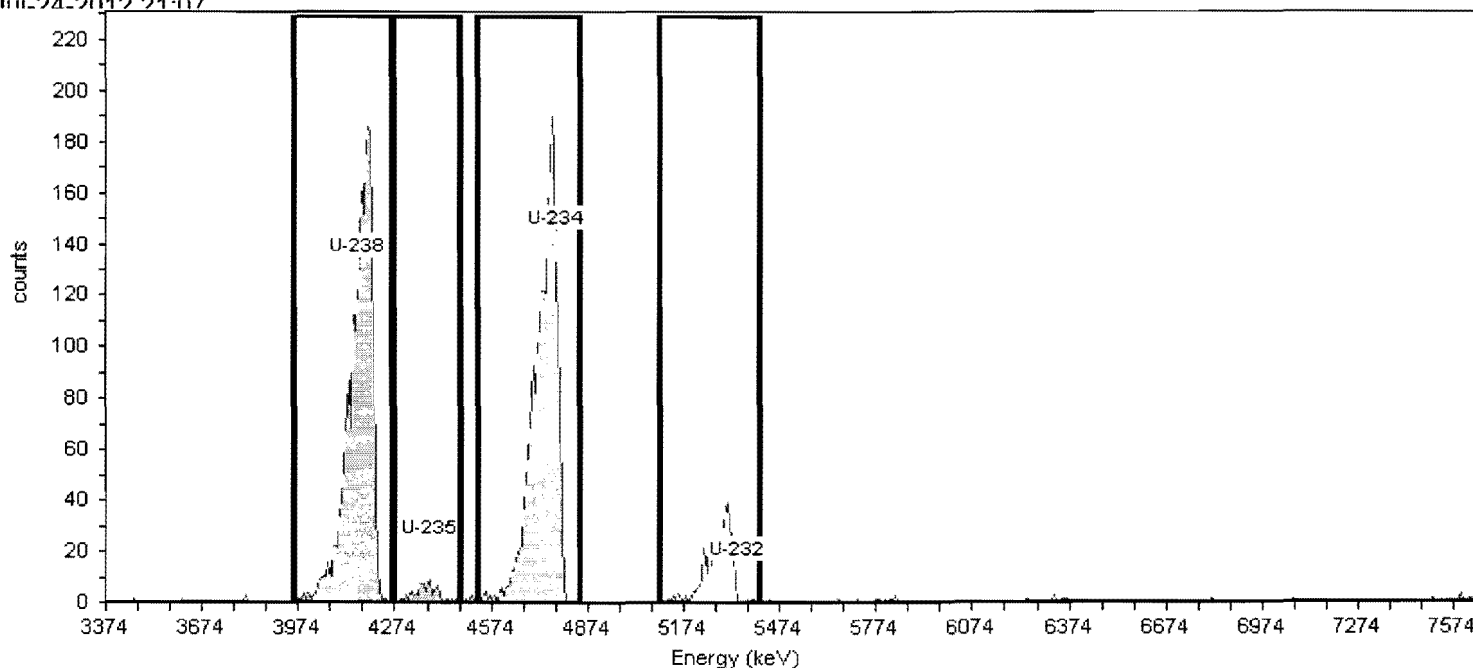
Calibration Date: 6/11/2012 3:32:41PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.32% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:50:52PM

MDA Constants: $K_{\alpha} = 1.65$, $K_{\beta} = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma			Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L			
U-238	4157.453	3956.099	4261.858	70.942	100.0	1826	0.5000	1825.50	3.346E+001	1.567E+000	3.22E+000		3.015E-002	9.727E-002
U-235	4381.179	4269.316	4470.670	66.891	80.2	69	0.2500	68.75	1.571E+000	3.799E-001	4.02E-001		2.658E-002	1.039E-001
U-234	4776.430	4530.331	4851.005	79.345	99.8	1878	0.5000	1877.50	3.448E+001	1.592E+000	3.31E+000		3.021E-002	9.747E-002
U-232	5343.203	5097.104	5410.321	84.752	100.1	349	1.0000	348.00	5.224E+000	6.845E-001	8.13E-001		4.261E-002	1.280E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis

13715 Rider Trail North
Earth City, MO 63045

8:54:58AM 8/16/2012

Sample Name: F2H090401-018D

SampleType: Sample

: MV2RW1AD

Sample Collection Date: 8/6/2012 12:00:00AM

Batch Name: 2226015

AnalysisID: 535780

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5004L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 70.66%

Acquisition

Detector: AV71

Serial Number: 48-158EE6

Acquisition Start Date: 8/15/2012 11:44:23PM

Live Time: 400.00 min.

Real Time: 400.05 min.

Background Date: 7/24/2012 9:07:35PM

Background Info: Sample: ICB;AV71; Det: AV71; Spectrum #1;

Jul-24-2012 21:07

Calibration Name: IC-9792;AV71-20120610

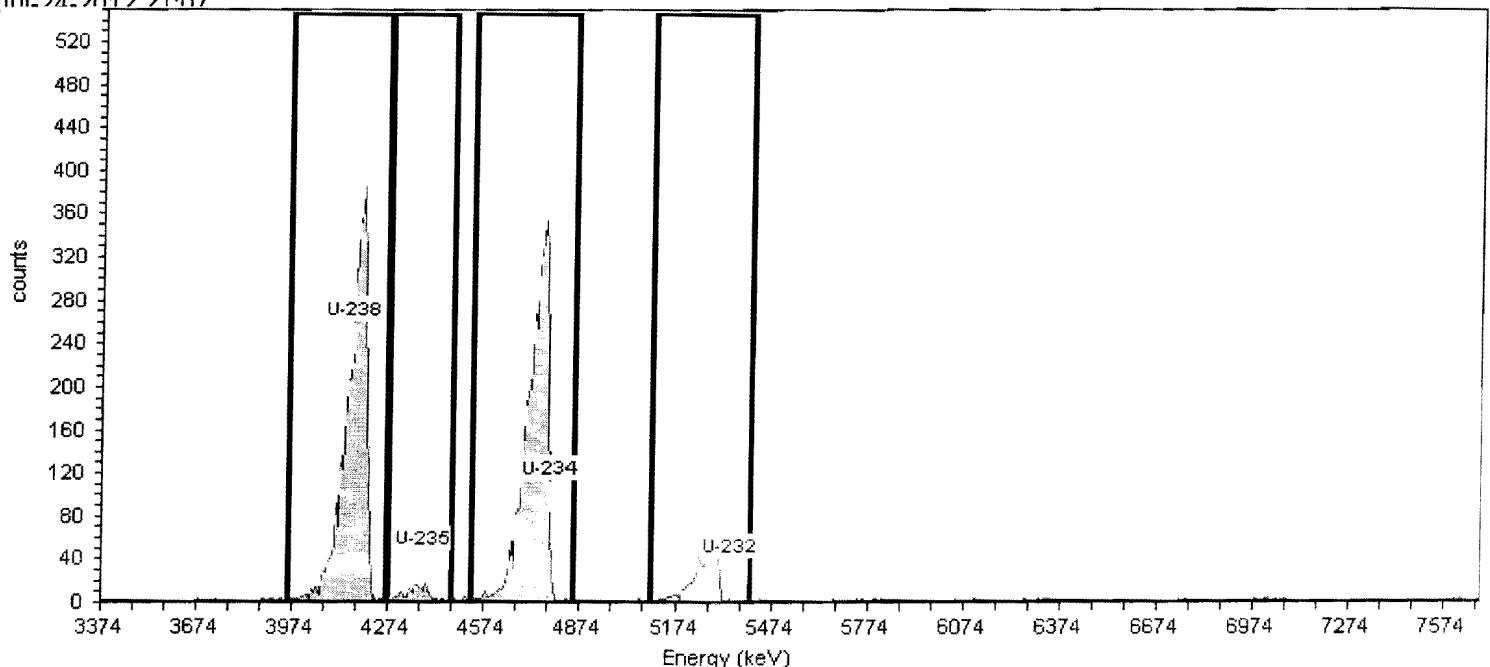
Calibration Date: 6/11/2012 3:33:08PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.63% +/- 0.32% TPU(2 sigma)

**General Analysis**

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:42:50PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	64.950	100.0	3420	1.6667	3418.33	3.941E+001	1.349E+000	3.57E+000	3.462E-002	8.948E-002
U-235	4381.179	4269.316	4470.670	67.824	80.2	143	0.0000	143.00	2.056E+000	3.438E-001	3.85E-001	2.159E-002	3.890E-002
U-234	4776.430	4530.331	4851.005	73.692	99.8	3387	0.0000	3387.00	3.912E+001	1.345E+000	3.55E+000	1.735E-002	3.126E-002
U-232	5343.203	5097.104	5410.321	74.289	100.1	555	1.6667	553.33	4.928E+000	5.431E-001	6.83E-001	3.460E-002	9.784E-002

Alpha-Spectroscopy
Analysis ReportTestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:55:04AM 8/16/2012

Sample

Sample Name: F2H090401-018S

SampleType: Sample

: MV2RW1AC

Sample Collection Date: 8/6/2012 12:00:00AM

Batch

Batch Name: 2226015

AnalysisID: 535781

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Tracer Nuclide: U-232

Tracer Recovery: 71.10%

Acquisition

Detector: AV74

Serial Number: 50-051C6

Acquisition Start Date: 8/15/2012 11:44:24PM

Live Time: 400.00 min.

Real Time: 400.05 min.

Background Date: 7/24/2012 9:07:39PM

Background Info: Sample: ICB;AV74; Det: AV74; Spectrum #1;

Jul 24 2012 21:07

Calibration Name: IC-9795;AV74-20120611a

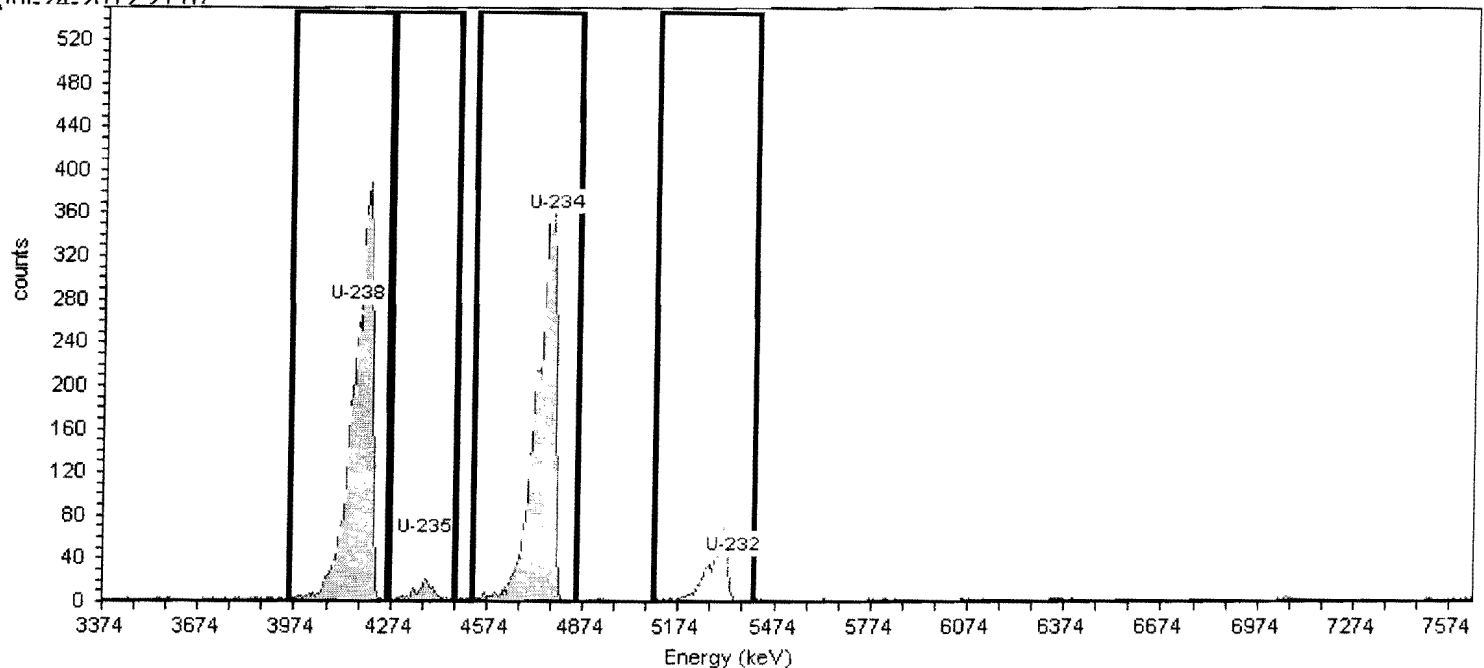
Calibration Date: 6/12/2012 1:04:18AM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.01% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:42:50PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	68.675	100.0	3486	0.0000	3486.00	4.087E+001	1.384E+000	3.70E+000	1.761E-002	3.173E-002
U-235	4381.179	4269.316	4470.670	50.362	80.2	138	0.0000	138.00	2.017E+000	3.435E-001	3.83E-001	2.195E-002	3.956E-002
U-234	4776.430	4530.331	4851.005	69.664	99.8	3437	0.8333	3436.17	4.037E+001	1.378E+000	3.66E+000	2.495E-002	7.378E-002
U-232	5343.203	5097.104	5410.321	73.968	100.1	546	1.6667	544.33	4.961E+000	5.478E-001	6.88E-001	3.518E-002	9.950E-002

Sample Name: F2H090401-019
SampleType: Sample
: MV2RX1AA
Sample Collection Date: 8/6/2012 3:20:00PM

Sample

Spectrum #1 Analysis #1
Sample Volume : 0.5001L
Aliquot: N/A Aliquot Fraction: N/A

Batch Name: 2226015
AnalysisID: 535637

Batch

Analyst: 60040

Tracer Name: Rad11-0087_U232_Unclean
Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM
Tracer Ref. Date: 4/7/2003 11:00:15AM

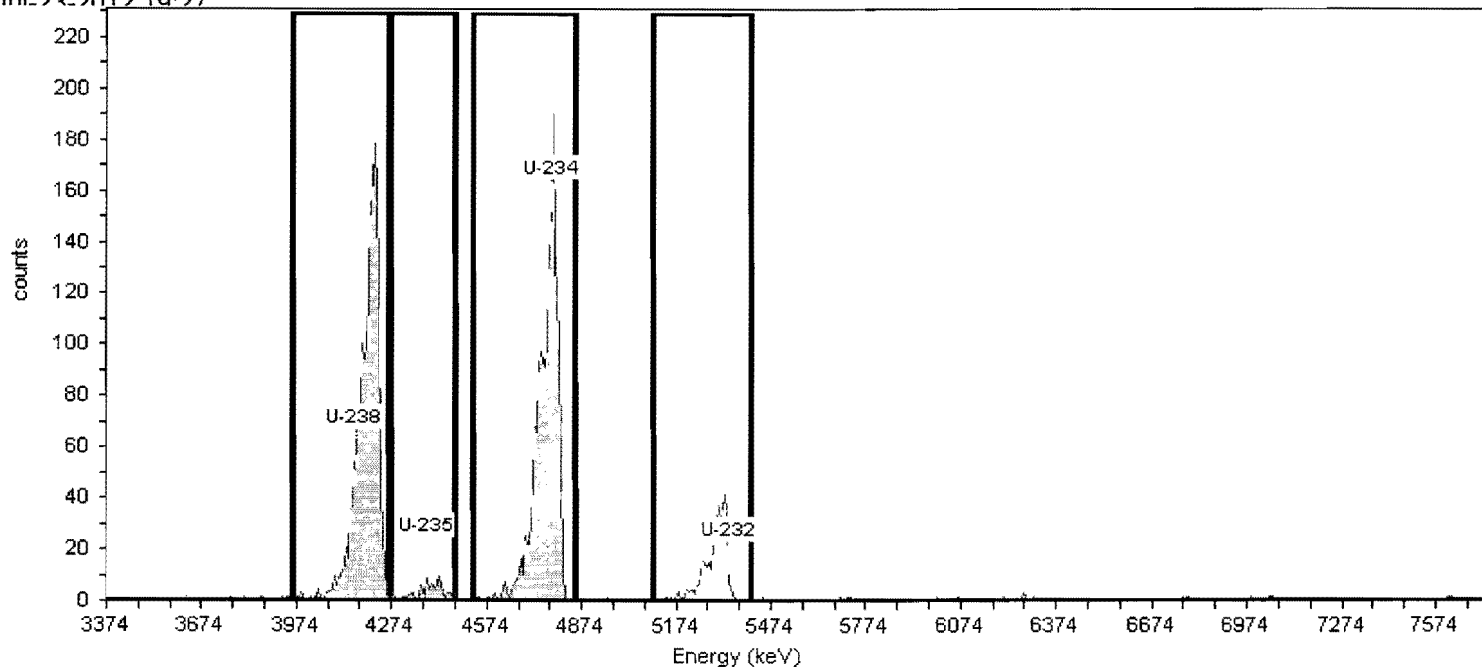
Tracer

Tracer Nuclide: U-232
Tracer Recovery: 71.74%

Detector: AV75
Serial Number: 46-033P6
Acquisition Start Date: 8/15/2012 3:53:40PM
Live Time: 240.00 min.
Real Time: 240.01 min.
Background Date: 7/23/2012 7:27:05PM
Background Info: Sample: ICB;AV75; Det: AV75; Spectrum #1;
Jul-23-2012 10:27

Acquisition

Calibration Name: IC-9817;AV75-20120611a
Calibration Date: 6/12/2012 1:04:21AM
Gain = 7.4575 keV / Ch
Energy Cal: Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²
Efficiency: 26.56% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI
Decay Correction: 8/15/2012 3:50:52PM
MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium
MDA Source: Background

Nuclide Summary (ROI)

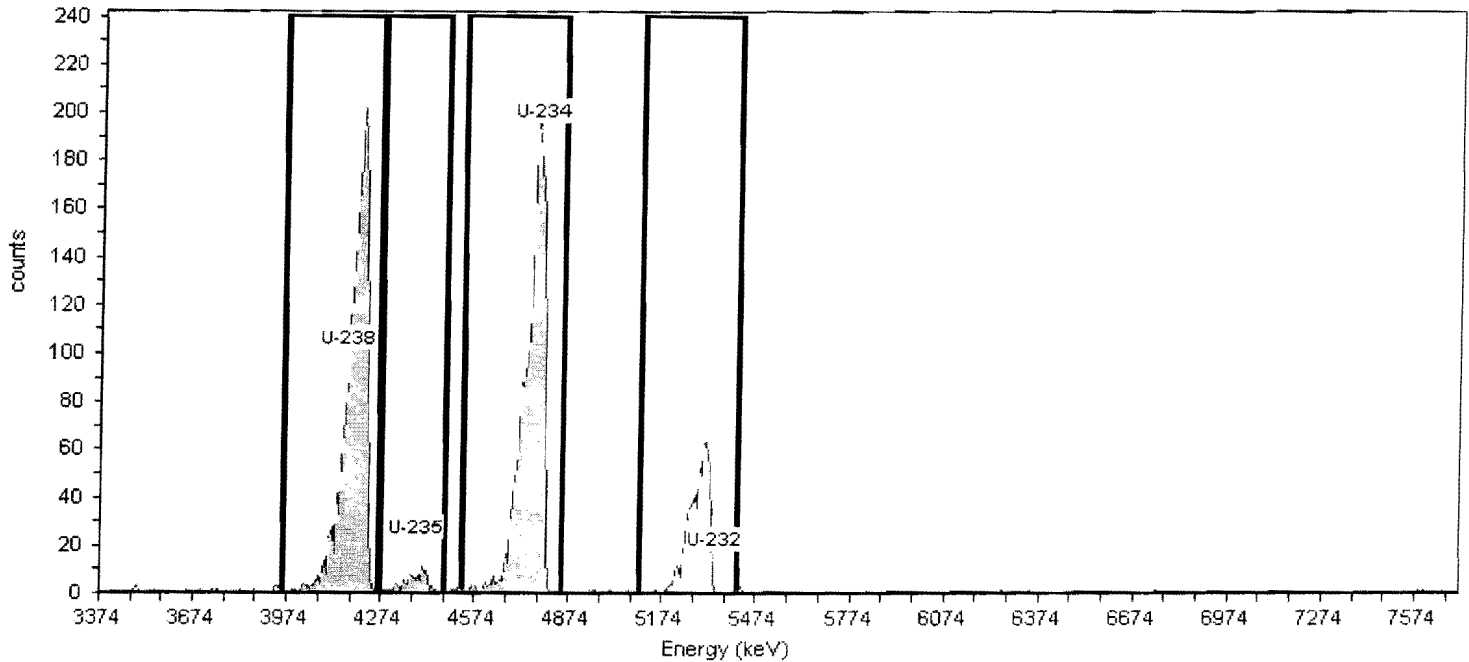
Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	33.125	100.0	1493	0.5000	1492.50	2.940E+001	1.522E+000	2.90E+000	3.241E-002	1.045E-001
U-235	4381.179	4269.316	4470.670	60.405	80.2	68	0.2500	67.75	1.664E+000	4.053E-001	4.29E-001	2.857E-002	1.116E-001
U-234	4776.430	4530.331	4851.005	69.691	99.8	1455	0.2500	1454.75	2.872E+001	1.506E+000	2.84E+000	2.296E-002	8.972E-002
U-232	5343.203	5097.104	5410.321	56.680	100.1	325	1.0000	324.00	5.007E+000	7.100E-001	8.25E-001	4.579E-002	1.375E-001

Alpha-Spectroscopy Analysis Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:55:11AM 8/16/2012

Sample		Sample	
Sample Name: F2H090401-020		Spectrum #1 Analysis #1	
Sample Type: Sample		Sample Volume : 0.5002L	
: MV2R11AA		Aliquot: N/A Aliquot Fraction: N/A	
Sample Collection Date: 8/6/2012 3:45:00PM			
Batch		Batch	
Batch Name: 2226015		Analyst: 60040	
AnalysisID: 535782			
Tracer		Tracer	
Tracer Name: Rad11-0087_U232_Unclean		Tracer Nuclide: U-232	
Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM		Tracer Recovery: 72.60%	
Tracer Ref. Date: 4/7/2003 11:00:15AM			

Acquisition		Acquisition	
Detector: AV76		Calibration Name: IC-9884;AV76-20120611a	
Serial Number: 49-155N6		Calibration Date: 6/12/2012 1:04:24AM	
Acquisition Start Date: 8/15/2012 11:44:25PM		Gain = 7.4575 keV / Ch	
Live Time: 400.00 min.		Offset = 3,366.95 keV	
Real Time: 400.02 min.		Energy Cal: Quadratic = 0.0000 keV / Ch ²	
Background Date: 7/23/2012 7:27:06PM		Efficiency: 27.23% +/- 0.38% TPU(2 sigma)	
Background Info: Sample: ICB;AV76; Det: AV76; Spectrum #1;			
Jul-23-2012 10:27			



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI
Decay Correction: 8/15/2012 11:42:50PM
MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	67.481	100.0	1759	1.6667	1757.33	2.001E+001	9.553E-001	1.93E+000	3.420E-002	8.838E-002
U-235	4381.179	4269.316	4470.670	59.275	80.2	80	3.7500	76.25	1.083E+000	2.565E-001	2.72E-001	6.396E-002	1.461E-001
U-234	4776.430	4530.331	4851.005	61.884	99.8	1747	2.9167	1744.08	1.990E+001	9.541E-001	1.92E+000	4.533E-002	1.072E-001
U-232	5343.203	5097.104	5410.321	73.071	100.1	562	1.6667	560.33	5.065E+000	5.398E-001	6.87E-001	3.417E-002	9.663E-002

Sample Name: F2H090401-021

SampleType: Sample

: MV2R21AA

Sample Collection Date: 8/6/2012 3:55:00PM

Batch Name: 2226015

AnalysisID: 535783

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Sample

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Batch

Analyst: 60040

Tracer

Tracer Nuclide: U-232

Tracer Recovery: 80.60%

Acquisition

Detector: AV77

Serial Number: 49-155N7

Acquisition Start Date: 8/15/2012 11:44:26PM

Live Time: 400.00 min.

Real Time: 400.02 min.

Background Date: 7/23/2012 7:27:07PM

Background Info: Sample: ICB;AV77; Det: AV77; Spectrum #1;

Jul-23-2012 10:27

Calibration Name: IC-9885;AV77-20120612

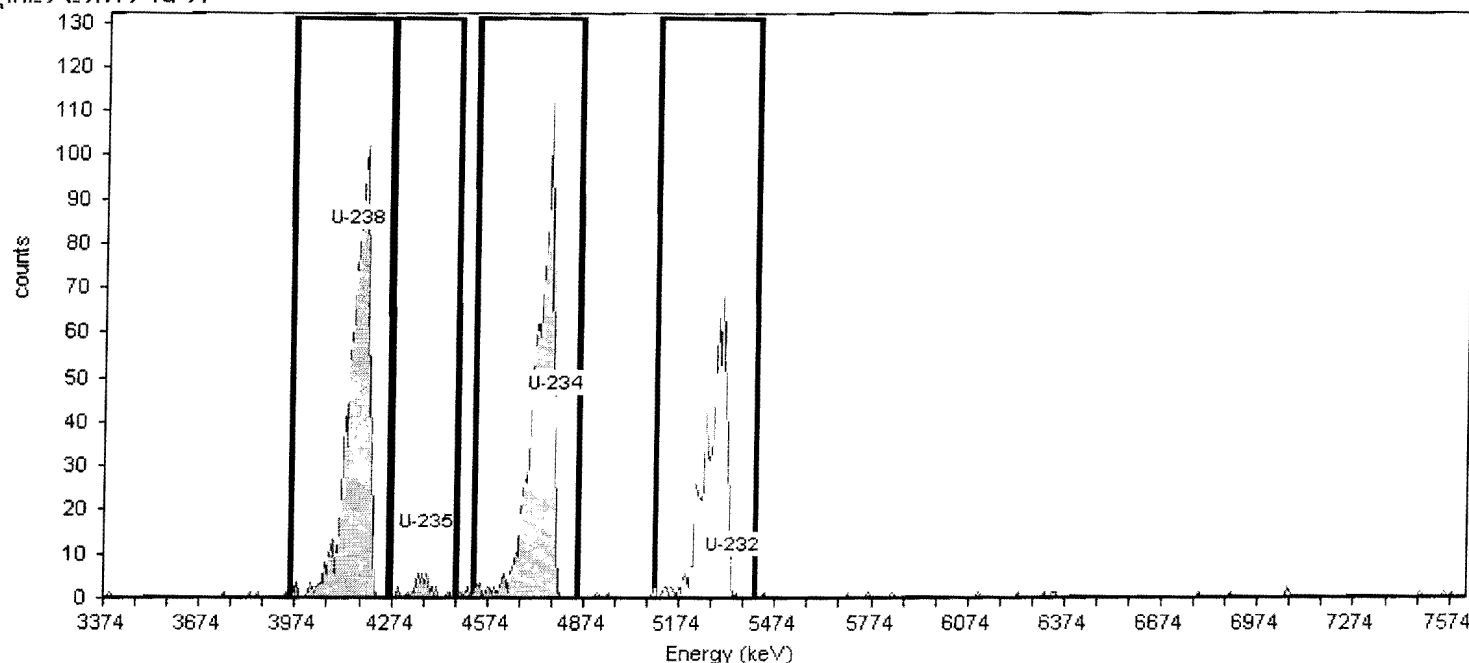
Calibration Date: 6/12/2012 10:16:22PM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.74% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:42:50PM

MDA Constants: K α = 1.65, K β = 1.65

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	69.282	100.0	910	0.4167	909.58	9.503E+000	6.304E-001	1.02E+000	1.569E-002	5.468E-002
U-235	4381.179	4269.316	4470.670	46.237	80.2	33	0.0000	33.00	4.299E-001	1.497E-001	1.54E-001	1.956E-002	3.525E-002
U-234	4776.430	4530.331	4851.005	71.110	99.8	889	2.9167	886.08	9.276E+000	6.247E-001	9.99E-001	4.159E-002	9.834E-002
U-232	5343.203	5097.104	5410.321	74.409	100.1	613	2.0833	610.92	5.625E+000	5.173E-001	7.01E-001	3.505E-002	9.548E-002

Alpha-Spectroscopy
Analysis ReportTestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
8:55:23AM 8/16/2012

Sample

Sample Name: F2H090401-022

SampleType: Sample

: MV2R41AA

Sample Collection Date: 8/6/2012 12:00:00AM

Batch

Batch Name: 2226015

AnalysisID: 535784

Tracer

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Spectrum #1 Analysis #1

Sample Volume : 0.5001L

Aliquot: N/A Aliquot Fraction: N/A

Analyst: 60040

Tracer Nuclide: U-232

Tracer Recovery: 42.90%

Acquisition

Detector: AV78

Serial Number: 46-033FF4

Acquisition Start Date: 8/15/2012 11:44:28PM

Live Time: 400.00 min.

Real Time: 400.02 min.

Background Date: 7/23/2012 7:27:09PM

Background Info: Sample: ICB;AV78; Det: AV78; Spectrum #1;

Jul-23-2012 10:27

Calibration Name: IC-9886;AV78-20120611a

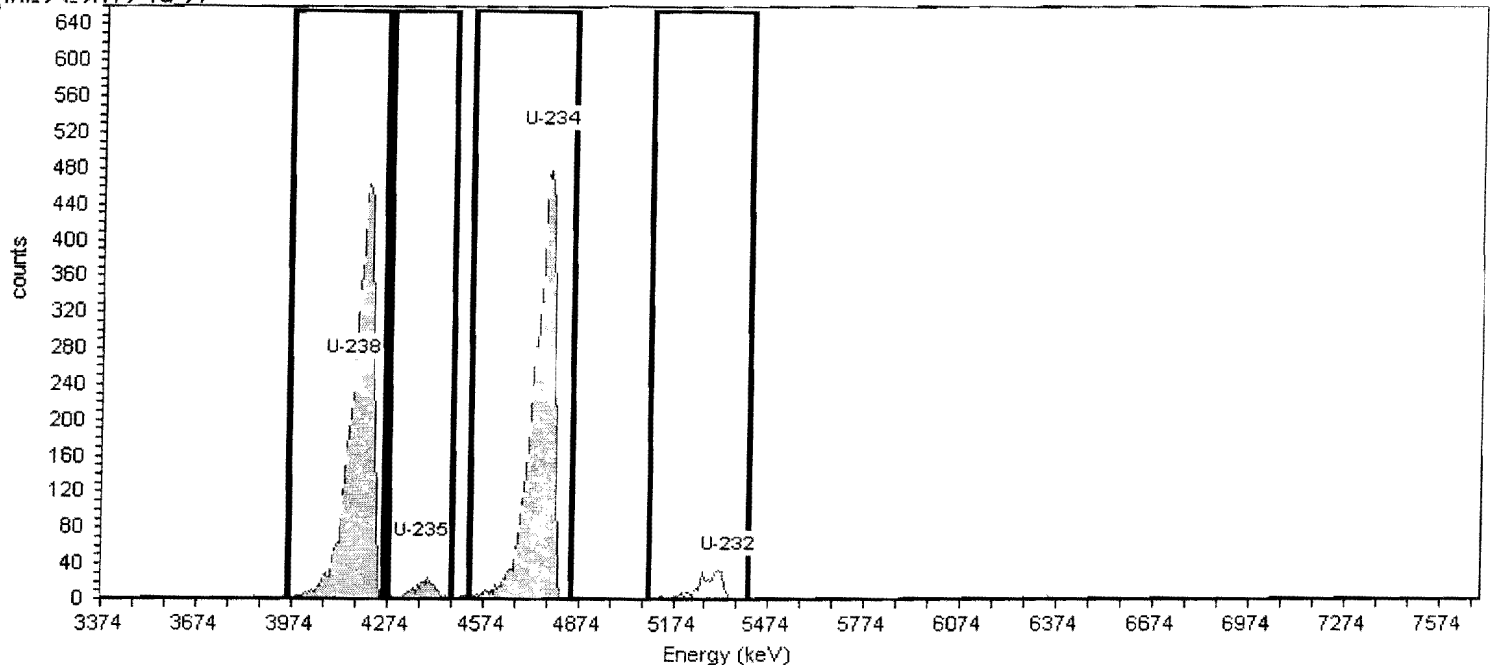
Calibration Date: 6/12/2012 1:04:27AM

Gain = 7.4575 keV / Ch

Energy Cal: Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.51% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 11:42:50PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										Uncount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	67.491	100.0	4709	1.2500	4707.75	8.981E+001	2.618E+000	7.99E+000	4.962E-002	1.351E-001
U-235	4381.179	4269.316	4470.670	57.325	80.2	193	0.4167	192.58	4.581E+000	6.612E-001	7.65E-001	3.572E-002	1.245E-001
U-234	4776.430	4530.331	4851.005	72.807	99.8	4779	0.8333	4778.17	9.133E+001	2.643E+000	8.11E+000	4.059E-002	1.201E-001
U-232	5343.203	5097.104	5410.321	82.679	100.1	335	0.4167	334.58	2.994E+000	6.979E-001	7.42E-001	2.862E-002	1.092E-001

Sample Name: F2H130000-015B

SampleType: Blank

: MV35H1AA

Sample Collection Date: 8/3/2012 1:40:00PM

Batch Name: 2226015

AnalysisID: 535641

Tracer Name: Rad11-0087_U232_Unclean

Tracer Activity: 77.48 DPM/mL x (Vol.)0.10 mL = 7.75 DPM

Tracer Ref. Date: 4/7/2003 11:00:15AM

Detector: AV121

Serial Number: 49-037W2

Acquisition Start Date: 8/15/2012 3:52:47PM

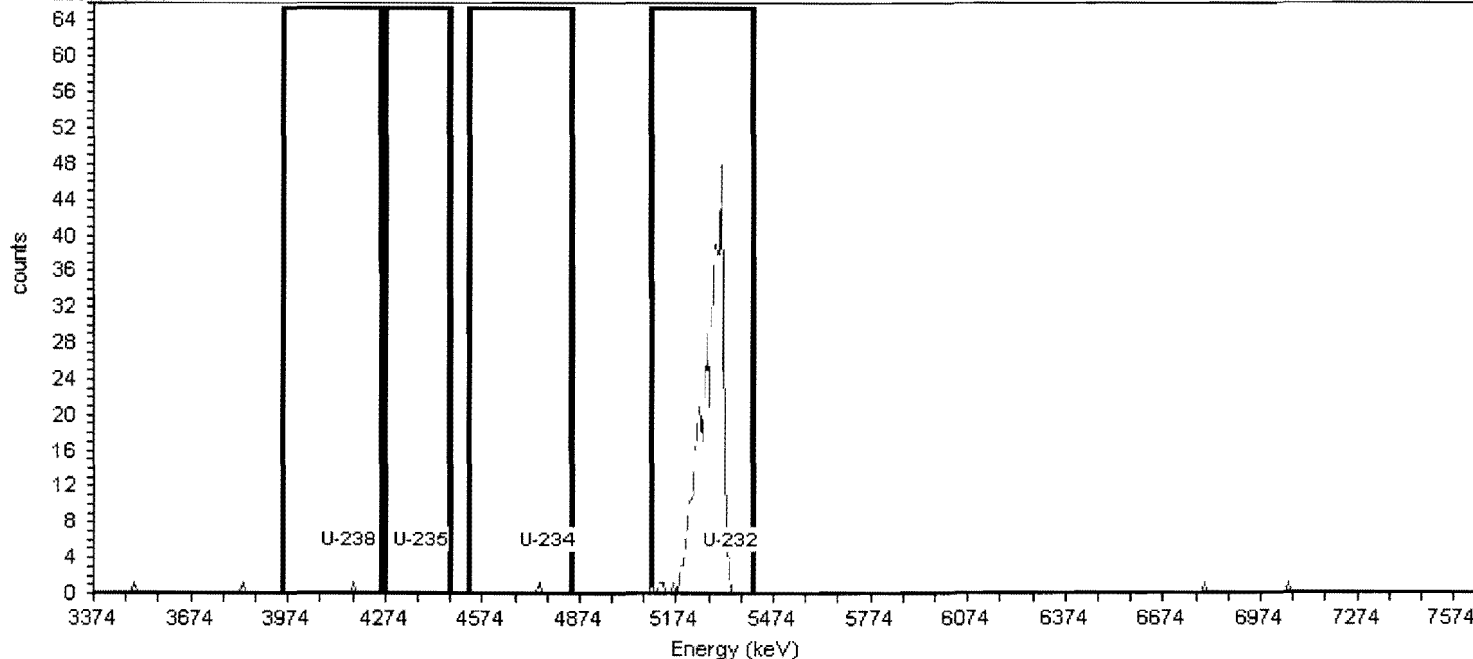
Live Time: 240.00 min.

Real Time: 240.00 min.

Background Date: 7/24/2012 9:06:32PM

Background Info: Sample: ICB;AV121; Det: AV121; Spectrum #1;

Jul 24 2012 21:06



Analysis Method: ROI Analysis, Set Name = UROI

Decay Correction: 8/15/2012 3:50:52PM

MDA Constants: $K\alpha = 1.65$, $K\beta = 1.65$

Nuclide Library: Uranium

MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi/L	2.00 Sigma		Critical Level pCi/L	MDA pCi/L
										UncCount pCi/L	TPU pCi/L		
U-238	4157.453	3956.099	4261.858	44.465	100.0	1	0.2500	0.75	5.744E-003	1.579E-002	1.58E-002	8.909E-003	3.481E-002
U-235	4381.179	4269.316	4470.670	.000	80.2	0	0.0000	0.00	0.000E+000	9.550E-003	9.55E-003	1.111E-002	2.584E-002
U-234	4776.430	4530.331	4851.005	44.465	99.8	1	0.2500	0.75	5.756E-003	1.582E-002	1.58E-002	8.926E-003	3.488E-002
U-232	5343.203	5097.104	5410.321	72.840	100.1	417	0.2500	416.75	3.027E+000	3.126E-001	4.03E-001	8.901E-003	3.806E-002

SampID	WRKNO	Aliquot	Dilution	Adj Aliquot	TracerID	TracerAnalyte	TracerAliquot	Low Level
--------	-------	---------	----------	-------------	----------	---------------	---------------	-----------

Spike Information

Sample ID	Standard ID	Analyte	Std Conc	Aliquot	Ref Date	StdAdded
F2H090401-018D	Rad12-0005	U-234	7.249E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.526E+000 pCi/L
F2H090401-018D	Rad12-0005	U-238	7.526E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.775E+000 pCi/L
F2H090401-018S	Rad12-0005	U-234	7.249E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.529E+000 pCi/L
F2H090401-018S	Rad12-0005	U-238	7.526E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	6.779E+000 pCi/L
F2H130000-015C	Rad12-0005	U-234	7.249E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	3.265E+000 pCi/L
F2H130000-015C	Rad12-0005	U-238	7.526E+001 dpm/mL	0.10 mL	8/1/1997 12:00:00AM	3.390E+000 pCi/L

8.13.12
Spike Date

Standard Operating Procedures

SOPNumber	Title	Revision
<input type="checkbox"/> ST-RC-0002	Planchet Preparation For Radiochemistry And Radiological Screening Analysis	10.00
<input type="checkbox"/> ST-RC-0003	Drying And Grinding Of Soil And Solid Samples	11.00
<input type="checkbox"/> ST-RC-0004	Preparation Of Soil, Sludge, Filter, Biota and Oil/Grease Samples For Radiochemical Analysis	19.00
<input type="checkbox"/> ST-RC-0014	Bulk Drying and Grinding of Soil and Solid Samples	0.00
<input checked="" type="checkbox"/> ST-RC-0100	Actinide Coprecipitation	14.00
<input checked="" type="checkbox"/> ST-RC-0238	Isotopic Uranium by Eichrom UTEVA Resin for Various Matrices	12.00
<input type="checkbox"/> ST-RC-0240	Isotopic Americium, Curium, Plutonium, Thorium, and Uranium in Various Matrices by Eichrom Separation Resin	12.00
<input type="checkbox"/> ST-RC-0241	Isotopic Americium, Plutonium, Curium, and Uranium in Various Matrices by Eichrom Uteva and Tru Resins (with V	9.00
<input type="checkbox"/> ST-RC-0242	Isotopic Thorium, Plutonium and Uranium in Various Matrices by Eichrom Separation Resin	14.00
<input type="checkbox"/> ST-RC-0246	Isotopic Americium, Curium and Uranium in Various Matrices by Eichrom Separation Resins	5.00
<input checked="" type="checkbox"/> ST-RD-0210	Alpha Spectroscopy Analysis	8.00

8.15.12
Date

8.15.12
Precip Date

8.20.12
Review Date

8.15.12
Release Date

8/15/12
Receipt Date

1125353055 | 8.13.12
Balance ID / Initials / Date

240mins LL

8/22

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Prep Report for Uranium, Isotopic by Alpha Spectroscopy

Batch: 2226015

Prep Analyst: 403651

SampID	WRKNO	Aliquot	Dilution	Adj Aliquot	TracerID	TracerAnalyte	TracerAliquot	Low Level
F2H090401-012	MV2RN1AA	5.0015E+002 mL	1.00	5.0015E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-013	MV2RP1AA	5.0007E+002 mL	1.00	5.0007E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-014	MV2RQ1AA	5.0003E+002 mL	1.00	5.0003E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-015	MV2RR1AA	5.0011E+002 mL	1.00	5.0011E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-016	MV2RT1AA	5.0014E+002 mL	1.00	5.0014E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-017	MV2RV1AA	5.0013E+002 mL	1.00	5.0013E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-018	MV2RW1AA	5.0039E+002 mL	1.00	5.0039E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-018D	MV2RW1AD	5.0035E+002 mL	1.00	5.0035E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-018S	MV2RW1AC	5.0012E+002 mL	1.00	5.0012E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-019	MV2RX1AA	5.0006E+002 mL	1.00	5.0006E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-020	MV2R11AA	5.0024E+002 mL	1.00	5.0024E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-021	MV2R21AA	5.0005E+002 mL	1.00	5.0005E+002 mL	Rad11-0087	U-232	0.10	N
F2H090401-022	MV2R41AA	5.0006E+002 mL	1.00	5.0006E+002 mL	Rad11-0087	U-232	0.10	N
F2H130000-015B	MV35H1AA	1.0000E+003 mL	1.00	1.0000E+003 mL	Rad11-0087	U-232	0.10	N
F2H130000-015C	MV35H1AC	1.0000E+003 mL	1.00	1.0000E+003 mL	Rad11-0087	U-232	0.10	N

SampleID	WRKNO	Aliquot	Dilution	Adj Aliquot	TracerID	TracerAnalyte	TracerAliquot	Low Level
----------	-------	---------	----------	-------------	----------	---------------	---------------	-----------

Spike Information

Sample ID	Standard ID	Analyte	Std Conc	Aliquot	Ref Date	Std Added
F2H090401-018D	Rad12-0005	U-234	7.249E+001	dpm/mL 0.10 mL	8/1/1997 12:00:00AM	6.526E+000 pCi/L
F2H090401-018D	Rad12-0005	U-238	7.526E+001	dpm/mL 0.10 mL	8/1/1997 12:00:00AM	6.775E+000 pCi/L
F2H090401-018S	Rad12-0005	U-234	7.249E+001	dpm/mL 0.10 mL	8/1/1997 12:00:00AM	6.529E+000 pCi/L
F2H090401-018S	Rad12-0005	U-238	7.526E+001	dpm/mL 0.10 mL	8/1/1997 12:00:00AM	6.779E+000 pCi/L
F2H130000-015C	Rad12-0005	U-234	7.249E+001	dpm/mL 0.10 mL	8/1/1997 12:00:00AM	3.265E+000 pCi/L
F2H130000-015C	Rad12-0005	U-238	7.526E+001	dpm/mL 0.10 mL	8/1/1997 12:00:00AM	3.390E+000 pCi/L

Spi

Spike Date

Standard Operating Procedures

SOPNumber	Title	Revision
<input type="checkbox"/> ST-RC-0002	Planchet Preparation For Radiochemistry And Radiological Screening Analysis	10.00
<input type="checkbox"/> ST-RC-0003	Drying And Grinding Of Soil And Solid Samples	11.00
<input type="checkbox"/> ST-RC-0004	Preparation Of Soil, Sludge, Filter, Biota and Oil/Grease Samples For Radiochemical Analysis	19.00
<input type="checkbox"/> ST-RC-0014	Bulk Drying and Grinding of Soil and Solid Samples	0.00
<input checked="" type="checkbox"/> ST-RC-0100	Actinide Coprecipitation	14.00
<input checked="" type="checkbox"/> ST-RC-0238	Isotopic Uranium by Eichrom UTEVA Resin for Various Matrices	12.00
<input type="checkbox"/> ST-RC-0240	Isotopic Americium, Curium, Plutonium, Thorium, and Uranium in Various Matrices by Eichrom Separation Resin	12.00
<input type="checkbox"/> ST-RC-0241	Isotopic Americium, Plutonium, Curium, and Uranium in Various Matrices by Eichrom Uteva and Tru Resins (with V	9.00
<input type="checkbox"/> ST-RC-0242	Isotopic Thorium, Plutonium and Uranium in Various Matrices by Eichrome Separation Resin	14.00
<input type="checkbox"/> ST-RC-0246	Isotopic Americium, Curium and Uranium in Various Matrices by Eichrom Separation Resins	5.00
<input checked="" type="checkbox"/> ST-RD-0210	Alpha Spectroscopy Analysis	8.00

Co

Date

Precip Date

Review Date

Analyst/Relinquished By

Release Date

Received By

Receipt Date

Balance ID / Initials / Date

Alpha Spectrsocopy

Daily Checks and Run Logs

Detector	Date/Time	Gross Counts			P/F	FWHM (keV)			P/F	Pulser Center			P/F	Energy (keV)			P/F
		Result	Criteria			Result	Criteria			Result	Criteria			Result	Criteria		
AV1	08/15/2012 0:41	7384	7412.2 +/- 5%		Pass	15.1	10 - 20		Pass	222.0	223.4 +/- 5 ch		Pass	5023	5032.6 +/- 40keV		Pass
AV3	08/15/2012 0:41	7375	7431.5 +/- 5%		Pass	14.8	10 - 20		Pass	227.2	227.1 +/- 5 ch		Pass	5061	5060.9 +/- 40keV		Pass
AV4	08/15/2012 0:41	7383	7450.2 +/- 5%		Pass	13.7	10 - 20		Pass	223.9	225.4 +/- 5 ch		Pass	5037	5048.2 +/- 40keV		Pass
AV6	08/15/2012 0:41	7379	7349.4 +/- 5%		Pass	14.3	10 - 20		Pass	218.0	219.1 +/- 5 ch		Pass	4993	5001.2 +/- 40keV		Pass
AV7	08/15/2012 0:41	7362	7427.2 +/- 5%		Pass	16.2	10 - 20		Pass	226.1	225.5 +/- 5 ch		Pass	5053	5048.9 +/- 40keV		Pass
AV8	08/15/2012 0:41	7373	7429.3 +/- 5%		Pass	13.8	10 - 20		Pass	221.1	221.2 +/- 5 ch		Pass	5016	5016.8 +/- 40keV		Pass
AV9	08/15/2012 0:41	7658	7739.2 +/- 5%		Pass	14.1	10 - 20		Pass	220.1	221.3 +/- 5 ch		Pass	5008	5017.6 +/- 40keV		Pass
AV10	08/15/2012 0:41	7614	7612.6 +/- 5%		Pass	16.3	10 - 20		Pass	221.9	222.0 +/- 5 ch		Pass	5022	5022.7 +/- 40keV		Pass
AV11	08/15/2012 0:41	7551	7589.5 +/- 5%		Pass	11.7	10 - 20		Pass	223.0	224.3 +/- 5 ch		Pass	5030	5039.9 +/- 40keV		Pass
AV12	08/15/2012 0:41	7519	7546.0 +/- 5%		Pass	11.6	10 - 20		Pass	220.0	220.1 +/- 5 ch		Pass	5007	5008.2 +/- 40keV		Pass
AV13	08/15/2012 0:41	7574	7703.7 +/- 5%		Pass	16.7	10 - 20		Pass	218.0	218.8 +/- 5 ch		Pass	4992	4999.0 +/- 40keV		Pass
AV14	08/15/2012 0:41	7516	7562.7 +/- 5%		Pass	11.6	10 - 20		Pass	223.0	224.4 +/- 5 ch		Pass	5030	5040.6 +/- 40keV		Pass
AV15	08/15/2012 0:41	7245	7704.9 +/- 5%		FAIL	13.3	10 - 20		Pass	222.9	225.0 +/- 5 ch		Pass	5030	5044.6 +/- 40keV		Pass
AV15	08/15/2012 1:23	7198	7704.9 +/- 5%		FAIL	13.0	10 - 20		Pass	222.9	225.0 +/- 5 ch		Pass	5029	5044.6 +/- 40keV		Pass
AV16	08/15/2012 0:41	7302	7461.8 +/- 5%		Pass	12.9	10 - 20		Pass	217.9	221.2 +/- 5 ch		Pass	4992	5016.7 +/- 40keV		Pass
AV17	08/15/2012 0:41	7578	7615.7 +/- 5%		Pass	11.3	10 - 20		Pass	226.0	226.0 +/- 5 ch		Pass	5053	5052.4 +/- 40keV		Pass
AV18	08/15/2012 0:41	7557	7601.2 +/- 5%		Pass	11.5	10 - 20		Pass	224.0	225.1 +/- 5 ch		Pass	5037	5045.3 +/- 40keV		Pass
AV19	08/15/2012 0:41	7597	7560.2 +/- 5%		Pass	11.1	10 - 20		Pass	226.0	226.3 +/- 5 ch		Pass	5052	5054.4 +/- 40keV		Pass
AV20	08/15/2012 0:41	7640	7736.8 +/- 5%		Pass	14.0	10 - 20		Pass	220.9	222.3 +/- 5 ch		Pass	5014	5025.0 +/- 40keV		Pass
AV21	08/15/2012 0:41	7283	7736.0 +/- 5%		FAIL	13.2	10 - 20		Pass	223.0	223.0 +/- 5 ch		Pass	5030	5029.9 +/- 40keV		Pass
AV21	08/15/2012 1:23	7217	7736.0 +/- 5%		FAIL	13.1	10 - 20		Pass	223.1	223.0 +/- 5 ch		Pass	5030	5029.9 +/- 40keV		Pass
AV22	08/15/2012 0:41	7522	7612.1 +/- 5%		Pass	11.7	10 - 20		Pass	223.0	224.0 +/- 5 ch		Pass	5030	5037.4 +/- 40keV		Pass
AV23	08/15/2012 0:41	7631	7705.4 +/- 5%		Pass	14.6	10 - 20		Pass	224.0	224.0 +/- 5 ch		Pass	5038	5037.7 +/- 40keV		Pass
AV24	08/15/2012 0:41	7626	7696.9 +/- 5%		Pass	14.4	10 - 20		Pass	215.9	217.1 +/- 5 ch		Pass	4977	4986.1 +/- 40keV		Pass
AV43	08/15/2012 0:48	7502	7571.0 +/- 5%		Pass	11.6	10 - 20		Pass	222.9	224.1 +/- 5 ch		Pass	5030	5038.2 +/- 40keV		Pass
AV44	08/15/2012 0:48	7587	7537.4 +/- 5%		Pass	11.4	10 - 20		Pass	221.0	222.0 +/- 5 ch		Pass	5015	5022.3 +/- 40keV		Pass
AV45	08/15/2012 0:48	7620	7611.7 +/- 5%		Pass	14.1	10 - 20		Pass	219.0	219.9 +/- 5 ch		Pass	5000	5007.1 +/- 40keV		Pass
AV46	08/15/2012 0:48	7540	7580.2 +/- 5%		Pass	11.9	10 - 20		Pass	224.0	223.5 +/- 5 ch		Pass	5037	5033.4 +/- 40keV		Pass
AV47	08/15/2012 0:48	7586	7458.5 +/- 5%		Pass	15.6	10 - 20		Pass	223.2	223.4 +/- 5 ch		Pass	5031	5032.6 +/- 40keV		Pass
AV48	08/15/2012 0:48	7472	7590.7 +/- 5%		Pass	11.8	10 - 20		Pass	102.1	224.9 +/- 5 ch		FAIL	4128	5044.0 +/- 40keV		FAIL
AV48	08/15/2012 1:23	7262	7590.7 +/- 5%		Pass	12.3	10 - 20		Pass	225.9	224.9 +/- 5 ch		Pass	5052	5044.0 +/- 40keV		Pass
AV49	08/15/2012 0:48	7608	7623.0 +/- 5%		Pass	14.7	10 - 20		Pass	220.0	220.9 +/- 5 ch		Pass	5008	5014.1 +/- 40keV		Pass

LOT # F2H090401-R3

8/15/12

mm
8/15/12

mm
8/15/12

mm
8/15/12

163 of 672

Detector	Date/Time	Gross Counts			FWHM (keV)			Pulser Center			Energy (keV)		
		Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F
AV50	08/15/2012 0:48	7519	7466.2 +/- 5%	Pass	12.0	10 - 20	Pass	222.0	222.1 +/- 5 ch	Pass	5022	5023.4 +/- 40keV	Pass
AV51	08/15/2012 0:48	7045	7258.3 +/- 5%	Pass	12.6	10 - 20	Pass	222.0	223.0 +/- 5 ch	Pass	5022	5030.2 +/- 40keV	Pass
AV52	08/15/2012 0:48	7271	7272.2 +/- 5%	Pass	14.2	10 - 20	Pass	224.0	224.6 +/- 5 ch	Pass	5038	5041.9 +/- 40keV	Pass
AV53	08/15/2012 0:49	7231	7204.6 +/- 5%	Pass	10.7	10 - 20	Pass	221.0	222.1 +/- 5 ch	Pass	5015	5023.1 +/- 40keV	Pass
AV54	08/15/2012 0:49	7263	6921.8 +/- 5%	Pass	14.4	10 - 20	Pass	226.0	224.4 +/- 5 ch	Pass	5052	5040.4 +/- 40keV	Pass
AV55	08/15/2012 0:49	7068	7202.5 +/- 5%	Pass	12.3	10 - 20	Pass	251.0	251.1 +/- 5 ch	Pass	5238	5239.7 +/- 40keV	Pass
AV56	08/15/2012 0:49	7591	7232.1 +/- 5%	Pass	845.2	10 - 20	FAIL	162.1	222.7 +/- 5 ch	FAIL	4576	5027.7 +/- 40keV	FAIL
AV57	08/15/2012 0:49	7235	6885.7 +/- 5%	FAIL	16.3	10 - 20	Pass	229.0	228.4 +/- 5 ch	Pass	5075	5070.5 +/- 40keV	Pass
AV57	08/15/2012 1:24	7139	6885.7 +/- 5%	Pass	16.3	10 - 20	Pass	229.0	228.4 +/- 5 ch	Pass	5075	5070.5 +/- 40keV	Pass
AV59	08/15/2012 0:49	7201	7144.9 +/- 5%	Pass	15.2	10 - 20	Pass	222.9	225.2 +/- 5 ch	Pass	5030	5046.1 +/- 40keV	Pass
AV60	08/15/2012 0:49	7203	6875.4 +/- 5%	Pass	14.1	10 - 20	Pass	221.0	220.4 +/- 5 ch	Pass	5015	5010.4 +/- 40keV	Pass
AV61	08/15/2012 0:49	7158	7120.3 +/- 5%	Pass	11.5	10 - 20	Pass	223.0	223.6 +/- 5 ch	Pass	5030	5034.4 +/- 40keV	Pass
AV63	08/15/2012 0:49	7197	7235.6 +/- 5%	Pass	14.0	10 - 20	Pass	223.0	224.1 +/- 5 ch	Pass	5030	5038.5 +/- 40keV	Pass
AV64	08/15/2012 0:49	6998	7084.6 +/- 5%	Pass	13.0	10 - 20	Pass	224.0	224.8 +/- 5 ch	Pass	5038	5043.1 +/- 40keV	Pass
AV65	08/15/2012 0:49	7189	7229.4 +/- 5%	Pass	14.5	10 - 20	Pass	222.0	223.2 +/- 5 ch	Pass	5022	5031.4 +/- 40keV	Pass
AV66	08/15/2012 0:49	7190	7203.8 +/- 5%	Pass	18.3	10 - 20	Pass	223.0	223.7 +/- 5 ch	Pass	5030	5034.9 +/- 40keV	Pass
AV67	08/15/2012 0:49	7342	7434.3 +/- 5%	Pass	17.1	10 - 20	Pass	214.9	217.9 +/- 5 ch	Pass	4969	4992.0 +/- 40keV	Pass
AV68	08/15/2012 0:49	7409	7428.4 +/- 5%	Pass	15.7	10 - 20	Pass	223.0	223.8 +/- 5 ch	Pass	5030	5036.3 +/- 40keV	Pass
AV69	08/15/2012 0:49	7316	7318.7 +/- 5%	Pass	12.1	10 - 20	Pass	223.0	222.4 +/- 5 ch	Pass	5030	5025.6 +/- 40keV	Pass
AV70	08/15/2012 0:49	7377	7411.6 +/- 5%	Pass	16.3	10 - 20	Pass	221.1	221.4 +/- 5 ch	Pass	5016	5018.0 +/- 40keV	Pass
AV71	08/15/2012 1:24	7318	7445.6 +/- 5%	Pass	13.8	10 - 20	Pass	220.1	220.9 +/- 5 ch	Pass	5008	5014.2 +/- 40keV	Pass
AV71	08/15/2012 0:49	7016	7445.6 +/- 5%	FAIL	13.5	10 - 20	Pass	220.1	220.9 +/- 5 ch	Pass	5008	5014.2 +/- 40keV	Pass
AV72	08/15/2012 1:24	7031	7422.1 +/- 5%	FAIL	13.0	10 - 20	Pass	218.0	221.6 +/- 5 ch	Pass	4992	5019.8 +/- 40keV	Pass
AV72	08/15/2012 0:49	6898	7422.1 +/- 5%	FAIL	13.7	10 - 20	Pass	217.9	221.6 +/- 5 ch	Pass	4992	5019.8 +/- 40keV	Pass
AV73	08/15/2012 0:49	7229	7324.4 +/- 5%	Pass	12.1	10 - 20	Pass	223.0	224.2 +/- 5 ch	Pass	5030	5039.0 +/- 40keV	Pass
AV74	08/15/2012 0:49	7232	7234.2 +/- 5%	Pass	12.2	10 - 20	Pass	229.0	229.9 +/- 5 ch	Pass	5075	5081.1 +/- 40keV	Pass
AV75	08/15/2012 10:42	7221	7498.8 +/- 5%	Pass	13.3	10 - 20	Pass	221.9	222.3 +/- 5 ch	Pass	5022	5024.6 +/- 40keV	Pass
AV76	08/15/2012 10:41	7387	7452.6 +/- 5%	Pass	12.4	10 - 20	Pass	233.0	232.8 +/- 5 ch	Pass	5105	5103.4 +/- 40keV	Pass
AV77	08/15/2012 10:41	7550	7562.1 +/- 5%	Pass	15.1	10 - 20	Pass	223.2	223.0 +/- 5 ch	Pass	5031	5030.2 +/- 40keV	Pass
AV78	08/15/2012 10:41	7558	7589.4 +/- 5%	Pass	14.8	10 - 20	Pass	223.9	224.9 +/- 5 ch	Pass	5037	5044.4 +/- 40keV	Pass
AV79	08/15/2012 10:41	7560	7567.7 +/- 5%	Pass	13.3	10 - 20	Pass	222.0	222.0 +/- 5 ch	Pass	5023	5022.4 +/- 40keV	Pass
AV80	08/15/2012 10:41	7558	7587.5 +/- 5%	Pass	13.7	10 - 20	Pass	224.0	224.0 +/- 5 ch	Pass	5038	5037.5 +/- 40keV	Pass
AV81	08/15/2012 10:42	7538	7512.5 +/- 5%	Pass	15.1	10 - 20	Pass	223.2	222.0 +/- 5 ch	Pass	5031	5022.5 +/- 40keV	Pass
AV82	08/15/2012 10:42	7544	7582.2 +/- 5%	Pass	14.1	10 - 20	Pass	222.1	222.1 +/- 5 ch	Pass	5023	5023.2 +/- 40keV	Pass
AV83	08/15/2012 0:57	7509	7790.4 +/- 5%	Pass	13.2	10 - 20	Pass	223.0	223.5 +/- 5 ch	Pass	5030	5033.4 +/- 40keV	Pass
AV84	08/15/2012 0:56	7452	7782.0 +/- 5%	Pass	12.4	10 - 20	Pass	225.0	226.9 +/- 5 ch	Pass	5045	5058.9 +/- 40keV	Pass

104 of 672
F2H090401-REV

104 of 672

		Gross Counts			FWHM (keV)			Pulser Center			Energy (keV)		
Detector	Date/Time	Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F
AV85	08/15/2012 1:24	7309	7804.7 +/- 5%	FAIL	12.5	10 - 20	Pass	215.0	219.7 +/- 5 ch	Pass	4970	5005.4 +/- 40keV	Pass
	08/15/2012 0:56	7302	7804.7 +/- 5%	FAIL	13.0	10 - 20	Pass	214.9	219.7 +/- 5 ch	Pass	4970	5005.4 +/- 40keV	Pass
AV86	08/15/2012 0:56	7441	7778.6 +/- 5%	Pass	13.3	10 - 20	Pass	225.0	225.0 +/- 5 ch	Pass	5045	5044.7 +/- 40keV	Pass
AV87	08/15/2012 0:56	7629	7675.1 +/- 5%	Pass	11.5	10 - 20	Pass	225.0	227.5 +/- 5 ch	Pass	5045	5063.8 +/- 40keV	Pass
AV88	08/15/2012 0:56	7663	7805.9 +/- 5%	Pass	13.4	10 - 20	Pass	224.0	226.6 +/- 5 ch	Pass	5037	5056.7 +/- 40keV	Pass
AV89	08/15/2012 0:56	7435	7760.2 +/- 5%	Pass	13.1	10 - 20	Pass	222.0	222.9 +/- 5 ch	Pass	5023	5029.2 +/- 40keV	Pass
AV90	08/15/2012 0:57	7657	7797.3 +/- 5%	Pass	13.7	10 - 20	Pass	223.1	223.8 +/- 5 ch	Pass	5030	5035.6 +/- 40keV	Pass
AV91	08/15/2012 0:57	7507	7447.4 +/- 5%	Pass	12.9	10 - 20	Pass	222.0	223.6 +/- 5 ch	Pass	5023	5034.1 +/- 40keV	Pass
AV92	08/15/2012 0:57	7528	7334.7 +/- 5%	Pass	12.6	10 - 20	Pass	222.0	223.9 +/- 5 ch	Pass	5023	5036.8 +/- 40keV	Pass
AV93	08/15/2012 0:57	7507	7529.6 +/- 5%	Pass	12.8	10 - 20	Pass	222.0	223.1 +/- 5 ch	Pass	5022	5030.4 +/- 40keV	Pass
AV94	08/15/2012 0:57	7513	7618.5 +/- 5%	Pass	13.0	10 - 20	Pass	221.0	221.7 +/- 5 ch	Pass	5015	5020.5 +/- 40keV	Pass
AV95	08/15/2012 0:57	7251	7434.0 +/- 5%	Pass	13.4	10 - 20	Pass	222.9	222.3 +/- 5 ch	Pass	5029	5024.6 +/- 40keV	Pass
AV97	08/15/2012 0:58	7544	7629.3 +/- 5%	Pass	13.9	10 - 20	Pass	222.9	224.0 +/- 5 ch	Pass	5029	5037.6 +/- 40keV	Pass
AV98	08/15/2012 0:58	7351	7570.0 +/- 5%	Pass	13.0	10 - 20	Pass	224.0	224.5 +/- 5 ch	Pass	5037	5041.4 +/- 40keV	Pass
AV101	08/15/2012 1:02	7192	7561.2 +/- 5%	Pass	13.2	10 - 20	Pass	221.1	221.0 +/- 5 ch	Pass	5015	5015.3 +/- 40keV	Pass
AV102	08/15/2012 1:02	7509	7575.1 +/- 5%	Pass	13.7	10 - 20	Pass	223.1	223.3 +/- 5 ch	Pass	5030	5032.5 +/- 40keV	Pass
AV103	08/15/2012 1:02	7501	7537.7 +/- 5%	Pass	14.0	10 - 20	Pass	221.0	221.9 +/- 5 ch	Pass	5015	5021.7 +/- 40keV	Pass
AV106	08/15/2012 1:02	7499	7525.6 +/- 5%	Pass	13.5	10 - 20	Pass	222.0	222.1 +/- 5 ch	Pass	5023	5022.9 +/- 40keV	Pass
AV107	08/15/2012 1:02	7573	7588.5 +/- 5%	Pass	13.7	10 - 20	Pass	221.0	221.3 +/- 5 ch	Pass	5015	5017.6 +/- 40keV	Pass
AV108	08/15/2012 1:02	7371	7570.4 +/- 5%	Pass	13.0	10 - 20	Pass	222.0	222.8 +/- 5 ch	Pass	5023	5028.7 +/- 40keV	Pass
AV109	08/15/2012 1:02	7569	7592.9 +/- 5%	Pass	13.6	10 - 20	Pass	217.0	218.0 +/- 5 ch	Pass	4985	4992.6 +/- 40keV	Pass
AV111	08/15/2012 1:02	7335	7552.4 +/- 5%	Pass	13.2	10 - 20	Pass	221.0	221.4 +/- 5 ch	Pass	5015	5018.4 +/- 40keV	Pass
AV112	08/15/2012 1:02	7562	7475.3 +/- 5%	Pass	13.9	10 - 20	Pass	219.9	221.0 +/- 5 ch	Pass	5007	5015.1 +/- 40keV	Pass
AV113	08/15/2012 1:02	7560	7549.4 +/- 5%	Pass	13.9	10 - 20	Pass	220.9	222.0 +/- 5 ch	Pass	5015	5022.3 +/- 40keV	Pass
AV114	08/15/2012 1:02	7558	7576.7 +/- 5%	Pass	13.2	10 - 20	Pass	222.0	223.0 +/- 5 ch	Pass	5023	5029.7 +/- 40keV	Pass
AV115	08/15/2012 1:02	7666	7681.7 +/- 5%	Pass	13.3	10 - 20	Pass	222.0	223.0 +/- 5 ch	Pass	5023	5029.7 +/- 40keV	Pass
AV116	08/15/2012 1:02	7661	7697.2 +/- 5%	Pass	13.6	10 - 20	Pass	221.0	221.8 +/- 5 ch	Pass	5015	5021.0 +/- 40keV	Pass
AV117	08/15/2012 1:02	7661	7694.4 +/- 5%	Pass	13.2	10 - 20	Pass	222.0	222.9 +/- 5 ch	Pass	5022	5029.5 +/- 40keV	Pass
AV118	08/15/2012 1:02	7658	7691.2 +/- 5%	Pass	13.3	10 - 20	Pass	222.0	222.9 +/- 5 ch	Pass	5022	5029.2 +/- 40keV	Pass
AV119	08/15/2012 1:02	7655	7663.6 +/- 5%	Pass	14.0	10 - 20	Pass	223.9	217.3 +/- 5 ch	FAIL	5037	4987.8 +/- 40keV	FAIL
AV119	08/15/2012 1:24	7540	7663.6 +/- 5%	Pass	14.1	10 - 20	Pass	219.9	217.3 +/- 5 ch	Pass	5007	4987.8 +/- 40keV	Pass
AV120	08/15/2012 1:02	7651	7684.0 +/- 5%	Pass	14.1	10 - 20	Pass	221.1	221.4 +/- 5 ch	Pass	5016	5018.1 +/- 40keV	Pass
AV121	08/15/2012 1:02	7650	7681.7 +/- 5%	Pass	13.7	10 - 20	Pass	221.0	221.6 +/- 5 ch	Pass	5015	5019.5 +/- 40keV	Pass
AV122	08/15/2012 1:02	7644	7674.3 +/- 5%	Pass	13.4	10 - 20	Pass	219.0	219.9 +/- 5 ch	Pass	5000	5006.9 +/- 40keV	Pass
AV124	08/15/2012 1:02	7475	7504.3 +/- 5%	Pass	11.5	10 - 20	Pass	221.0	222.1 +/- 5 ch	Pass	5015	5023.1 +/- 40keV	Pass
AV125	08/15/2012 1:02	7508	7533.9 +/- 5%	Pass	11.4	10 - 20	Pass	221.0	221.9 +/- 5 ch	Pass	5015	5021.7 +/- 40keV	Pass

LOT # F2H090401-REV

km
@1512
km
@1512

165 of 672

Detector	Date/Time	Gross Counts			FWHM (keV)			Pulser Center			Energy (keV)		
		Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F
AV126	08/15/2012 1:02	7440	7556.1 +/- 5%	Pass	11.6	10 - 20	Pass	224.1	224.7 +/- 5 ch	Pass	5038	5042.8 +/- 40keV	Pass
AV129	08/15/2012 1:02	7457	7455.1 +/- 5%	Pass	12.1	10 - 20	Pass	222.0	222.0 +/- 5 ch	Pass	5022	5022.5 +/- 40keV	Pass
AV130	08/15/2012 1:02	7245	7519.9 +/- 5%	Pass	12.9	10 - 20	Pass	224.9	226.7 +/- 5 ch	Pass	5044	5057.4 +/- 40keV	Pass
AV131	08/15/2012 1:02	7495	7423.7 +/- 5%	Pass	12.6	10 - 20	Pass	223.0	224.1 +/- 5 ch	Pass	5030	5038.2 +/- 40keV	Pass
AV132	08/15/2012 1:02	7401	7600.9 +/- 5%	Pass	13.3	10 - 20	Pass	224.0	224.6 +/- 5 ch	Pass	5038	5042.2 +/- 40keV	Pass
AV133	08/15/2012 1:02	7441	7501.0 +/- 5%	Pass	12.3	10 - 20	Pass	221.9	223.4 +/- 5 ch	Pass	5022	5032.8 +/- 40keV	Pass
AV134	08/15/2012 1:02	7496	7441.4 +/- 5%	Pass	12.5	10 - 20	Pass	224.0	225.0 +/- 5 ch	Pass	5037	5044.7 +/- 40keV	Pass
AV135	08/15/2012 1:02	7641	7675.8 +/- 5%	Pass	13.7	10 - 20	Pass	218.9	220.4 +/- 5 ch	Pass	5000	5010.5 +/- 40keV	Pass
AV136	08/15/2012 1:02	7234	7461.4 +/- 5%	Pass	13.2	10 - 20	Pass	221.1	221.6 +/- 5 ch	Pass	5016	5019.6 +/- 40keV	Pass
AV137	08/15/2012 1:02	7266	7444.4 +/- 5%	Pass	13.2	10 - 20	Pass	221.1	222.2 +/- 5 ch	Pass	5016	5024.0 +/- 40keV	Pass
AV138	08/15/2012 1:02	7410	7513.7 +/- 5%	Pass	12.2	10 - 20	Pass	448.9	450.3 +/- 5 ch	Pass	6714	6725.2 +/- 40keV	Pass
AV147	08/15/2012 0:42	5989	6019.0 +/- 5%	Pass	15.7	10 - 20	Pass	223.1	224.2 +/- 5 ch	Pass	5031	5038.6 +/- 40keV	Pass
AV148	08/15/2012 0:42	6017	5976.5 +/- 5%	Pass	14.3	10 - 20	Pass	223.0	222.6 +/- 5 ch	Pass	5030	5027.1 +/- 40keV	Pass
AV149	08/15/2012 0:42	5896	5944.2 +/- 5%	Pass	11.6	10 - 20	Pass	225.1	223.9 +/- 5 ch	Pass	5046	5036.7 +/- 40keV	Pass
AV150	08/15/2012 0:42	5978	5967.4 +/- 5%	Pass	16.6	10 - 20	Pass	222.9	223.0 +/- 5 ch	Pass	5029	5029.7 +/- 40keV	Pass
AV151	08/15/2012 0:42	5988	5866.8 +/- 5%	Pass	15.8	10 - 20	Pass	222.0	221.6 +/- 5 ch	Pass	5022	5019.3 +/- 40keV	Pass
AV152	08/15/2012 0:42	5977	6012.2 +/- 5%	Pass	11.2	10 - 20	Pass	224.0	223.9 +/- 5 ch	Pass	5038	5036.8 +/- 40keV	Pass
AV153	08/15/2012 0:42	5993	5986.2 +/- 5%	Pass	15.8	10 - 20	Pass	223.0	223.0 +/- 5 ch	Pass	5030	5029.9 +/- 40keV	Pass
AV154	08/15/2012 0:42	5707	5786.0 +/- 5%	Pass	13.2	10 - 20	Pass	220.9	221.7 +/- 5 ch	Pass	5014	5020.2 +/- 40keV	Pass
AV155	08/15/2012 0:42	5905	5904.6 +/- 5%	Pass	11.8	10 - 20	Pass	222.0	222.0 +/- 5 ch	Pass	5022	5022.6 +/- 40keV	Pass
AV156	08/15/2012 0:42	5937	5967.6 +/- 5%	Pass	11.8	10 - 20	Pass	224.0	223.9 +/- 5 ch	Pass	5038	5036.5 +/- 40keV	Pass
AV157	08/15/2012 0:42	6005	5882.0 +/- 5%	Pass	23.7	10 - 20	FAIL	222.0	222.0 +/- 5 ch	Pass	5022	5022.2 +/- 40keV	Pass
AV158	08/15/2012 0:42	6006	5929.1 +/- 5%	Pass	23.3	10 - 20	FAIL	225.9	225.8 +/- 5 ch	Pass	5051	5050.5 +/- 40keV	Pass
AV159	08/15/2012 0:42	6014	6003.9 +/- 5%	Pass	14.5	10 - 20	Pass	229.1	226.3 +/- 5 ch	Pass	5075	5054.8 +/- 40keV	Pass
AV160	08/15/2012 0:42	6027	6002.5 +/- 5%	Pass	14.0	10 - 20	Pass	223.0	223.0 +/- 5 ch	Pass	5030	5029.9 +/- 40keV	Pass
AV161	08/15/2012 0:42	5886	5912.9 +/- 5%	Pass	13.1	10 - 20	Pass	231.0	230.6 +/- 5 ch	Pass	5090	5086.8 +/- 40keV	Pass
AV162	08/15/2012 0:42	6014	5928.3 +/- 5%	Pass	15.4	10 - 20	Pass	224.0	223.1 +/- 5 ch	Pass	5037	5030.6 +/- 40keV	Pass
AV163	08/15/2012 0:42	6003	6002.8 +/- 5%	Pass	14.4	10 - 20	Pass	224.0	224.0 +/- 5 ch	Pass	5037	5037.5 +/- 40keV	Pass
AV164	08/15/2012 0:42	5843	5806.4 +/- 5%	Pass	12.5	10 - 20	Pass	223.0	222.0 +/- 5 ch	Pass	5030	5022.5 +/- 40keV	Pass
AV165	08/15/2012 0:42	5897	5907.4 +/- 5%	Pass	12.6	10 - 20	Pass	224.0	223.8 +/- 5 ch	Pass	5037	5036.1 +/- 40keV	Pass
AV166	08/15/2012 0:42	6021	5999.7 +/- 5%	Pass	13.9	10 - 20	Pass	222.1	221.7 +/- 5 ch	Pass	5023	5020.6 +/- 40keV	Pass
AV167	08/15/2012 0:42	6002	5955.7 +/- 5%	Pass	14.4	10 - 20	Pass	225.2	224.9 +/- 5 ch	Pass	5046	5044.0 +/- 40keV	Pass
AV168	08/15/2012 0:42	5861	5886.9 +/- 5%	Pass	12.2	10 - 20	Pass	222.9	223.0 +/- 5 ch	Pass	5030	5029.8 +/- 40keV	Pass
AV169	08/15/2012 0:42	5894	5889.8 +/- 5%	Pass	12.0	10 - 20	Pass	223.0	223.0 +/- 5 ch	Pass	5030	5030.0 +/- 40keV	Pass
AV170	08/15/2012 0:42	6031	5977.2 +/- 5%	Pass	13.5	10 - 20	Pass	223.9	224.0 +/- 5 ch	Pass	5037	5037.2 +/- 40keV	Pass
AV171	08/15/2012 0:42	5711	5885.7 +/- 5%	Pass	12.9	10 - 20	Pass	225.1	224.0 +/- 5 ch	Pass	5046	5037.2 +/- 40keV	Pass

LOT # F2H000000-REV

Wm Elsie

Wm Elsie

Wm Elsie

Wm Elsie

166 of 672

Detector	Date/Time	Gross Counts			FWHM (keV)			Pulser Center			Energy (keV)		
		Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F	Result	Criteria	P/F
AV172	08/15/2012 0:42	6034	5833.5 +/- 5%	Pass	13.6	10 - 20	Pass	224.1	223.8 +/- 5 ch	Pass	5038	5035.9 +/- 40keV	Pass
AV173	08/15/2012 0:42	5777	5822.9 +/- 5%	Pass	13.1	10 - 20	Pass	222.1	221.1 +/- 5 ch	Pass	5023	5015.7 +/- 40keV	Pass
AV174	08/15/2012 0:42	6034	6009.2 +/- 5%	Pass	13.3	10 - 20	Pass	225.0	224.8 +/- 5 ch	Pass	5045	5043.2 +/- 40keV	Pass
AV175	08/15/2012 0:42	6006	5996.5 +/- 5%	Pass	22.7	10 - 20	FAIL	221.0	221.6 +/- 5 ch	Pass	5015	5019.6 +/- 40keV	Pass
AV176	08/15/2012 0:42	5657	6001.3 +/- 5%	FAIL	13.6	10 - 20	Pass	223.1	222.0 +/- 5 ch	Pass	5031	5022.5 +/- 40keV	Pass
AV177	08/15/2012 0:42	5803	5916.6 +/- 5%	Pass	12.7	10 - 20	Pass	225.2	224.0 +/- 5 ch	Pass	5046	5037.4 +/- 40keV	Pass
AV178	08/15/2012 0:42	5997	5971.5 +/- 5%	Pass	14.7	10 - 20	Pass	223.0	218.5 +/- 5 ch	Pass	5030	4996.3 +/- 40keV	Pass
AV179	08/15/2012 0:42	5909	5932.8 +/- 5%	Pass	11.7	10 - 20	Pass	220.9	221.0 +/- 5 ch	Pass	5015	5015.1 +/- 40keV	Pass
AV180	08/15/2012 0:42	5904	5837.1 +/- 5%	Pass	12.3	10 - 20	Pass	223.0	222.8 +/- 5 ch	Pass	5030	5028.4 +/- 40keV	Pass
AV181	08/15/2012 0:42	6029	5985.0 +/- 5%	Pass	13.5	10 - 20	Pass	222.9	223.0 +/- 5 ch	Pass	5029	5029.9 +/- 40keV	Pass
AV182	08/15/2012 0:42	5939	5616.1 +/- 5%	FAIL	11.9	10 - 20	Pass	231.0	229.3 +/- 5 ch	Pass	5090	5077.2 +/- 40keV	Pass
AV183	08/15/2012 0:42	5967	5790.1 +/- 5%	Pass	11.6	10 - 20	Pass	223.0	222.8 +/- 5 ch	Pass	5030	5028.1 +/- 40keV	Pass
AV184	08/15/2012 0:42	6003	5998.2 +/- 5%	Pass	26.6	10 - 20	FAIL	221.9	222.1 +/- 5 ch	Pass	5022	5023.1 +/- 40keV	Pass
AV185	08/15/2012 0:42	5966	5934.7 +/- 5%	Pass	11.3	10 - 20	Pass	222.0	222.0 +/- 5 ch	Pass	5022	5022.6 +/- 40keV	Pass
AV186	08/15/2012 0:42	5750	5893.0 +/- 5%	Pass	12.8	10 - 20	Pass	222.9	223.0 +/- 5 ch	Pass	5029	5030.1 +/- 40keV	Pass
AV187	08/15/2012 0:42	5977	5814.7 +/- 5%	Pass	11.3	10 - 20	Pass	224.0	223.0 +/- 5 ch	Pass	5037	5030.3 +/- 40keV	Pass
AV188	08/15/2012 0:42	5934	5897.1 +/- 5%	Pass	12.2	10 - 20	Pass	222.0	221.8 +/- 5 ch	Pass	5023	5021.2 +/- 40keV	Pass
AV189	08/15/2012 0:42	5906	5887.8 +/- 5%	Pass	11.9	10 - 20	Pass	225.0	224.0 +/- 5 ch	Pass	5045	5037.8 +/- 40keV	Pass
AV190	08/15/2012 0:42	6015	5963.7 +/- 5%	Pass	14.7	10 - 20	Pass	224.0	224.0 +/- 5 ch	Pass	5037	5037.8 +/- 40keV	Pass
AV191	08/15/2012 0:42	6006	5895.3 +/- 5%	Pass	18.6	10 - 20	Pass	222.1	222.0 +/- 5 ch	Pass	5023	5022.5 +/- 40keV	Pass
AV192	08/15/2012 0:42	5985	5991.1 +/- 5%	Pass	15.8	10 - 20	Pass	225.0	223.6 +/- 5 ch	Pass	5045	5034.8 +/- 40keV	Pass
AV193	08/15/2012 0:42	6009	5938.1 +/- 5%	Pass	14.2	10 - 20	Pass	223.0	222.9 +/- 5 ch	Pass	5030	5029.0 +/- 40keV	Pass
AV194	08/15/2012 0:42	5989	6008.3 +/- 5%	Pass	20.9	10 - 20	FAIL	223.0	222.8 +/- 5 ch	Pass	5030	5028.7 +/- 40keV	Pass
AV195	08/15/2012 0:42	6008	6002.2 +/- 5%	Pass	15.3	10 - 20	Pass	224.0	223.8 +/- 5 ch	Pass	5037	5036.1 +/- 40keV	Pass
AV196	08/15/2012 0:42	6023	5979.3 +/- 5%	Pass	14.5	10 - 20	Pass	222.8	223.0 +/- 5 ch	Pass	5028	5030.1 +/- 40keV	Pass
AV197	08/15/2012 0:42	6019	5963.4 +/- 5%	Pass	13.8	10 - 20	Pass	223.0	223.0 +/- 5 ch	Pass	5030	5030.3 +/- 40keV	Pass
AV198	08/15/2012 0:42	5904	5991.2 +/- 5%	Pass	17.9	10 - 20	Pass	223.8	224.4 +/- 5 ch	Pass	5036	5040.3 +/- 40keV	Pass
AV199	08/15/2012 0:42	6000	5993.0 +/- 5%	Pass	14.7	10 - 20	Pass	223.1	218.0 +/- 5 ch	FAIL	5030	4992.6 +/- 40keV	Pass
AV200	08/15/2012 0:42	6005	6012.6 +/- 5%	Pass	15.0	10 - 20	Pass	223.1	222.0 +/- 5 ch	Pass	5031	5022.5 +/- 40keV	Pass
AV201	08/15/2012 0:42	5820	5925.5 +/- 5%	Pass	12.5	10 - 20	Pass	224.0	223.8 +/- 5 ch	Pass	5037	5035.8 +/- 40keV	Pass
AV202	08/15/2012 0:42	6016	6001.6 +/- 5%	Pass	14.6	10 - 20	Pass	224.0	224.1 +/- 5 ch	Pass	5037	5037.8 +/- 40keV	Pass
AV203	08/15/2012 0:42	5951	5973.5 +/- 5%	Pass	11.6	10 - 20	Pass	211.0	209.7 +/- 5 ch	Pass	4940	4930.5 +/- 40keV	Pass
AV204	08/15/2012 0:42	5975	5952.9 +/- 5%	Pass	15.4	10 - 20	Pass	223.9	222.9 +/- 5 ch	Pass	5037	5029.0 +/- 40keV	Pass
AV205	08/15/2012 0:42	5940	5978.5 +/- 5%	Pass	12.0	10 - 20	Pass	224.0	223.0 +/- 5 ch	Pass	5037	5029.9 +/- 40keV	Pass
AV206	08/15/2012 0:42	6003	5955.5 +/- 5%	Pass	15.2	10 - 20	Pass	223.9	222.1 +/- 5 ch	Pass	5037	5023.1 +/- 40keV	Pass
AV207	08/15/2012 0:42	5971	5917.9 +/- 5%	Pass	16.4	10 - 20	Pass	222.0	222.0 +/- 5 ch	Pass	5022	5022.7 +/- 40keV	Pass

LOT # F21308401 Rev V

Detector	Date/Time	Result	Gross Counts			Result	FWHM (keV)			Result	Pulser Center			Result	Energy (keV)		
			Criteria	P/F			Criteria	P/F			Criteria	P/F			Criteria	P/F	
AV244	08/15/2012 0:42	5918	5849.1 +/- 5%	Pass		11.9	10 - 20	Pass		224.0	224.1 +/- 5 ch	Pass		5038	5038.0 +/- 40keV	Pass	
AV245	08/15/2012 0:42	5937	5856.0 +/- 5%	Pass		12.1	10 - 20	Pass		223.0	222.8 +/- 5 ch	Pass		5030	5028.1 +/- 40keV	Pass	
AV246	08/15/2012 0:42	6024	5755.3 +/- 5%	Pass		13.7	10 - 20	Pass		222.1	221.7 +/- 5 ch	Pass		5023	5020.2 +/- 40keV	Pass	
AV247	OOS 08/15/2012 0:42	5947	5564.1 +/- 5%	FAIL		11.8	10 - 20	Pass		215.0	213.4 +/- 5 ch	Pass		4970	4958.1 +/- 40keV	Pass	
AV248	08/15/2012 0:42	5994	5837.2 +/- 5%	Pass		11.2	10 - 20	Pass		223.0	222.7 +/- 5 ch	Pass		5030	5027.9 +/- 40keV	Pass	
AV249	OOS 08/15/2012 0:42	5999	6028.2 +/- 5%	Pass		24.9	10 - 20	FAIL		222.2	222.5 +/- 5 ch	Pass		5024	5026.6 +/- 40keV	Pass	
AV250	08/15/2012 0:42	6021	5995.9 +/- 5%	Pass		13.2	10 - 20	Pass		223.0	222.8 +/- 5 ch	Pass		5030	5028.6 +/- 40keV	Pass	

Notes:

Detectors which do not appear on the AlphaVision Daily Pulser Check report were not used for the day.

OOS = Out of Service (detector failed two consecutive daily checks)

OK = After one initial failing check the detector passed according to laboratory or client specific requirements; therefore, the detector was placed into service (if "OK" is used for any other purpose, an explanation will be provided).

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Run Log

Logbook No.: 3844

TESTAMERICA
St. Louis

Alpha Spectrometry Runlog

	Date	Batch #	Sample #	Detector	Count Time	Analyte	Setup Initials	Process Initials
1	8-14-12	2223028	F2H070477-001	97	240min	U		I
2	1	1	1 -001x	98	1	1		
3	8-15-12	Daily	Pulsars	1-250	1min	QA		—
4		2221028	F2H070410-001	101	600mins	U		
5			-w2	102				
6			-w3	103				
7			-w4	106				
8			-w5	107				
9			-w6	108				
10			-w7	109				
11			-w8	111				
12			-w9	112				
13			-w10	113				
14			-w11	114				
15			F2H08000-028B	115				
16			-v28C	116				
17			-v28L	117				
18		2221027	F2H070410-001	124		pu		
19			-w2	125				
20			-w3	126				
21			-w4	129				
22			-w5	130				
23			-w6	131				
24			-w7	132				
25			-w8	133				
26			-w9	134				
27			-w10	135				
28			-w11	136				
29			F2H06000-027B	137				

Reviewed By: WmDate: 8/15/12

Logbook No.: 3844

TESTAMERICA
St. Louis

Alpha Spectrometry Runlog

	Date	Batch #	Sample #	Detector	Count Time	Analyte	Setup Initials	Process Initials
1	8/15/12	2221071	F2H080000-027C	138	60mins	pu		
2			027L	118	1	1		
3		2226014	F2H090401-001	43	240mins	u		
4			-002	44				
5			-003	49				
6			-004	50				
7			-005	51				
8			-006	52				
9			-007	53				
10			-007D	54				
11			-007S	55				
12			-008	57				
13			-009	60				
14			-010	61				
15			-011	63				
16			F2H130000-014B	119				
17			-014C	120				
18		2226015	F2H090401-012	64				
19			-013	65				
20			-014	66				
21			-015	67				
22			-016	68				
23			-017	69				
24			-018	70				
25			-018D	71				
26			-018S	74				
27			-019	75				
28			-020	76				
29			-021	77				

Reviewed By: _____

Date: 8/15/12

Logbook No.: 3844

TESTAMERICA
St. Louis

Alpha Spectrometry Runlog

	Date	Batch #	Sample #	Detector	Count Time	Analyte	Setup Initials	Process Initials
1	8/15/12	2226015	F2H090401-022	78	240mins	U		
2			F2H130000-015B	121				
3			Ung 8/15/12 -015C	122				
4		2226037	AT F2H080409-002	79	40mins			
5			-03	80				
6			F2H130000-037B	81				
7			-037C	82				
8			-037L	83				
9		2226015	F2H090401-015	67	400min	U		
10			-016	68				
11			-018D	71				
12			-018S	74				
13			-020	76				
14			-021	77				
15			-022	78				
16		2226014	F2H090401-003	49				
17			-004	50				
18			-005	51				
19			-006	52				
20			-007	53				
21			-007D	54				
22			-007S	55				
23			-010	61				
24			-011	63				
25	8-16-12	Daily	Pulsars	1-250	1min	QA		-
26		2226010	F2H070406-009	43	240mins	U		
27			-009X	44				
28			F2H150000-010B	101				
29			-010C	102				

Reviewed By: _____

Date: 8/16/12

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Monthly Backgrounds
Alpha Vision
July 2012
AV1-146

THE LEADER IN ENVIRONMENTAL TESTING

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:15:55PM 7/25/2012

Sample Name: ICB;AV43

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV43 , SN: 50-051c5

Acquisition Start Date: 7/24/2012 9:07:02PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-9794;AV43-20120607

Calibration Date: 6/7/2012 7:50:31PM

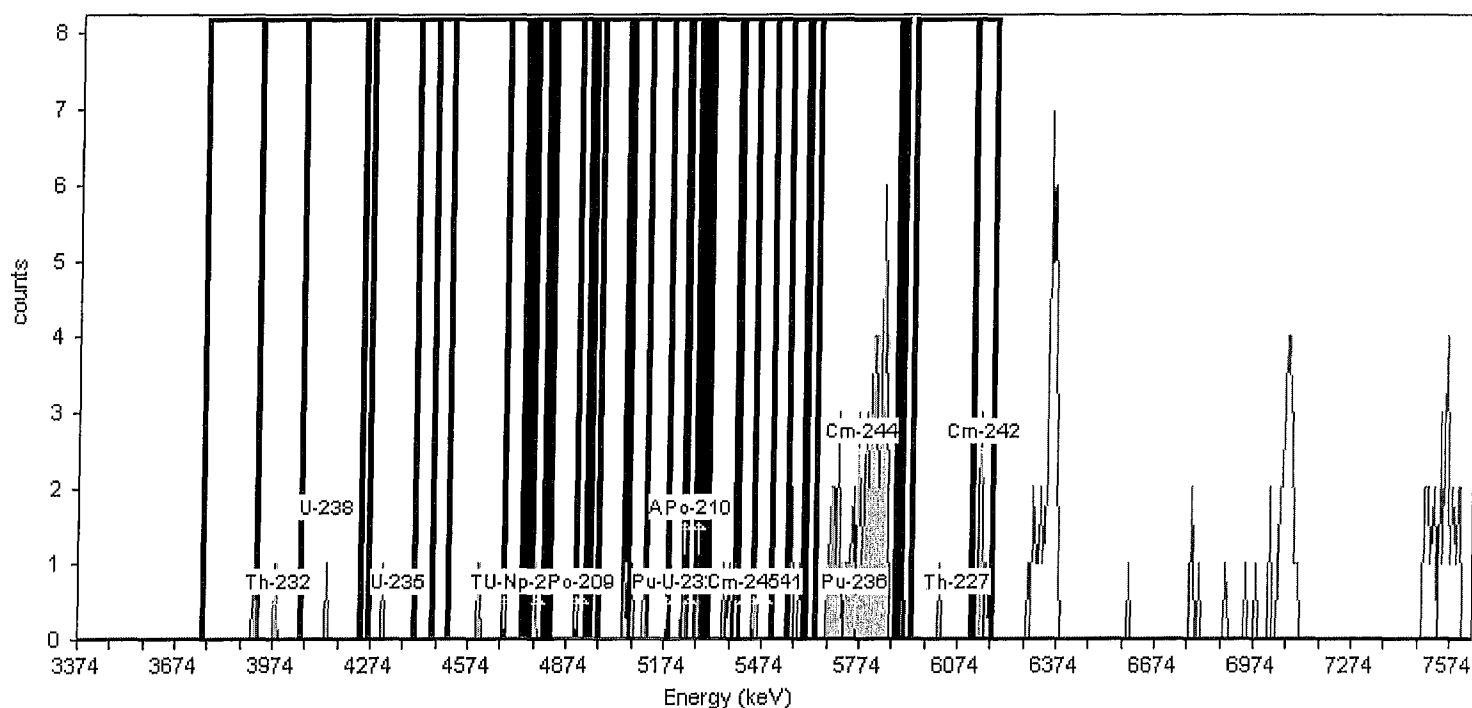
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.99% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_Background ROI, Nucleide Library: Background ROI Library

Total Background Counts: 171.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	4.00	4.167E-003	2.329E-003
Am-243	5.23	5.05	5.31	5.00	5.208E-003	2.552E-003
U-232	5.25	5.06	5.40	7.00	7.292E-003	2.946E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	2.00	2.083E-003	1.804E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	7.00	7.292E-003	2.946E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	54.00	5.625E-002	7.725E-003
Cm-244	5.78	5.64	5.90	54.00	5.625E-002	7.725E-003
Th-227	6.07	5.93	6.18	7.00	7.292E-003	2.946E-003
Cm-242	6.15	6.12	6.18	6.00	6.250E-003	2.756E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:01PM 7/25/2012

Sample Name: ICB;AV44

Sample

Spectrum #1 Analysis #1

Comment:

Batch Name: July2012b

Batch

Analyst: 60040

Description:

Acquisition

Detector: AV44 , SN: 50-051JJ1
Acquisition Start Date: 7/24/2012 9:07:03PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9795;AV44-20120610
Calibration Date: 6/11/2012 3:27:57PM

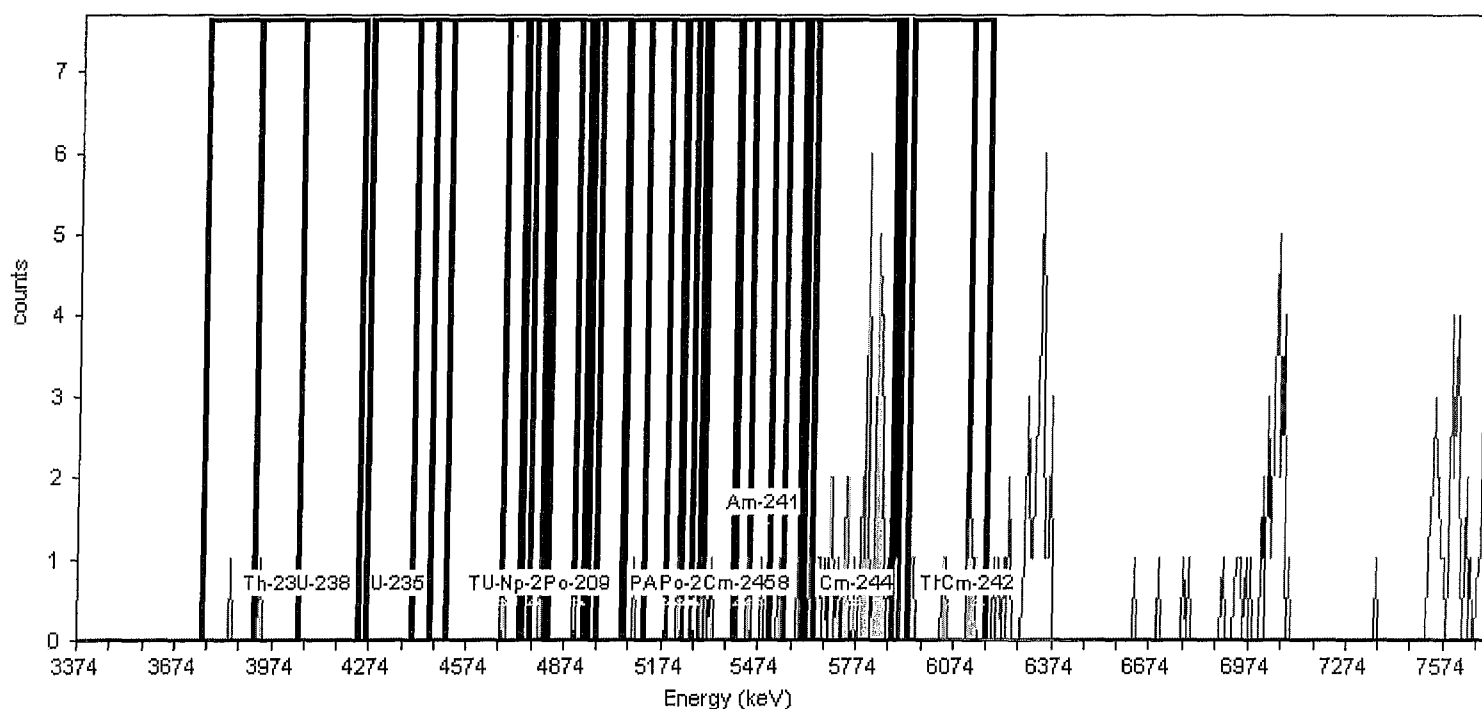
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.64% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 173.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	2.00	2.083E-003	1.804E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	3.00	3.125E-003	2.083E-003
U-232	5.25	5.06	5.40	5.00	5.208E-003	2.552E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	6.00	6.250E-003	2.756E-003
Am-241	5.48	5.30	5.60	7.00	7.292E-003	2.946E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	41.00	4.271E-002	6.751E-003
Cm-244	5.78	5.64	5.90	42.00	4.375E-002	6.831E-003
Th-227	6.07	5.93	6.18	9.00	9.375E-003	3.294E-003
Cm-242	6.15	6.12	6.18	5.00	5.208E-003	2.552E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:07PM 7/25/2012

Sample Name: ICB;AV45

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV45 , SN: 48-158FF2
Acquisition Start Date: 7/24/2012 9:07:04PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9817;AV45-20120610
Calibration Date: 6/11/2012 3:28:22PM

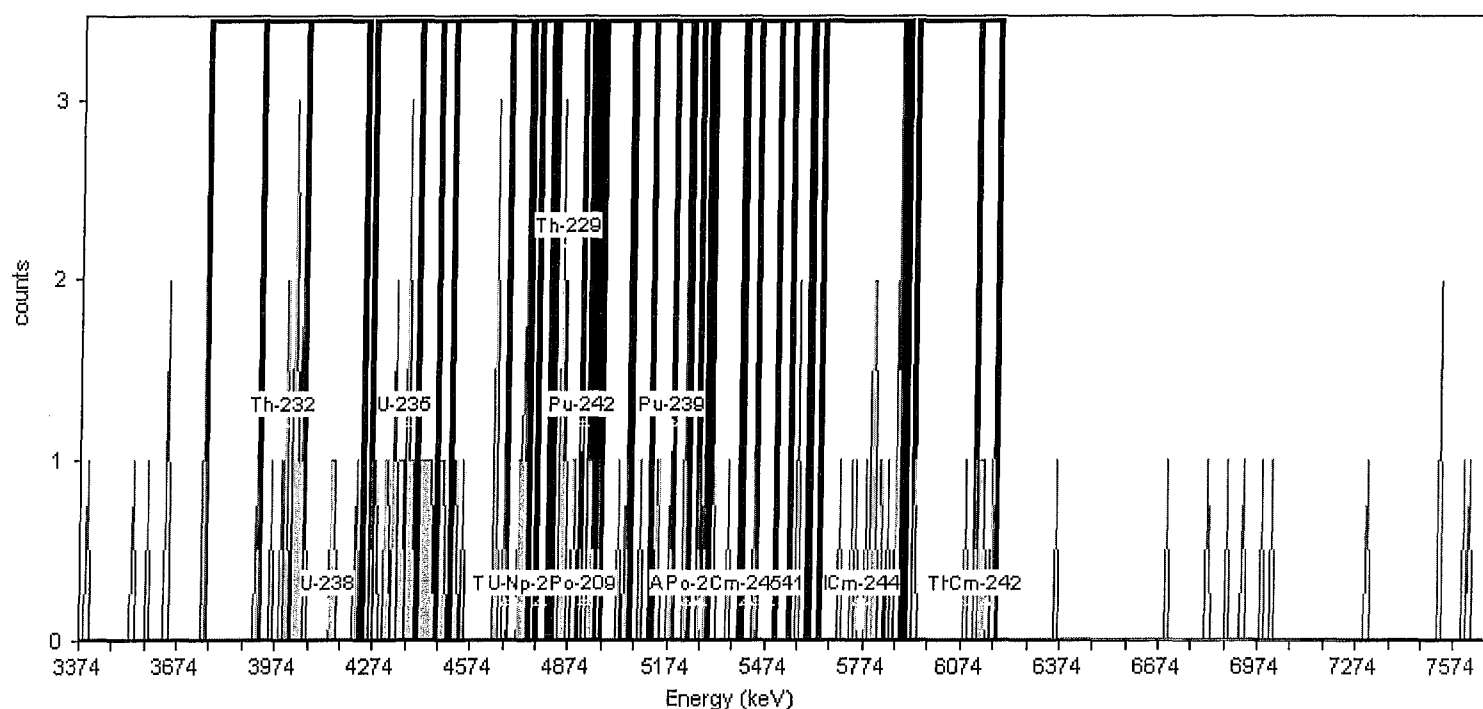
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.04% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 115.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	13.00	1.354E-002	3.898E-003
U-238	4.14	3.92	4.24	16.00	1.667E-002	4.295E-003
U-235	4.36	4.26	4.46	19.00	1.979E-002	4.658E-003
Th-230	4.68	4.40	4.75	18.00	1.875E-002	4.541E-003
U-234	4.71	4.51	4.82	11.00	1.146E-002	3.608E-003
Pu-242	4.90	4.68	4.95	15.00	1.563E-002	4.167E-003
Th-229	4.86	4.74	5.12	15.00	1.563E-002	4.167E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	2.00	2.083E-003	1.804E-003
Pu-239	5.18	4.97	5.24	7.00	7.292E-003	2.946E-003
Am-243	5.23	5.05	5.31	7.00	7.292E-003	2.946E-003
U-232	5.25	5.06	5.40	9.00	9.375E-003	3.294E-003
Th-228	5.45	5.19	5.51	7.00	7.292E-003	2.946E-003
Po-210	5.28	5.23	5.29	2.00	2.083E-003	1.804E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	15.00	1.563E-002	4.167E-003
Cm-244	5.78	5.64	5.90	15.00	1.563E-002	4.167E-003
Th-227	6.07	5.93	6.18	6.00	6.250E-003	2.756E-003
Cm-242	6.15	6.12	6.18	4.00	4.167E-003	2.329E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:13PM 7/25/2012

Sample Name: ICB;AV46

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV46 , SN: 49-202GG2
Acquisition Start Date: 7/24/2012 9:07:05PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9884;AV46-20120610
Calibration Date: 6/11/2012 3:28:47PM

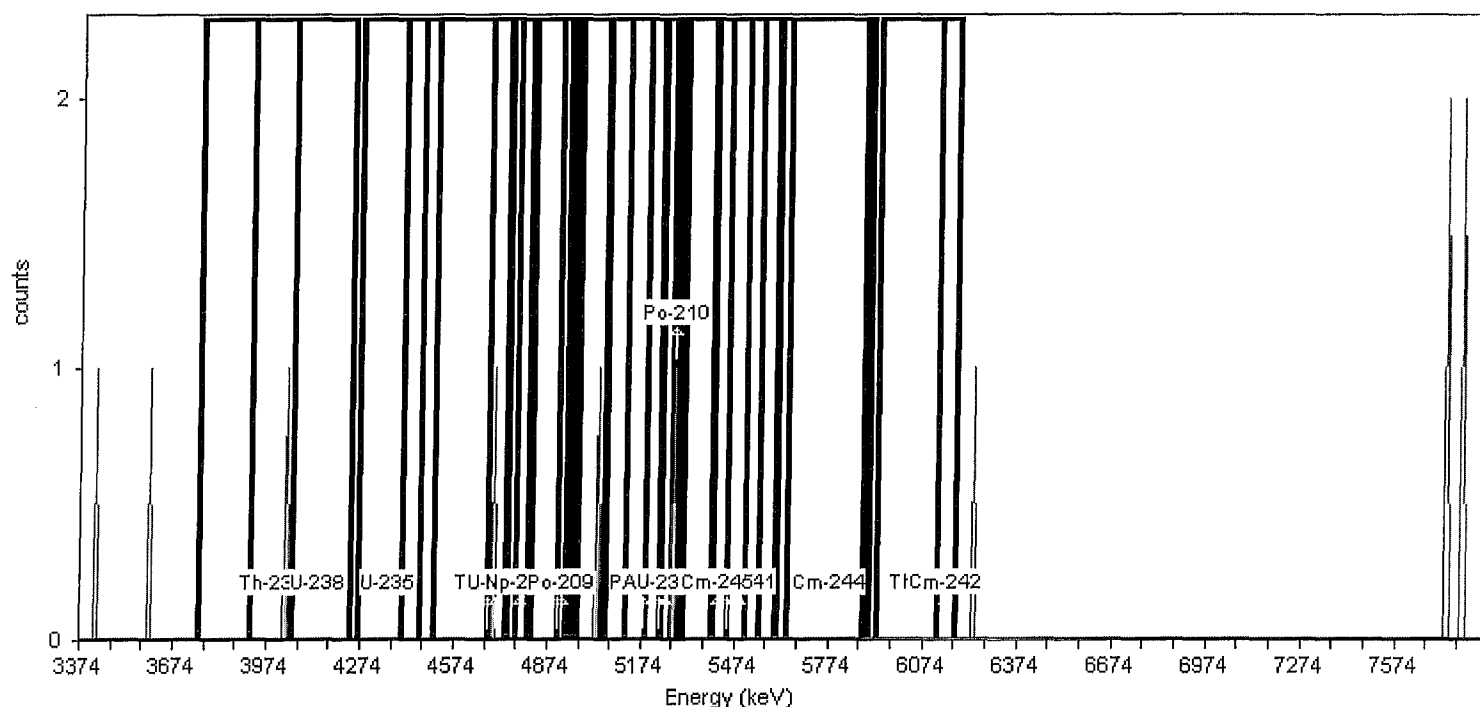
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.49% +/- 0.40% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 11.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	1.00	1.042E-003	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	1.00	1.042E-003	1.473E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	1.00	1.042E-003	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:18PM 7/25/2012

Sample Name: ICB;AV47

Sample

Spectrum #1 Analysis #1

Comment:

Batch Name: July2012b

Batch

Analyst: 60040

Description:

Acquisition

Detector: AV47 , SN: 50-051C7
Acquisition Start Date: 7/24/2012 9:07:06PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9885;AV47-20120611a
Calibration Date: 6/12/2012 1:04:12AM

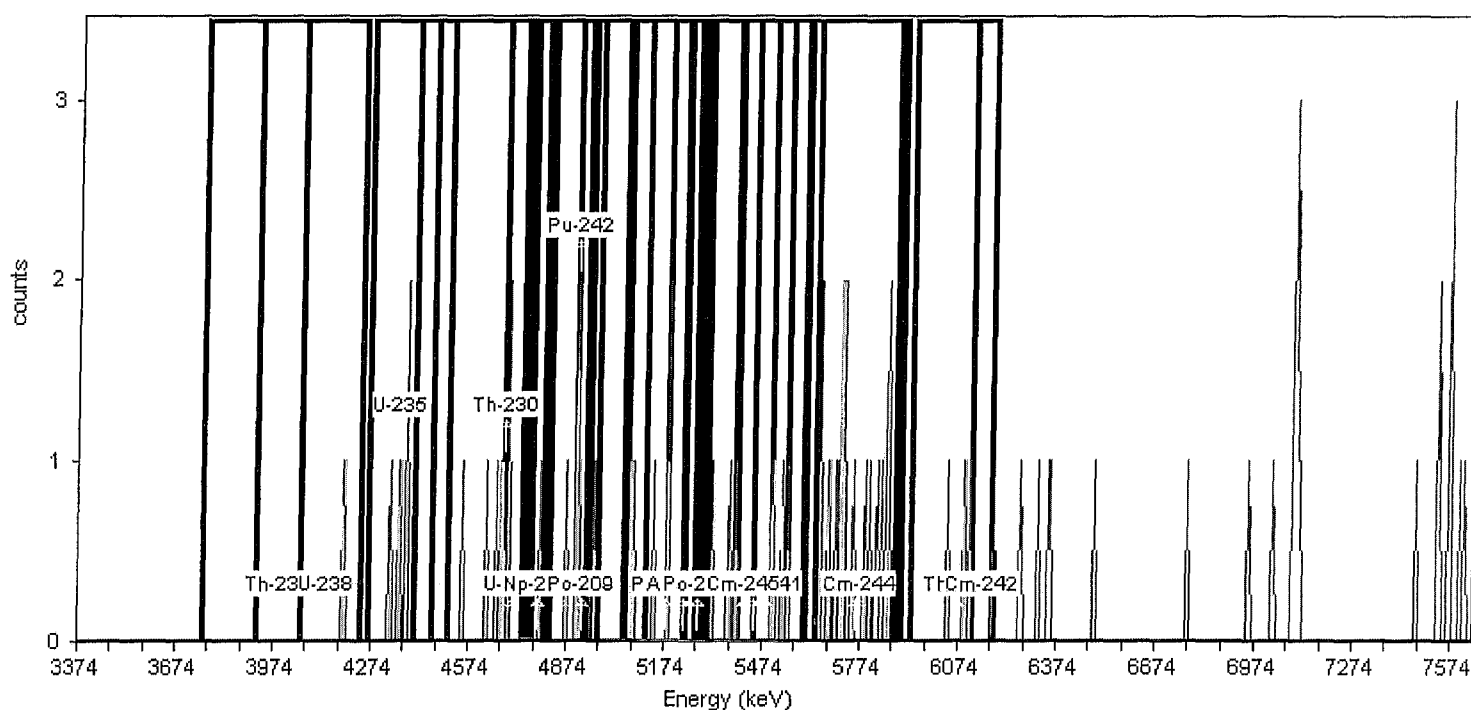
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.78% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 74.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	4.00	4.167E-003	2.329E-003
Th-230	4.68	4.40	4.75	7.00	7.292E-003	2.946E-003
U-234	4.71	4.51	4.82	8.00	8.333E-003	3.125E-003
Pu-242	4.90	4.68	4.95	8.00	8.333E-003	3.125E-003
Th-229	4.86	4.74	5.12	9.00	9.375E-003	3.294E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	3.00	3.125E-003	2.083E-003
Pu-239	5.18	4.97	5.24	6.00	6.250E-003	2.756E-003
Am-243	5.23	5.05	5.31	6.00	6.250E-003	2.756E-003
U-232	5.25	5.06	5.40	9.00	9.375E-003	3.294E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	6.00	6.250E-003	2.756E-003
Am-241	5.48	5.30	5.60	6.00	6.250E-003	2.756E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	16.00	1.667E-002	4.295E-003
Cm-244	5.78	5.64	5.90	16.00	1.667E-002	4.295E-003
Th-227	6.07	5.93	6.18	3.00	3.125E-003	2.083E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:24PM 7/25/2012

Sample Name: ICB;AV48

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4
Acquisition Start Date: 7/24/2012 9:07:07PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9886;AV48-20120610
Calibration Date: 6/11/2012 3:29:40PM

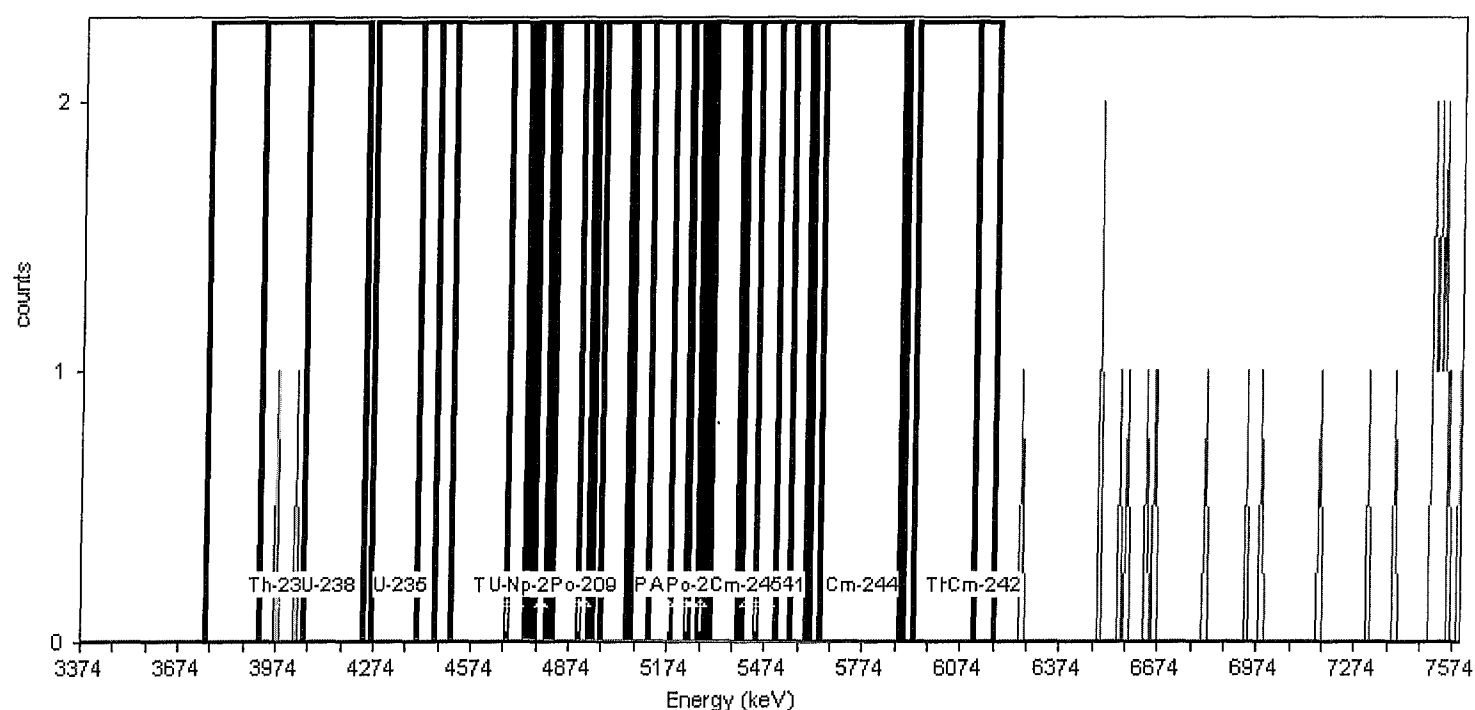
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.64% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 27.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV49

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV49 , SN: 46-022AA3

Acquisition Start Date: 7/24/2012 9:07:08PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-7107;AV49-20120610

Calibration Date: 6/10/2012 8:17:41PM

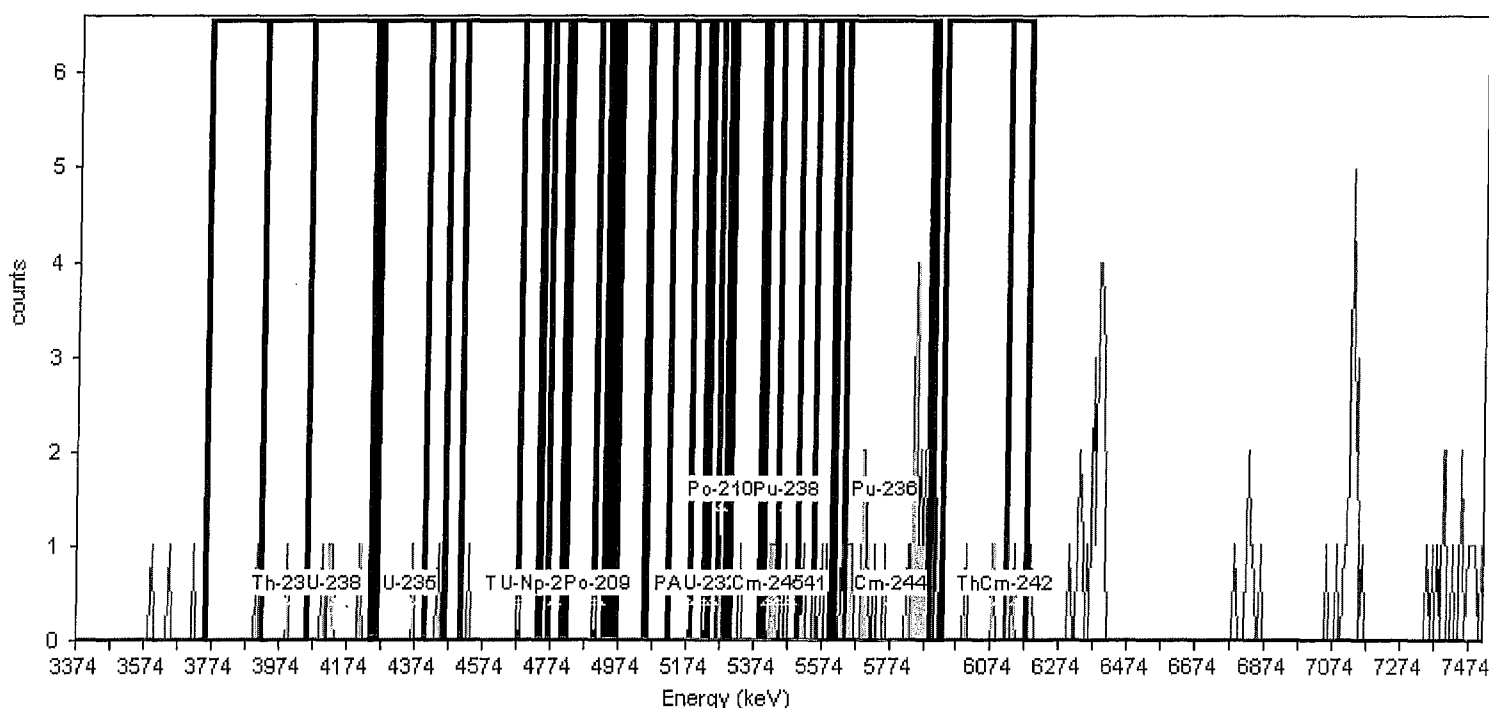
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366,95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.27% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05 Background ROI Library: Background ROI Library

Total Background Counts: 113.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	5.00	5.208E-003	2.552E-003
U-235	4.36	4.26	4.46	2.00	2.083E-003	1.804E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	2.00	2.083E-003	1.804E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	8.00	8.333E-003	3.125E-003
Am-241	5.48	5.30	5.60	9.00	9.375E-003	3.294E-003
Cm-245	5.42	5.40	5.45	3.00	3.125E-003	2.083E-003
Pu-236	5.76	5.61	5.89	23.00	2.396E-002	5.103E-003
Cm-244	5.78	5.64	5.90	22.00	2.292E-002	4.996E-003
Th-227	6.07	5.93	6.18	4.00	4.167E-003	2.329E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Monthly CCV
Alpha Vision
July 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)
<i>AV1</i>				
IC-7107;AV1-20120607	6/7/2012 3:02:16 PM	82232-334	0.2756	Pass
CCV-7107;AV1-20120724	7/24/2012 1:37:50 PM	82232-334	0.2749	Pass 99.7401 Pass
<i>AV2</i>				
IC-8874;AV2-20120607	6/7/2012 3:02:23 PM	82233-334	0.2693	Pass
CCV-8874;AV2-20120724	7/24/2012 1:38:06 PM	82233-334	0.2737	Pass 101.617 Pass
<i>AV3</i>				
IC-8875;AV3-20120607	6/7/2012 3:02:28 PM	82234-334	0.2857	Pass
CCV-8875;AV3-20120724	7/24/2012 1:38:18 PM	82234-334	0.2813	Pass 98.4574 Pass
<i>AV4</i>				
IC-8876;AV4-20120607	6/7/2012 3:02:32 PM	82235-334	0.2793	Pass
CCV-8876;AV4-20120724	7/24/2012 1:38:33 PM	82235-334	0.2759	Pass 98.7801 Pass
<i>AV6</i>				
IC-9520;AV6-20120607a	6/7/2012 3:56:30 PM	82237-334	0.2792	Pass
CCV-9520;AV6-20120724	7/24/2012 1:38:57 PM	82237-334	0.2815	Pass 100.837 Pass
<i>AV7</i>				
IC-8879;AV7-20120607	6/7/2012 4:03:51 PM	82238-334	0.2731	Pass
CCV-8879;AV7-20120724	7/24/2012 1:39:10 PM	82238-334	0.2696	Pass 98.7133 Pass
<i>AV8</i>				
IC-9792;AV8-20120607	6/7/2012 4:06:21 PM	82240-334	0.2787	Pass
CCV-9792;AV8-20120724	7/24/2012 1:39:22 PM	82240-334	0.2791	Pass 100.131 Pass
<i>AV9</i>				
IC-9793;AV9-20120607	6/7/2012 4:06:26 PM	82241-334	0.2781	Pass
CCV-9793;AV9-20120724	7/24/2012 1:39:34 PM	82241-334	0.2797	Pass 100.590 Pass
<i>AV10</i>				
IC-9794;AV10-20120621	6/21/2012 2:01:39 PM	82242-334	0.2725	Pass
<i>AV11</i>				
IC-9795;AV11-20120607	6/7/2012 7:50:12 PM	82243-334	0.2751	Pass
CCV-9795;AV11-20120724	7/24/2012 1:40:24 PM	82243-334	0.2762	Pass 100.416 Pass
<i>AV12</i>				
IC-9817;AV12-20120607	6/7/2012 7:50:16 PM	82244-334	0.2699	Pass
CCV-9817;AV12-20120724	7/24/2012 1:40:35 PM	82244-334	0.2659	Pass 98.5073 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 1 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV13</i>						
IC-9884;AV13-20120607	6/7/2012 7:50:19 PM	82245-334	0.2758	Pass		
CCV-9884;AV13-20120724	7/24/2012 1:40:46 PM	82245-334	0.2906	Pass	105.355	Fail
CCV-9884;AV13-20120724a	7/24/2012 5:02:56 PM	82245-334	0.2748	Pass	99.6538	Pass
CCV-9884;AV13-20120725	7/25/2012 11:44:29 AM	82245-334	0.2727	Pass	98.8754	Pass
<i>AV14</i>						
IC-9885;AV14-20120607	6/7/2012 7:50:22 PM	82246-334	0.2724	Pass		
CCV-9885;AV14-20120724	7/24/2012 1:41:00 PM	82246-334	0.2691	Pass	98.7814	Pass
<i>AV15</i>						
IC-9886;AV15-20120607	6/7/2012 7:50:24 PM	82247-334	0.2743	Pass		
CCV-9886;AV15-20120724	7/24/2012 1:41:10 PM	82247-334	0.2744	Pass	100.039	Pass
<i>AV16</i>						
IC-7107;AV16-20120607a	6/8/2012 12:12:55 AM	82232-334	0.2798	Pass		
CCV-7107;AV16-20120724	7/24/2012 5:03:06 PM	82232-334	0.2799	Pass	100.019	Pass
<i>AV17</i>						
IC-8874;AV17-20120607	6/8/2012 12:13:37 AM	82233-334	0.2631	Pass		
CCV-8874;AV17-20120724	7/24/2012 5:03:21 PM	82233-334	0.2669	Pass	101.451	Pass
<i>AV18</i>						
IC-8875;AV18-20120607	6/8/2012 12:13:58 AM	82234-334	0.2748	Pass		
CCV-8875;AV18-20120724	7/24/2012 5:05:40 PM	82234-334	0.2730	Pass	99.3381	Pass
<i>AV19</i>						
IC-8876;AV19-20120607	6/8/2012 12:14:05 AM	82235-334	0.2694	Pass		
CCV-8876;AV19-20120724	7/24/2012 5:03:44 PM	82235-334	0.2681	Pass	99.5055	Pass
<i>AV20</i>						
IC-8877;AV20-20120607	6/7/2012 7:50:28 PM	82236-334	0.2703	Pass		
CCV-8877;AV20-20120724	7/24/2012 1:38:45 PM	82236-334	0.2677	Pass	99.0551	Pass
<i>AV21</i>						
IC-9520;AV21-20120607	6/8/2012 12:14:09 AM	82237-334	0.2708	Pass		
CCV-9520;AV21-20120724	7/24/2012 5:03:53 PM	82237-334	0.2734	Pass	100.966	Pass
<i>AV22</i>						
IC-8879;AV22-20120607	6/8/2012 12:14:14 AM	82238-334	0.2679	Pass		
CCV-8879;AV22-20120724	7/24/2012 5:04:03 PM	82238-334	0.2639	Pass	98.5154	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 2 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV23</i>						
IC-9792;AV23-20120607	6/8/2012 12:14:18 AM	82240-334	0.2673	Pass		
CCV-9792;AV23-20120724	7/24/2012 5:04:14 PM	82240-334	0.2688	Pass	100.552	Pass
<i>AV24</i>						
IC-9793;AV24-20120607	6/8/2012 12:14:21 AM	82241-334	0.2734	Pass		
CCV-9793;AV24-20120724	7/24/2012 5:04:24 PM	82241-334	0.2766	Pass	101.156	Pass
<i>AV43</i>						
IC-9794;AV43-20120607	6/7/2012 7:50:31 PM	82242-334	0.2699	Pass		
CCV-9794;AV43-20120725	7/25/2012 10:28:07 PM	82242-334	0.2686	Pass	99.5158	Pass
<i>AV44</i>						
IC-9795;AV44-20120610	6/11/2012 3:27:57 PM	82243-334	0.2664	Pass		
CCV-9795;AV44-20120725	7/25/2012 10:28:12 PM	82243-334	0.2682	Pass	100.672	Pass
<i>AV45</i>						
IC-9817;AV45-20120610	6/11/2012 3:28:22 PM	82244-334	0.2704	Pass		
CCV-9817;AV45-20120725	7/25/2012 10:28:16 PM	82244-334	0.0001	Eval	5.53444	Fail
<i>AV46</i>						
IC-9884;AV46-20120610	6/11/2012 3:28:47 PM	82245-334	0.2849	Pass		
CCV-9884;AV46-20120725	7/25/2012 10:28:19 PM	82245-334	0.2804	Pass	98.4164	Pass
<i>AV47</i>						
IC-9885;AV47-20120611a	6/12/2012 1:04:12 AM	82246-334	0.2678	Pass		
<i>AV48</i>						
IC-9886;AV48-20120610	6/11/2012 3:29:40 PM	82247-334	0.2764	Pass		
CCV-9886;AV48-20120725	7/25/2012 10:28:31 PM	82247-334	0.0004	Eval	0.13021	Fail
<i>AV49</i>						
IC-7107;AV49-20120610	6/10/2012 8:17:41 PM	82232-334	0.2927	Pass		
CCV-7107;AV49-20120725	7/25/2012 10:28:34 PM	82232-334	0.2909	Pass	99.3834	Pass
<i>AV50</i>						
IC-8874;AV50-20120610	6/10/2012 8:17:58 PM	82233-334	0.2754	Pass		
CCV-8874;AV50-20120726	7/26/2012 1:58:10 PM	82233-334	0.2729	Pass	99.0921	Pass
<i>AV51</i>						
IC-8875;AV51-20120610	6/10/2012 8:18:12 PM	82234-334	0.2819	Pass		
CCV-8875;AV51-20120725	7/25/2012 10:28:38 PM	82234-334	0.2814	Pass	99.8447	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 3 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV52</i>				
IC-8876;AV52-20120610	6/10/2012 8:18:26 PM	82235-334	0.2911	Pass
CCV-8876;AV52-20120726	7/26/2012 1:58:30 PM	82235-334	0.2925	Pass 100.496 Pass
<i>AV53</i>				
IC-8877;AV53-20120610	6/10/2012 8:18:38 PM	82236-334	0.2773	Pass
CCV-8877;AV53-20120725	7/25/2012 10:28:41 PM	82236-334	0.2775	Pass 100.055 Pass
<i>AV54</i>				
IC-9520;AV54-20120610	6/10/2012 8:18:52 PM	82237-334	0.2798	Pass
CCV-9520;AV54-20120726	7/26/2012 1:58:49 PM	82237-334	0.2760	Pass 98.6444 Pass
<i>AV55</i>				
IC-8879;AV55-20120610	6/10/2012 8:19:03 PM	82238-334	0.2720	Pass
CCV-8879;AV55-20120725	7/25/2012 10:28:45 PM	82238-334	0.2697	Pass 99.1518 Pass
<i>AV56</i>				
IC-9792;AV56-20120610	6/10/2012 8:19:16 PM	82240-334	0.2709	Pass
CCV-9792;AV56-20120725	7/25/2012 10:28:48 PM	82240-334	0.0003	Eval 0.11605 Fail
<i>AV57</i>				
IC-9793;AV57-20120610	6/10/2012 8:19:29 PM	82241-334	0.2764	Pass
CCV-9793;AV57-20120725	7/25/2012 10:28:52 PM	82241-334	0.2763	Pass 99.9520 Pass
<i>AV58</i>				
IC-9794;AV58-20120610	6/10/2012 8:19:36 PM	82242-334	0.2550	Pass
<i>AV59</i>				
IC-9795;AV59-20120610	6/10/2012 8:19:39 PM	82243-334	0.2753	Pass
<i>AV60</i>				
IC-9817;AV60-20120610	6/10/2012 8:19:43 PM	82244-334	0.2682	Pass
CCV-9817;AV60-20120725a	7/26/2012 12:42:30 AM	82244-334	0.2705	Pass 100.836 Pass
<i>AV61</i>				
IC-9884;AV61-20120610	6/10/2012 8:19:46 PM	82245-334	0.2792	Pass
CCV-9884;AV61-20120725	7/26/2012 12:42:24 AM	82245-334	0.2785	Pass 99.7356 Pass
<i>AV62</i>				
IC-9885;AV62-20120610	6/10/2012 8:19:49 PM	82246-334	0.2742	Pass
CCV-9885;AV62-20120725	7/26/2012 12:42:33 AM	82246-334	0.2738	Pass 99.8594 Pass
<i>AV63</i>				
IC-9886;AV63-20120610	6/10/2012 8:19:57 PM	82247-334	0.2707	Pass
CCV-9886;AV63-20120725	7/26/2012 12:42:36 AM	82247-334	0.2716	Pass 100.323 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 4 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV64</i>						
IC-7107;AV64-20120610	6/11/2012 3:30:09 PM	82232-334	0.2935	Pass		
CCV-7107;AV64-20120726	7/26/2012 1:58:00 PM	82232-334	0.2935	Pass	99.9978	Pass
<i>AV65</i>						
IC-8874;AV65-20120610	6/11/2012 3:30:33 PM	82233-334	0.2759	Pass		
CCV-8874;AV65-20120725	7/25/2012 10:28:56 PM	82233-334	0.2745	Pass	99.4624	Pass
<i>AV66</i>						
IC-8875;AV66-20120610	6/11/2012 3:30:58 PM	82234-334	0.2846	Pass		
CCV-8875;AV66-20120725	7/26/2012 12:42:39 AM	82234-334	0.2809	Pass	98.6783	Pass
<i>AV67</i>						
IC-8876;AV67-20120610	6/11/2012 3:31:27 PM	82235-334	0.2953	Pass		
CCV-8876;AV67-20120726	7/26/2012 5:34:37 PM	82235-334	0.2975	Pass	100.722	Pass
<i>AV68</i>						
IC-8877;AV68-20120610	6/11/2012 3:31:53 PM	82236-334	0.2740	Pass		
CCV-8877;AV68-20120725	7/26/2012 12:42:42 AM	82236-334	0.2748	Pass	100.313	Pass
<i>AV69</i>						
IC-9520;AV69-20120610	6/11/2012 3:32:14 PM	82237-334	0.2763	Pass		
CCV-9520;AV69-20120725	7/25/2012 10:29:25 PM	82237-334	0.2730	Pass	98.8075	Pass
<i>AV70</i>						
IC-8879;AV70-20120610	6/11/2012 3:32:41 PM	82238-334	0.2732	Pass		
CCV-8879;AV70-20120725	7/26/2012 12:42:45 AM	82238-334	0.2708	Pass	99.1119	Pass
<i>AV71</i>						
IC-9792;AV71-20120610	6/11/2012 3:33:08 PM	82240-334	0.2763	Pass		
CCV-9792;AV71-20120725	7/26/2012 12:42:50 AM	82240-334	0.2755	Pass	99.7117	Pass
<i>AV72</i>						
IC-9793;AV72-20120610	6/11/2012 3:33:25 PM	82241-334	0.2910	Pass		
CCV-9793;AV72-20120725	7/26/2012 12:42:53 AM	82241-334	0.2858	Pass	98.2175	Pass
<i>AV73</i>						
IC-9794;AV73-20120610	6/11/2012 3:33:47 PM	82242-334	0.2766	Pass		
CCV-9794;AV73-20120725	7/26/2012 12:42:56 AM	82242-334	0.2759	Pass	99.7532	Pass
<i>AV74</i>						
IC-9795;AV74-20120611a	6/12/2012 1:04:18 AM	82243-334	0.2701	Pass		
CCV-9795;AV74-20120726	7/26/2012 8:37:17 AM	82243-334	0.2731	Pass	101.096	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 5 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV75</i>				
IC-9817;AV75-20120611a	6/12/2012 1:04:21 AM	82244-334	0.2656	Pass
CCV-9817;AV75-20120724	7/24/2012 8:51:29 PM	82244-334	0.2666	Pass 100.388 Pass
<i>AV76</i>				
IC-9884;AV76-20120611a	6/12/2012 1:04:24 AM	82245-334	0.2723	Pass
CCV-9884;AV76-20120724a	7/24/2012 10:38:47 PM	82245-334	0.2757	Pass 101.240 Pass
<i>AV77</i>				
IC-9885;AV77-20120612	6/12/2012 10:16:22 PM	82246-334	0.2674	Pass
CCV-9885;AV77-20120724	7/24/2012 8:51:53 PM	82246-334	0.2687	Pass 100.497 Pass
<i>AV78</i>				
IC-9886;AV78-20120611a	6/12/2012 1:04:27 AM	82247-334	0.2751	Pass
CCV-9886;AV78-20120724	7/24/2012 8:51:41 PM	82247-334	0.2748	Pass 99.8636 Pass
<i>AV79</i>				
IC-7107;AV79-20120611a	6/12/2012 1:04:30 AM	82232-334	0.2824	Pass
CCV-7107;AV79-20120724	7/24/2012 8:51:57 PM	82232-334	0.2837	Pass 100.462 Pass
<i>AV80</i>				
IC-8874;AV80-20120611a	6/12/2012 1:04:34 AM	82233-334	0.2692	Pass
CCV-8874;AV80-20120724	7/24/2012 8:51:46 PM	82233-334	0.2697	Pass 100.177 Pass
<i>AV81</i>				
IC-8875;AV81-20120611a	6/12/2012 1:04:37 AM	82234-334	0.2858	Pass
CCV-8875;AV81-20120724	7/24/2012 8:51:49 PM	82234-334	0.2899	Pass 101.429 Pass
<i>AV82</i>				
IC-8876;AV82-20120611a	6/12/2012 1:04:40 AM	82235-334	0.2768	Pass
CCV-8876;AV82-20120724	7/24/2012 8:52:00 PM	82235-334	0.2737	Pass 98.8822 Pass
<i>AV83</i>				
IC-8877;AV83-20120611a	6/12/2012 1:04:44 AM	82236-334	0.2727	Pass
CCV-8877;AV83-20120724	7/24/2012 8:52:04 PM	82236-334	0.2757	Pass 101.099 Pass
<i>AV84</i>				
IC-9520;AV84-20120611a	6/12/2012 1:04:47 AM	82237-334	0.2790	Pass
CCV-9520;AV84-20120724	7/24/2012 8:52:07 PM	82237-334	0.2748	Pass 98.4876 Pass
<i>AV85</i>				
IC-8879;AV85-20120611a	6/12/2012 1:04:50 AM	82238-334	0.2774	Pass
CCV-8879;AV85-20120724	7/24/2012 8:52:11 PM	82238-334	0.2782	Pass 100.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 6 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV86</i>						
IC-9792;AV86-20120611a	6/12/2012 1:04:54 AM	82240-334	0.2769	Pass		
CCV-9792;AV86-20120724	7/24/2012 8:52:16 PM	82240-334	0.2771	Pass	100.046	Pass
<i>AV87</i>						
IC-9793;AV87-20120611a	6/12/2012 1:04:56 AM	82241-334	0.2951	Pass		
CCV-9793;AV87-20120724	7/24/2012 8:52:20 PM	82241-334	0.2909	Pass	98.5861	Pass
<i>AV88</i>						
IC-9794;AV88-20120611a	6/12/2012 1:04:59 AM	82242-334	0.2744	Pass		
CCV-9794;AV88-20120724	7/24/2012 5:04:33 PM	82242-334	0.2741	Pass	99.8889	Pass
<i>AV89</i>						
IC-9795;AV89-20120612	6/12/2012 3:39:24 PM	82243-334	0.2684	Pass		
CCV-9795;AV89-20120724	7/24/2012 5:04:44 PM	82243-334	0.2679	Pass	99.8091	Pass
<i>AV90</i>						
IC-9817;AV90-20120612	6/12/2012 3:39:50 PM	82244-334	0.2731	Pass		
CCV-9817;AV90	7/24/2012 5:05:02 PM	82244-334	0.2721	Pass	99.6298	Pass
<i>AV91</i>						
IC-9884;AV91-20120612	6/12/2012 3:40:10 PM	82245-334	0.2787	Pass		
CCV-9884;AV91-20120724	7/24/2012 11:50:47 PM	82245-334	0.2800	Pass	100.497	Pass
<i>AV92</i>						
IC-9885;AV92-20120613	6/13/2012 10:43:01 AM	82246-334	0.2705	Pass		
CCV-9885;AV92-20120724	7/24/2012 5:08:08 PM	82246-334	0.2723	Pass	100.677	Pass
<i>AV93</i>						
IC-9886;AV93-20120612	6/12/2012 3:40:55 PM	82247-334	0.2715	Pass		
CCV-9886;AV93-20120724	7/24/2012 5:08:42 PM	82247-334	0.2720	Pass	100.196	Pass
<i>AV94</i>						
IC-7107;AV94-20120612a	6/12/2012 3:41:17 PM	82232-334	0.2797	Pass		
CCV-7107;AV94-20120724	7/24/2012 10:38:52 PM	82232-334	0.2772	Pass	99.0992	Pass
<i>AV95</i>						
IC-8874;AV95-20120608	6/8/2012 8:45:55 AM	82233-334	0.2719	Pass		
CCV-8874;AV95-20120724	7/24/2012 10:38:55 PM	82233-334	0.2708	Pass	99.6240	Pass
<i>AV96</i>						
IC-8875;AV96-20120612	6/12/2012 3:41:40 PM	82234-334	0.2831	Pass		
CCV-8875;AV96-20120724	7/24/2012 10:39:01 PM	82234-334	0.0004	Eval	0.14859	Fail

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 7 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV97</i>						
IC-8876;AV97-20120612a	6/12/2012 10:16:26 PM	82235-334	0.2765	Pass		
CCV-8876;;AV97-20120724	7/24/2012 10:39:04 PM	82235-334	0.2779	Pass	100.508	Pass
<i>AV98</i>						
IC-8877;AV98-20120608	6/8/2012 8:46:02 AM	82236-334	0.2818	Pass		
CCV-8877;AV98-20120724	7/24/2012 5:06:05 PM	82236-334	0.2793	Pass	99.1155	Pass
<i>AV99</i>						
IC-9520;AV99-20120608	6/8/2012 8:46:10 AM	82237-334	0.2703	Pass		
<i>AV100</i>						
IC-8879;AV100-20120608	6/8/2012 8:46:24 AM	82238-334	0.2719	Pass		
CCV-8879;AV100-20120726	7/26/2012 1:58:58 PM	82238-334	0.2703	Pass	99.4168	Pass
<i>AV101</i>						
IC-9792;AV101-20120608	6/8/2012 8:46:34 AM	82240-334	0.2802	Pass		
CCV-9792;AV101-20120726	7/26/2012 8:37:09 AM	82240-334	0.2787	Pass	99.4560	Pass
<i>AV102</i>						
IC-9793;AV102-20120608	6/8/2012 8:46:41 AM	82241-334	0.2826	Pass		
CCV-9793;AV102-20120726	7/26/2012 8:37:21 AM	82241-334	0.2794	Pass	98.8711	Pass
<i>AV103</i>						
IC-9794;AV103-20120607	6/8/2012 12:14:29 AM	82242-334	0.2709	Pass		
CCV-9794;AV103-20120726	7/26/2012 1:59:26 PM	82242-334	0.2718	Pass	100.319	Pass
<i>AV104</i>						
IC-9795;AV104-20120607	6/8/2012 12:14:40 AM	82243-334	0.2646	Pass		
CCV-9795;AV104-20120726	7/26/2012 1:59:37 PM	82243-334	0.0056	Eval	2.11169	Fail
<i>AV105</i>						
IC-9817;AV105-20120607	6/8/2012 12:14:48 AM	82244-334	0.2474	Pass		
CCV-9817;AV10520120726	7/26/2012 1:59:46 PM	82244-334	0.2451	Pass	99.0547	Pass
<i>AV106</i>						
IC-9884;AV106-20120607	6/8/2012 12:15:09 AM	82245-334	0.2797	Pass		
CCV-9884;AV106-20120726	7/26/2012 1:59:55 PM	82245-334	0.2758	Pass	98.5711	Pass
<i>AV107</i>						
IC-9885;AV107-20120607	6/8/2012 12:14:52 AM	82246-334	0.2711	Pass		
CCV-9885;AV107-20120726	7/26/2012 2:00:04 PM	82246-334	0.2733	Pass	100.841	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 8 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV108</i>							
IC-9886;AV108-20120607	6/8/2012 12:14:56 AM	82247-334	0.2812	Pass			
CCV-9886;AV108-20120726	7/26/2012 2:00:19 PM	82247-334	0.2814	Pass	100.046	Pass	
<i>AV109</i>							
IC-7107;AV109-20120608	6/8/2012 8:46:47 AM	82232-334	0.2782	Pass			
CCV-7107;AV109-20120725	7/26/2012 12:42:58 AM	82232-334	0.2245	Pass	80.7030	Fail	
CCV-7107;AV109-20120726	7/26/2012 5:32:41 PM	82232-334	0.2819	Pass	101.326	Pass	
CCV-7107;AV109-20120726a	7/26/2012 7:44:53 PM	82232-334	0.2763	Pass	99.3002	Pass	
<i>AV111</i>							
IC-8875;AV111-20120608	6/8/2012 8:46:55 AM	82234-334	0.2800	Pass			
CCV-8875;AV111-20120726	7/26/2012 8:37:25 AM	82234-334	0.2787	Pass	99.5396	Pass	
<i>AV112</i>							
IC-8876;AV112-20120608	6/8/2012 8:47:01 AM	82235-334	0.2750	Pass			
CCV-8876;AV112-20120725	7/25/2012 10:31:58 PM	82235-334	0.2735	Pass	99.4658	Pass	
<i>AV113</i>							
IC-8877;AV113-20120607	6/8/2012 12:15:02 AM	82236-334	0.2765	Pass			
CCV-8877;AV113-20120726	7/26/2012 8:37:29 AM	82236-334	0.2772	Pass	100.255	Pass	
<i>AV114</i>							
IC-9520;AV114-20120612	6/12/2012 3:42:22 PM	82237-334	0.2746	Pass			
CCV-9520;AV114-20120726	7/26/2012 5:34:48 PM	82237-334	0.2758	Pass	100.401	Pass	
<i>AV115</i>							
IC-8879;AV115-20120612	6/12/2012 3:42:43 PM	82238-334	0.2756	Pass			
CCV-8879;AV115-20120726	7/26/2012 5:34:59 PM	82238-334	0.2762	Pass	100.213	Pass	
<i>AV116</i>							
IC-9792;AV116-20120612	6/12/2012 3:43:02 PM	82240-334	0.2914	Pass			
CCV-9792;AV116-20120726	7/26/2012 1:59:07 PM	82240-334	0.2773	Pass	95.1508	Pass	
<i>AV117</i>							
IC-9793;AV117-20120612	6/12/2012 3:43:27 PM	82241-334	0.2628	Pass			
CCV-9793;AV117-20120726	7/26/2012 1:59:16 PM	82241-334	0.2683	Pass	102.098	Pass	
<i>AV118</i>							
IC-9794;AV118-20120608	6/8/2012 8:47:07 AM	82242-334	0.2728	Pass			
CCV-9794;AV118-20120726	7/26/2012 8:37:33 AM	82242-334	0.2689	Pass	98.5708	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 9 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV119</i>							
IC-9795;AV119-20120608	6/8/2012 8:47:13 AM	82243-334	0.2655	Pass			
CCV-9795;AV119-20120726	7/26/2012 10:05:57 PM	82243-334	0.2655	Pass	99.9791	Pass	
<i>AV120</i>							
IC-9817;AV120-20120608	6/8/2012 8:47:18 AM	82244-334	0.2668	Pass			
CCV-9817;AV120-20120726	7/26/2012 8:37:37 AM	82244-334	0.2689	Pass	100.796	Pass	
<i>AV121</i>							
IC-9884;AV121-20120608	6/8/2012 8:54:38 AM	82245-334	0.2825	Pass			
CCV-9884;AV121-20120726	7/26/2012 8:37:41 AM	82245-334	0.2811	Pass	99.4897	Pass	
<i>AV122</i>							
IC-9885;AV122-20120608	6/8/2012 8:54:44 AM	82246-334	0.2678	Pass			
CCV-9885;AV122-20120726	7/26/2012 8:37:46 AM	82246-334	0.2712	Pass	101.254	Pass	
<i>AV123</i>							
IC-9886;AV123-20120614	6/15/2012 11:45:44 AM	82247-334	0.2691	Pass			
CCV-9886;AV123-20120726	7/26/2012 8:37:50 AM	82247-334	0.2654	Pass	98.6278	Pass	
<i>AV124</i>							
IC-7107;AV124-20120614	6/15/2012 11:46:08 AM	82232-334	0.2653	Pass			
CCV-7107;AV124-20120726	7/26/2012 10:16:23 PM	82232-334	0.2661	Pass	100.282	Pass	
<i>AV125</i>							
IC-8874;AV125-20120614	6/15/2012 11:46:45 AM	82233-334	0.2675	Pass			
CCV-8874;AV125-20120725	7/26/2012 12:43:01 AM	82233-334	0.2694	Pass	100.701	Pass	
<i>AV126</i>							
IC-8875;AV126-20120614	6/15/2012 11:47:26 AM	82234-334	0.2760	Pass			
CCV-8875;AV126-20120726	7/26/2012 1:58:20 PM	82234-334	0.2746	Pass	99.5062	Pass	
<i>AV127</i>							
IC-8876;AV127-20120614	6/15/2012 11:48:11 AM	82235-334	0.2775	Pass			
CCV-8876;AV127-20120725	7/26/2012 12:43:05 AM	82235-334	0.0003	Eval	0.11569	Fail	
<i>AV128</i>							
IC-8877;AV128-20120614	6/15/2012 11:48:54 AM	82236-334	0.2685	Pass			
CCV-8877;AV128-20120726	7/26/2012 1:58:40 PM	82236-334	0.0003	Eval	0.11553	Fail	
<i>AV129</i>							
IC-9520;AV129-20120614	6/15/2012 11:49:36 AM	82237-334	0.2710	Pass			
CCV-9520;AV129-20120725	7/26/2012 12:43:08 AM	82237-334	0.2730	Pass	100.742	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 10 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV130</i>				
IC-8879;AV130-20120614	6/15/2012 11:50:34 AM	82238-334	0.2707	Pass
CCV-8879;AV130-20120726	7/26/2012 8:37:58 AM	82238-334	0.2711	Pass 100.151 Pass
<i>AV131</i>				
IC-9792;AV131-20120612	6/12/2012 10:16:29 PM	82240-334	0.2777	Pass
CCV-9792;AV131-20120726	7/26/2012 7:43:47 PM	82240-334	0.2754	Pass 99.1770 Pass
<i>AV132</i>				
IC-9793;AV132-20120612	6/12/2012 10:16:32 PM	82241-334	0.2711	Pass
CCV-9793;AV132-20120726	7/26/2012 5:35:09 PM	82241-334	0.2728	Pass 100.644 Pass
<i>AV133</i>				
IC-9794;AV133-20120612	6/12/2012 3:43:51 PM	82242-334	0.2627	Pass
CCV-9794;AV133-20120726	7/26/2012 7:43:55 PM	82242-334	0.2629	Pass 100.084 Pass
<i>AV134</i>				
IC-9795;AV134-20120612	6/12/2012 10:16:35 PM	82243-334	0.2665	Pass
CCV-9795;AV134-20120726	7/26/2012 7:44:04 PM	82243-334	0.2637	Pass 98.9425 Pass
<i>AV135</i>				
IC-9817;AV135-20120612	6/12/2012 10:16:38 PM	82244-334	0.2610	Pass
CCV-9817;AV135-20120726	7/26/2012 7:44:16 PM	82244-334	0.2622	Pass 100.442 Pass
<i>AV136</i>				
IC-9884;AV136-20120612	6/12/2012 10:16:41 PM	82245-334	0.2745	Pass
CCV-9884;AV13620120726	7/26/2012 7:44:27 PM	82245-334	0.2725	Pass 99.2766 Pass
<i>AV137</i>				
IC-9885;AV137-20120621	6/21/2012 2:01:56 PM	82246-334	0.2674	Pass
CCV-9885;AV137-20120726	7/26/2012 7:44:35 PM	82246-334	0.2648	Pass 99.0375 Pass
<i>AV138</i>				
IC-9886;AV138-20120608	6/8/2012 8:55:45 AM	82247-334	0.2683	Pass
CCV-9886;AV138-20120726	7/26/2012 7:44:43 PM	82247-334	0.2672	Pass 99.5864 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 11 of 11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Monthly Backgrounds
Alpha Vision
July 2012
AV1-146

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV50

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV50 , SN: 50-060W2

Acquisition Start Date: 7/24/2012 9:07:09PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-8874:AV50-20120610

Calibration Date: 6/10/2012 8:17:58PM

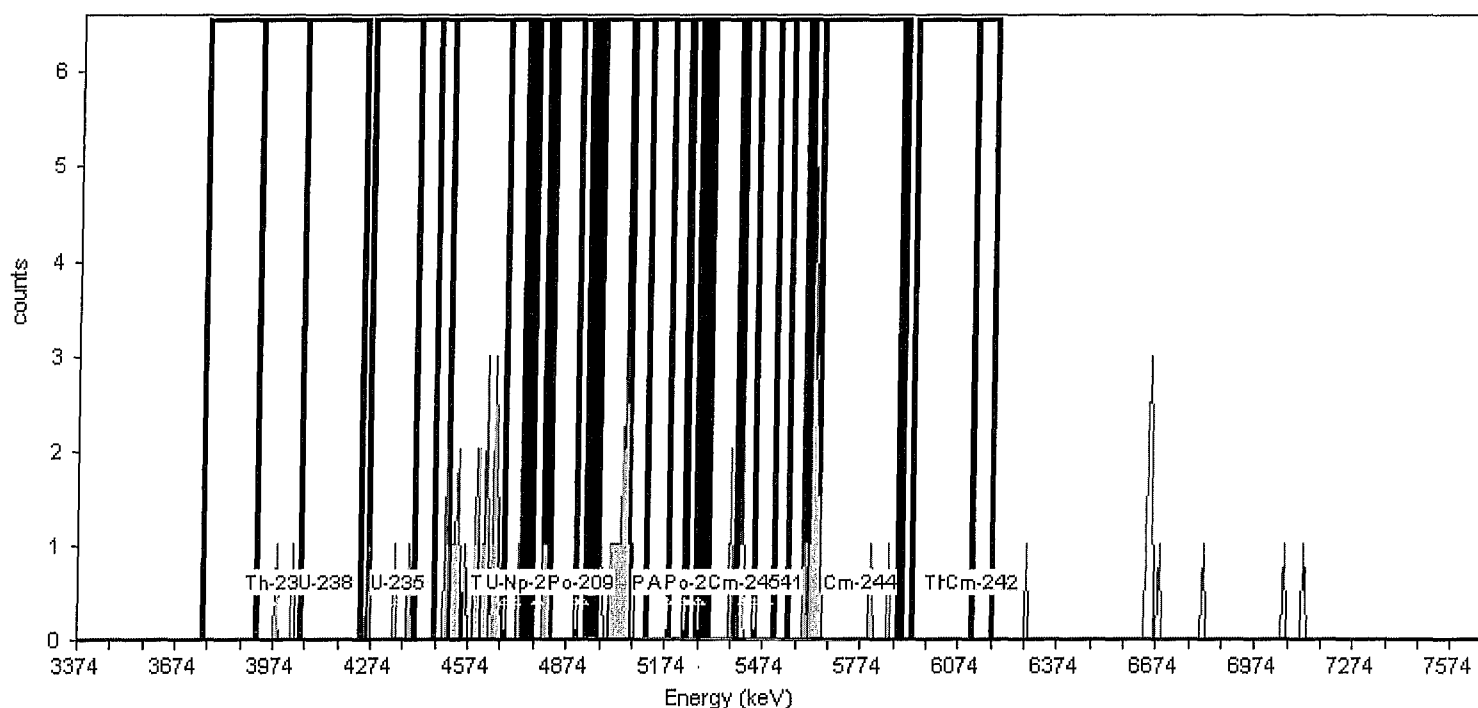
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.54% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05 Background ROI Library: Background ROI Library

Total Background Counts: 76.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	3.00	3.125E-003	2.083E-003
Th-230	4.68	4.40	4.75	23.00	2.396E-002	5.103E-003
U-234	4.71	4.51	4.82	23.00	2.396E-002	5.103E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	16.00	1.667E-002	4.295E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	14.00	1.458E-002	4.034E-003
Am-243	5.23	5.05	5.31	6.00	6.250E-003	2.756E-003
U-232	5.25	5.06	5.40	6.00	6.250E-003	2.756E-003
Th-228	5.45	5.19	5.51	5.00	5.208E-003	2.552E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	6.00	6.250E-003	2.756E-003
Cm-245	5.42	5.40	5.45	3.00	3.125E-003	2.083E-003
Pu-236	5.76	5.61	5.89	14.00	1.458E-002	4.034E-003
Cm-244	5.78	5.64	5.90	5.00	5.208E-003	2.552E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:51PM 7/25/2012

Sample Name: ICB;AV51

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV51 , SN: 48-10911
Acquisition Start Date: 7/24/2012 9:07:10PM
Live Time: 960.00 min.
Real Time: 963.14 min.
Calibration Name: IC-8875;AV51-20120610
Calibration Date: 6/10/2012 8:18:12PM

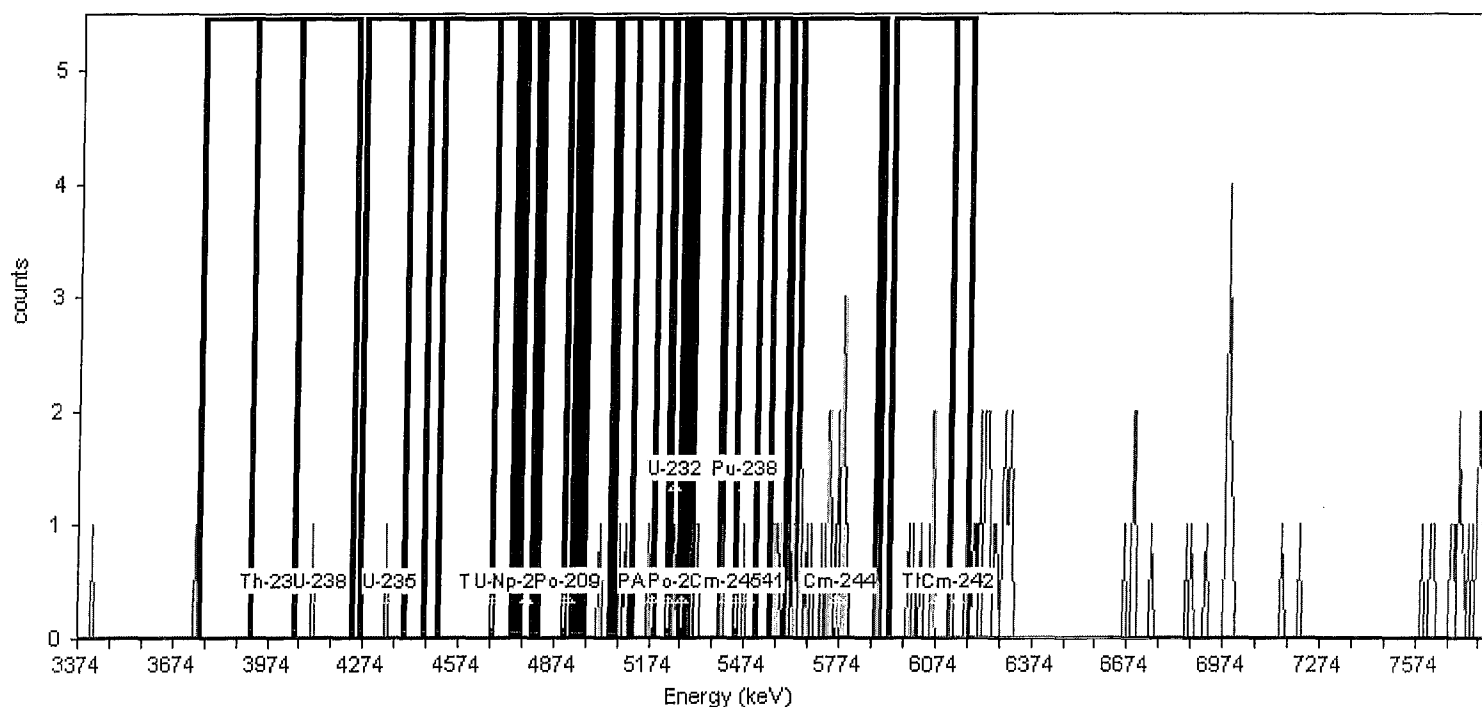
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.19% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 98.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	4.00	4.167E-003	2.329E-003
Am-243	5.23	5.05	5.31	5.00	5.208E-003	2.552E-003
U-232	5.25	5.06	5.40	8.00	8.333E-003	3.125E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	8.00	8.333E-003	3.125E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	19.00	1.979E-002	4.658E-003
Cm-244	5.78	5.64	5.90	17.00	1.771E-002	4.419E-003
Th-227	6.07	5.93	6.18	7.00	7.292E-003	2.946E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV52

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV52 , SN:
Acquisition Start Date: 7/24/2012 9:07:11PM
Live Time: 960.00 min.
Real Time: 963.14 min.
Calibration Name: IC-8876;AV52-20120610
Calibration Date: 6/10/2012 8:18:26PM

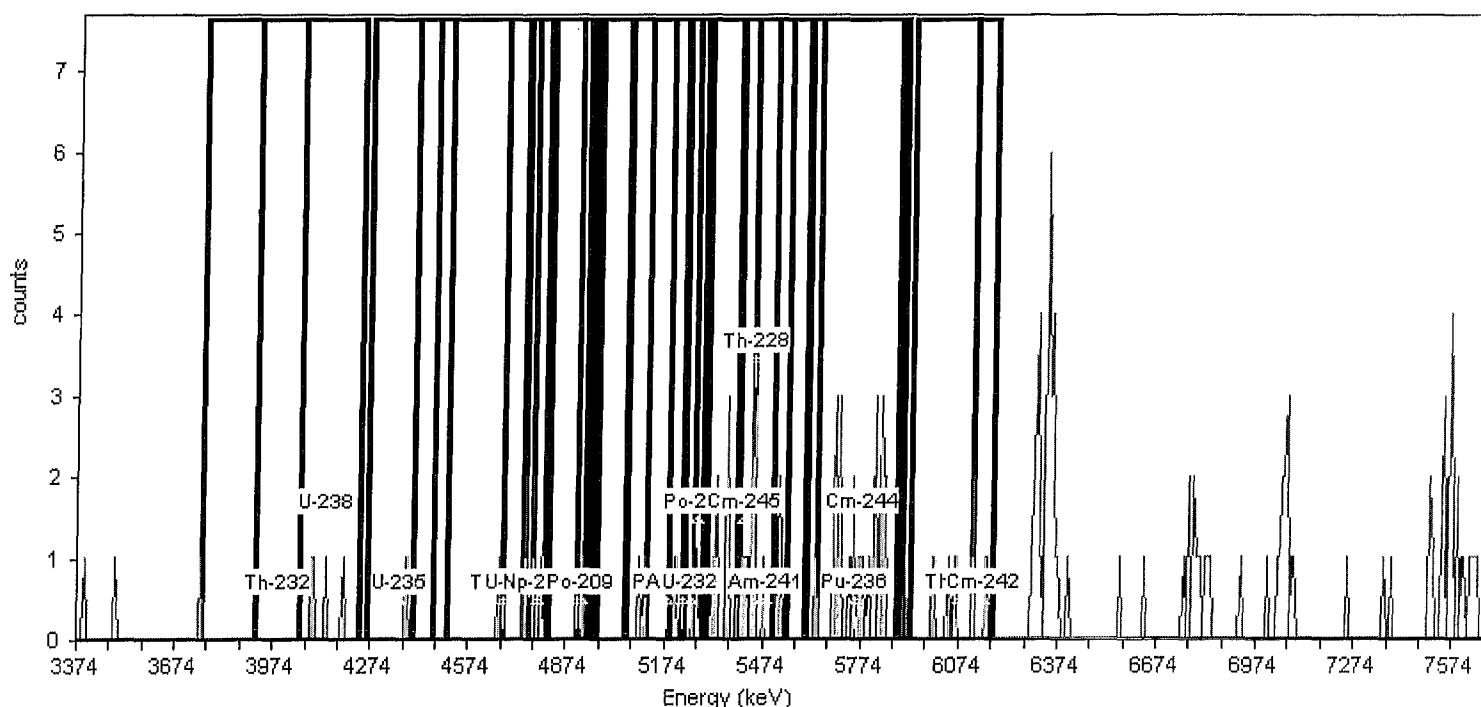
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366,95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.11% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05 Background ROI Library: Background ROI Library

Total Background Counts: 155.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	4.00	4.167E-003	2.329E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	3.00	3.125E-003	2.083E-003
U-234	4.71	4.51	4.82	6.00	6.250E-003	2.756E-003
Pu-242	4.90	4.68	4.95	6.00	6.250E-003	2.756E-003
Th-229	4.86	4.74	5.12	8.00	8.333E-003	3.125E-003
Np-237	4.78	4.77	4.81	3.00	3.125E-003	2.083E-003
Po-209	4.92	4.90	4.93	1.00	1.042E-003	1.473E-003
Pu-239	5.18	4.97	5.24	3.00	3.125E-003	2.083E-003
Am-243	5.23	5.05	5.31	5.00	5.208E-003	2.552E-003
U-232	5.25	5.06	5.40	14.00	1.458E-002	4.034E-003
Th-228	5.45	5.19	5.51	21.00	2.187E-002	4.886E-003
Po-210	5.28	5.23	5.29	2.00	2.083E-003	1.804E-003
Pu-238	5.47	5.27	5.55	22.00	2.292E-002	4.996E-003
Am-241	5.48	5.30	5.60	21.00	2.187E-002	4.886E-003
Cm-245	5.42	5.40	5.45	9.00	9.375E-003	3.294E-003
Pu-236	5.76	5.61	5.89	28.00	2.917E-002	5.610E-003
Cm-244	5.78	5.64	5.90	27.00	2.813E-002	5.512E-003
Th-227	6.07	5.93	6.18	7.00	7.292E-003	2.946E-003
Cm-242	6.15	6.12	6.18	4.00	4.167E-003	2.329E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV53

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV53 , SN: 50-051A6

Acquisition Start Date: 7/24/2012 9:07:12PM

Live Time: 960.00 min.

Real Time: 963.14 min.

Calibration Name: IC-8877;AV53-20120610

Calibration Date: 6/10/2012 8:18:38PM

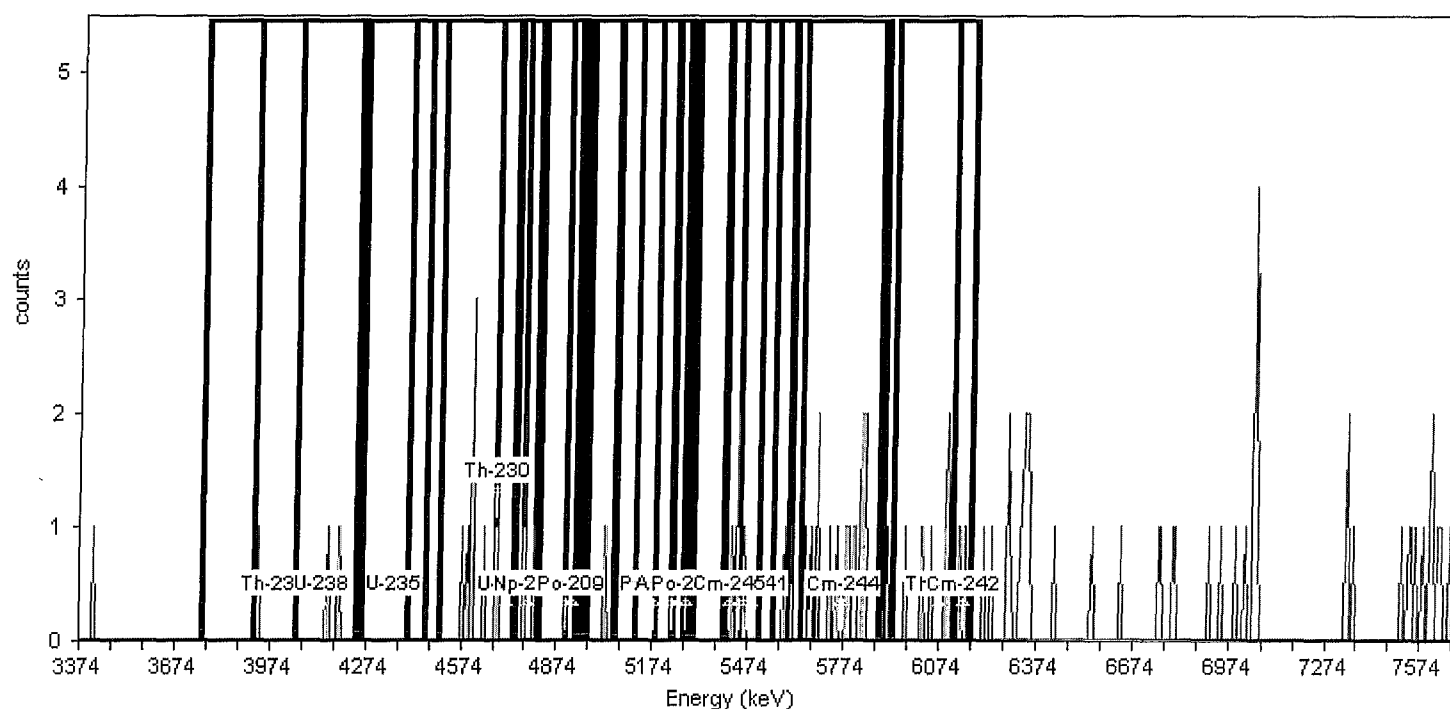
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.73% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 90.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	8.00	8.333E-003	3.125E-003
U-234	4.71	4.51	4.82	11.00	1.146E-002	3.608E-003
Pu-242	4.90	4.68	4.95	5.00	5.208E-003	2.552E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	3.00	3.125E-003	2.083E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	4.00	4.167E-003	2.329E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	4.00	4.167E-003	2.329E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	3.00	3.125E-003	2.083E-003
Pu-236	5.76	5.61	5.89	17.00	1.771E-002	4.419E-003
Cm-244	5.78	5.64	5.90	16.00	1.667E-002	4.295E-003
Th-227	6.07	5.93	6.18	8.00	8.333E-003	3.125E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
2:53:58AM 7/28/2012

Sample Name: ICB;AV54

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012f

Analyst: 60040

Description:

Acquisition

Detector: AV54 , SN: 48-046116
Acquisition Start Date: 7/27/2012 10:53:52AM
Live Time: 960.00 min.
Real Time: 960.00 min.
Calibration Name: IC-9520;AV54-20120610
Calibration Date: 6/10/2012 8:18:52PM

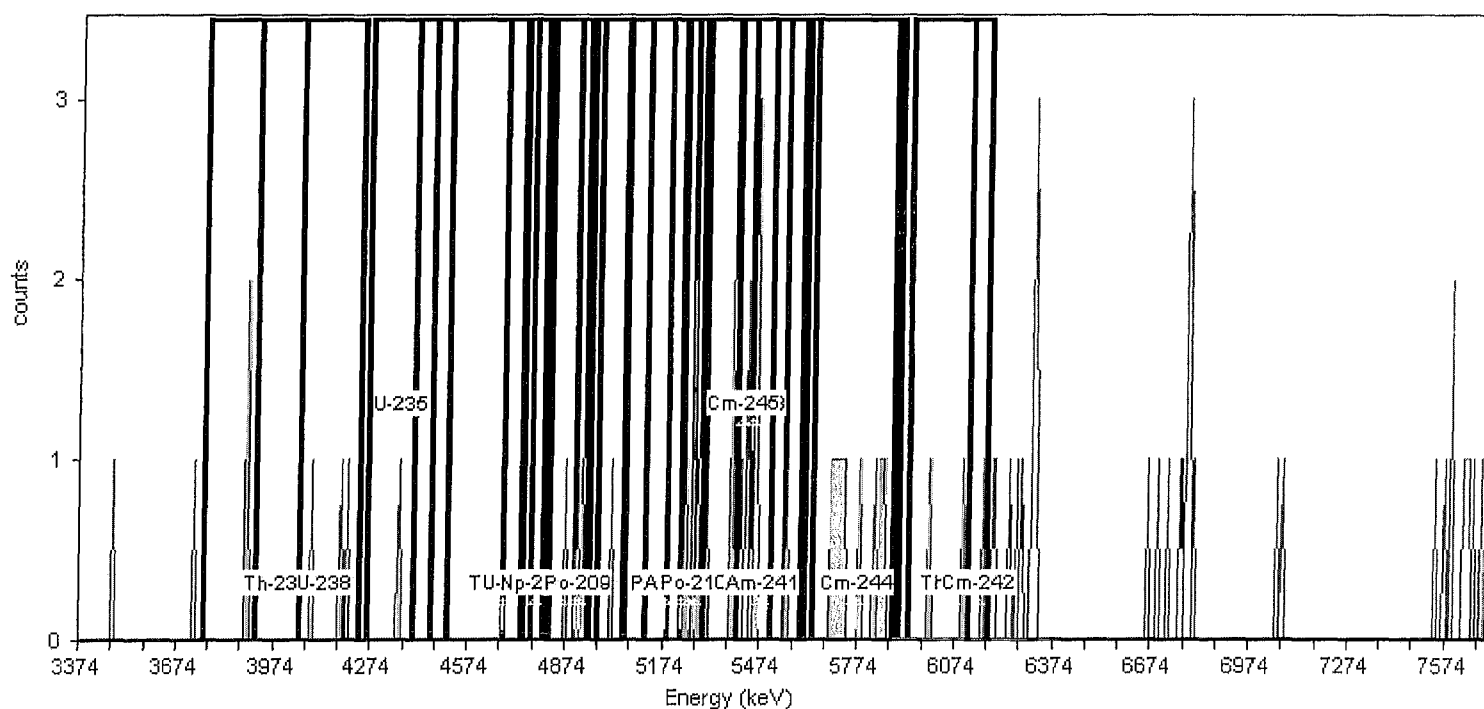
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.98% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 74.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	2.00	2.083E-003	1.804E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	4.00	4.167E-003	2.329E-003
U-232	5.25	5.06	5.40	7.00	7.292E-003	2.946E-003
Th-228	5.45	5.19	5.51	14.00	1.458E-002	4.034E-003
Po-210	5.28	5.23	5.29	4.00	4.167E-003	2.329E-003
Pu-238	5.47	5.27	5.55	13.00	1.354E-002	3.898E-003
Am-241	5.48	5.30	5.60	11.00	1.146E-002	3.608E-003
Cm-245	5.42	5.40	5.45	4.00	4.167E-003	2.329E-003
Pu-236	5.76	5.61	5.89	12.00	1.250E-002	3.756E-003
Cm-244	5.78	5.64	5.90	12.00	1.250E-002	3.756E-003
Th-227	6.07	5.93	6.18	3.00	3.125E-003	2.083E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:17:20PM 7/25/2012

Sample Name: ICB;AV55

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV55 , SN: 50-051C2
Acquisition Start Date: 7/24/2012 9:07:13PM
Live Time: 960.00 min.
Real Time: 963.14 min.
Calibration Name: IC-8879;AV55-20120610
Calibration Date: 6/10/2012 8:19:03PM

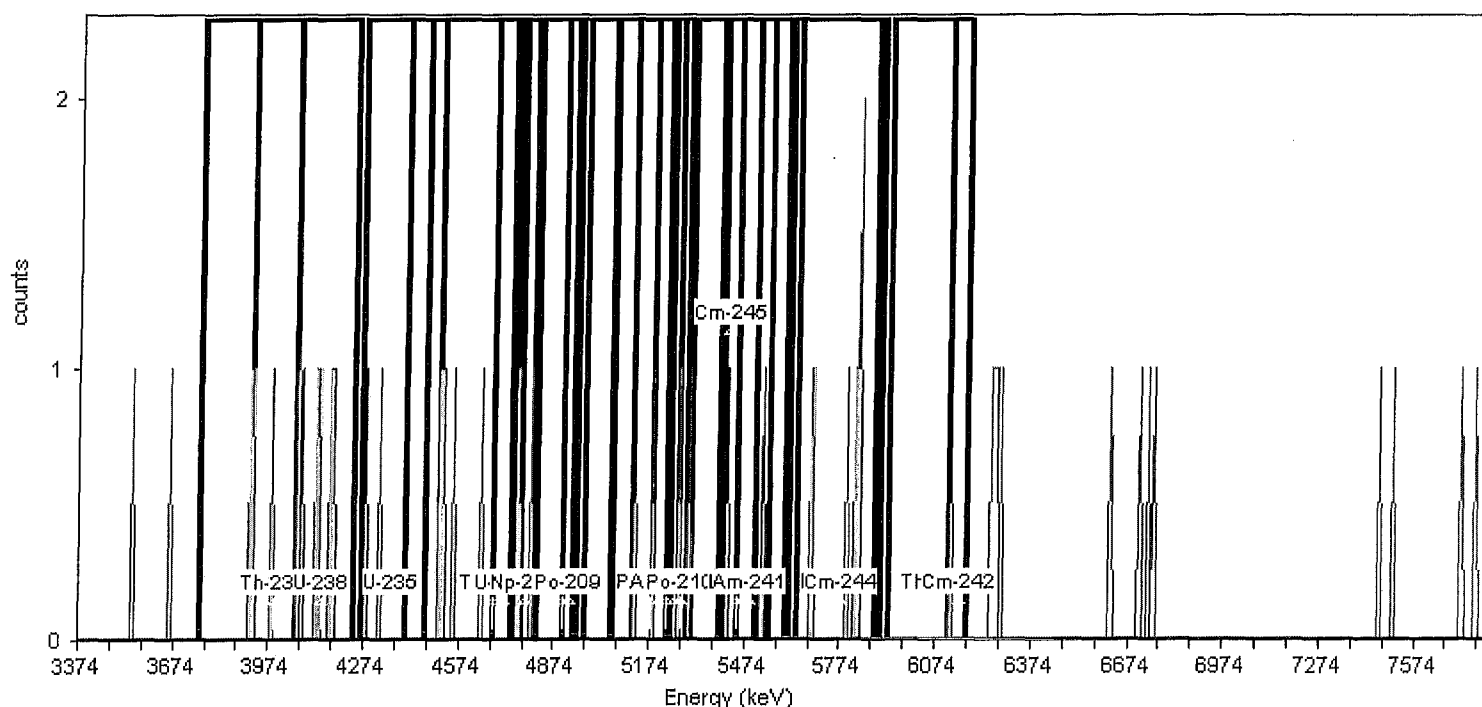
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.20% +/- 0.35% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 47.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	3.00	3.125E-003	2.083E-003
U-238	4.14	3.92	4.24	9.00	9.375E-003	3.294E-003
U-235	4.36	4.26	4.46	2.00	2.083E-003	1.804E-003
Th-230	4.68	4.40	4.75	5.00	5.208E-003	2.552E-003
U-234	4.71	4.51	4.82	8.00	8.333E-003	3.125E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	4.00	4.167E-003	2.329E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	4.00	4.167E-003	2.329E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	4.00	4.167E-003	2.329E-003
Am-241	5.48	5.30	5.60	3.00	3.125E-003	2.083E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	6.00	6.250E-003	2.756E-003
Cm-244	5.78	5.64	5.90	6.00	6.250E-003	2.756E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:17:26PM 7/25/2012

Sample Name: ICB;AV56

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV56, SN:
Acquisition Start Date: 7/24/2012 9:07:14PM
Live Time: 960.00 min.
Real Time: 963.14 min.
Calibration Name: IC-9792;AV56-20120610
Calibration Date: 6/10/2012 8:19:16PM

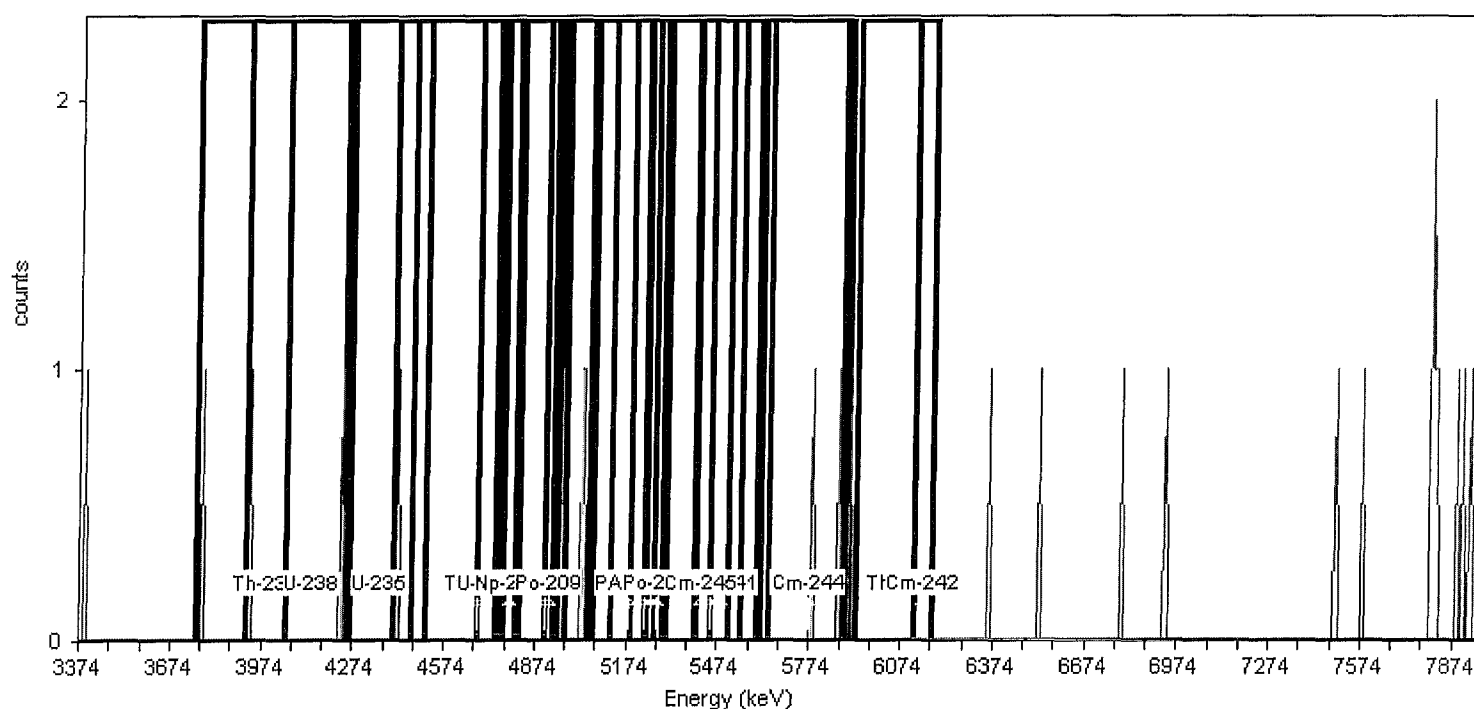
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.09% +/- 0.31% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 24.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	2.00	2.083E-003	1.804E-003
Cm-244	5.78	5.64	5.90	2.00	2.083E-003	1.804E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV57

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV57, SN: 48-158EE3
 Acquisition Start Date: 7/24/2012 9:07:15PM
 Live Time: 960.00 min.
 Real Time: 963.14 min.
 Calibration Name: IC-9793;AV57-20120610
 Calibration Date: 6/10/2012 8:19:29PM

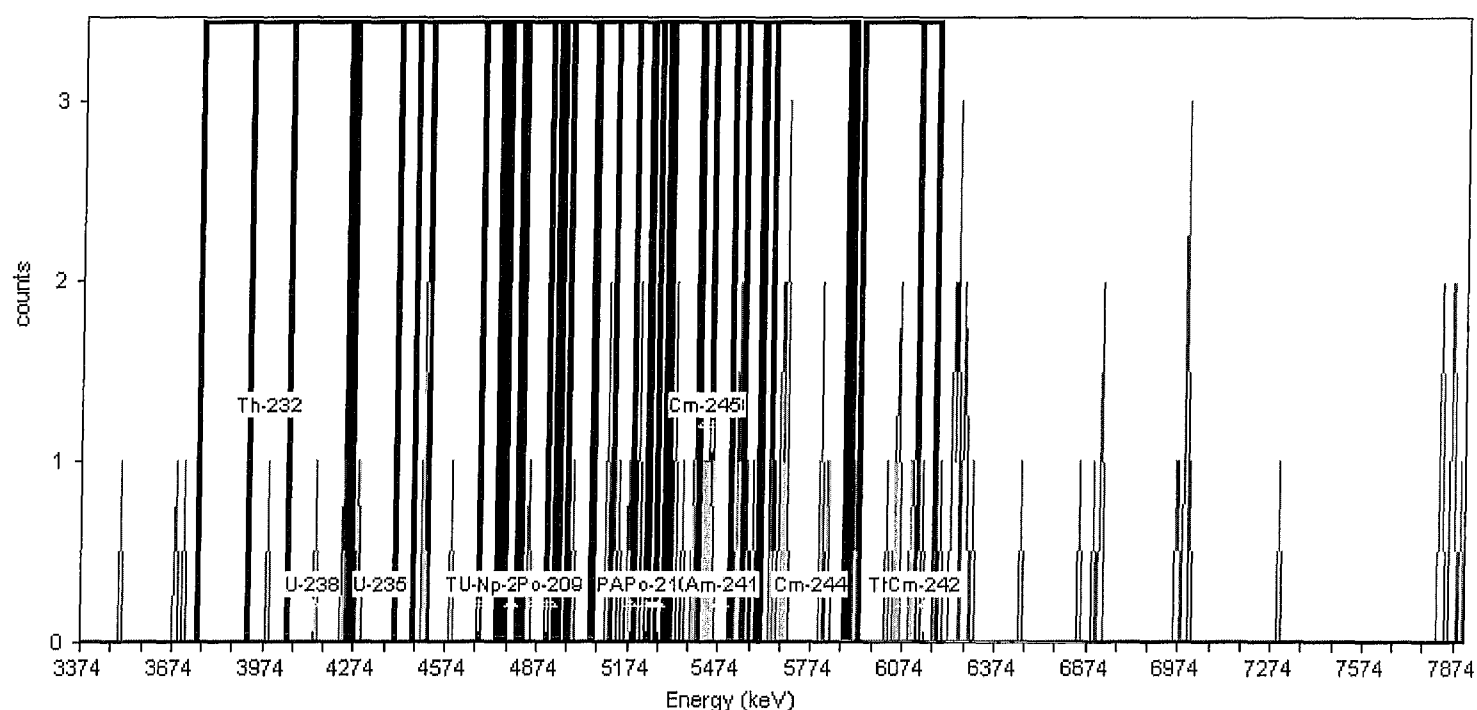
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.64% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 87.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	3.00	3.125E-003	2.083E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	8.00	8.333E-003	3.125E-003
Am-243	5.23	5.05	5.31	7.00	7.292E-003	2.946E-003
U-232	5.25	5.06	5.40	11.00	1.146E-002	3.608E-003
Th-228	5.45	5.19	5.51	11.00	1.146E-002	3.608E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	12.00	1.250E-002	3.756E-003
Am-241	5.48	5.30	5.60	14.00	1.458E-002	4.034E-003
Cm-245	5.42	5.40	5.45	5.00	5.208E-003	2.552E-003
Pu-236	5.76	5.61	5.89	12.00	1.250E-002	3.756E-003
Cm-244	5.78	5.64	5.90	12.00	1.250E-002	3.756E-003
Th-227	6.07	5.93	6.18	8.00	8.333E-003	3.125E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV59

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV59 , SN: 49-155M7
Acquisition Start Date: 7/24/2012 9:07:16PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9795;AV59-20120610
Calibration Date: 6/10/2012 8:19:39PM

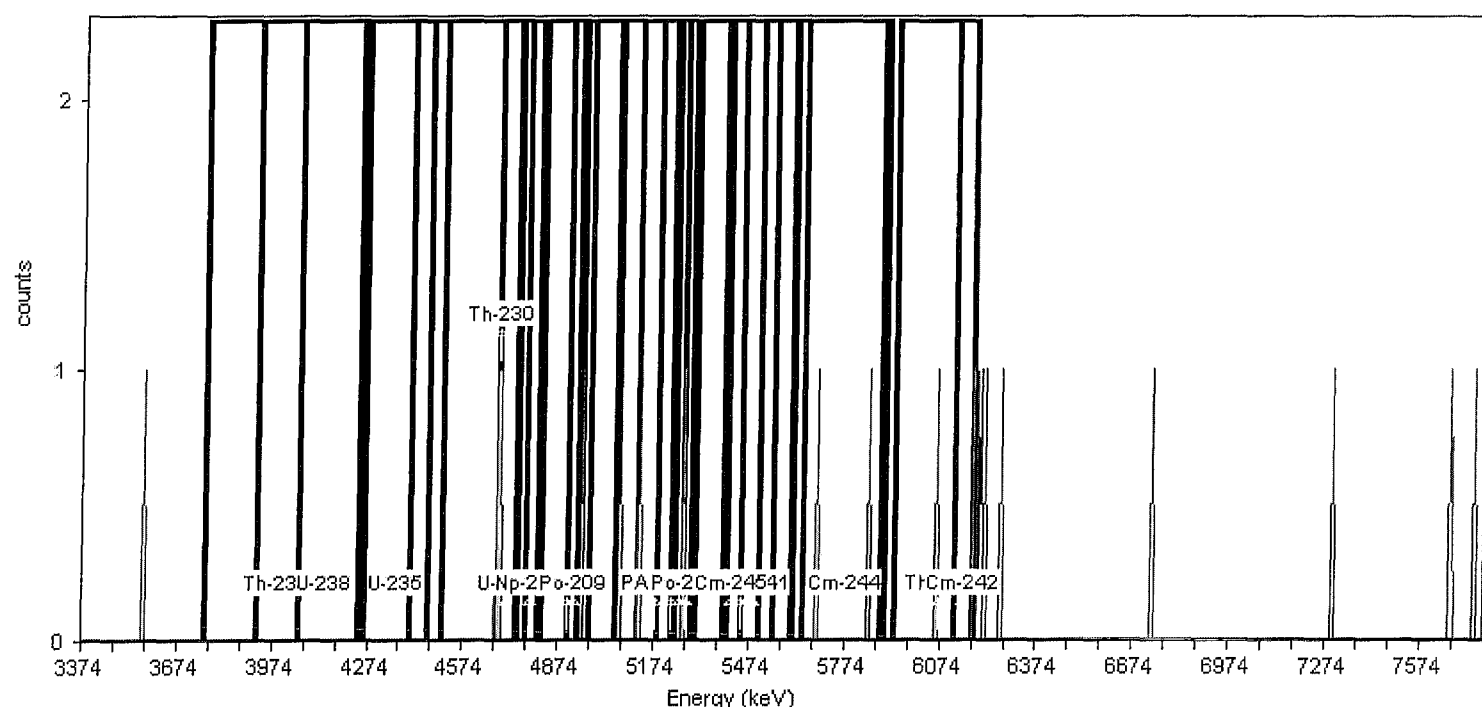
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.53% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 20.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	3.00	3.125E-003	2.083E-003
U-232	5.25	5.06	5.40	3.00	3.125E-003	2.083E-003
Th-228	5.45	5.19	5.51	1.00	1.042E-003	1.473E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	1.00	1.042E-003	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	2.00	2.083E-003	1.804E-003
Cm-244	5.78	5.64	5.90	2.00	2.083E-003	1.804E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Monthly CCV
Alpha Vision
July 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)
<i>AV1</i>				
IC-7107;AV1-20120607	6/7/2012 3:02:16 PM	82232-334	0.2756	Pass
CCV-7107;AV1-20120724	7/24/2012 1:37:50 PM	82232-334	0.2749	Pass 99.7401 Pass
<i>AV2</i>				
IC-8874;AV2-20120607	6/7/2012 3:02:23 PM	82233-334	0.2693	Pass
CCV-8874;AV2-20120724	7/24/2012 1:38:06 PM	82233-334	0.2737	Pass 101.617 Pass
<i>AV3</i>				
IC-8875;AV3-20120607	6/7/2012 3:02:28 PM	82234-334	0.2857	Pass
CCV-8875;AV3-20120724	7/24/2012 1:38:18 PM	82234-334	0.2813	Pass 98.4574 Pass
<i>AV4</i>				
IC-8876;AV4-20120607	6/7/2012 3:02:32 PM	82235-334	0.2793	Pass
CCV-8876;AV4-20120724	7/24/2012 1:38:33 PM	82235-334	0.2759	Pass 98.7801 Pass
<i>AV6</i>				
IC-9520;AV6-20120607a	6/7/2012 3:56:30 PM	82237-334	0.2792	Pass
CCV-9520;AV6-20120724	7/24/2012 1:38:57 PM	82237-334	0.2815	Pass 100.837 Pass
<i>AV7</i>				
IC-8879;AV7-20120607	6/7/2012 4:03:51 PM	82238-334	0.2731	Pass
CCV-8879;AV7-20120724	7/24/2012 1:39:10 PM	82238-334	0.2696	Pass 98.7133 Pass
<i>AV8</i>				
IC-9792;AV8-20120607	6/7/2012 4:06:21 PM	82240-334	0.2787	Pass
CCV-9792;AV8-20120724	7/24/2012 1:39:22 PM	82240-334	0.2791	Pass 100.131 Pass
<i>AV9</i>				
IC-9793;AV9-20120607	6/7/2012 4:06:26 PM	82241-334	0.2781	Pass
CCV-9793;AV9-20120724	7/24/2012 1:39:34 PM	82241-334	0.2797	Pass 100.590 Pass
<i>AV10</i>				
IC-9794;AV10-20120621	6/21/2012 2:01:39 PM	82242-334	0.2725	Pass
<i>AV11</i>				
IC-9795;AV11-20120607	6/7/2012 7:50:12 PM	82243-334	0.2751	Pass
CCV-9795;AV11-20120724	7/24/2012 1:40:24 PM	82243-334	0.2762	Pass 100.416 Pass
<i>AV12</i>				
IC-9817;AV12-20120607	6/7/2012 7:50:16 PM	82244-334	0.2699	Pass
CCV-9817;AV12-20120724	7/24/2012 1:40:35 PM	82244-334	0.2659	Pass 98.5073 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 1 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV13</i>						
IC-9884;AV13-20120607	6/7/2012 7:50:19 PM	82245-334	0.2758	Pass		
CCV-9884;AV13-20120724	7/24/2012 1:40:46 PM	82245-334	0.2906	Pass	105.355	Fail
CCV-9884;AV13-20120724a	7/24/2012 5:02:56 PM	82245-334	0.2748	Pass	99.6538	Pass
CCV-9884;AV13-20120725	7/25/2012 11:44:29 AM	82245-334	0.2727	Pass	98.8754	Pass
<i>AV14</i>						
IC-9885;AV14-20120607	6/7/2012 7:50:22 PM	82246-334	0.2724	Pass		
CCV-9885;AV14-20120724	7/24/2012 1:41:00 PM	82246-334	0.2691	Pass	98.7814	Pass
<i>AV15</i>						
IC-9886;AV15-20120607	6/7/2012 7:50:24 PM	82247-334	0.2743	Pass		
CCV-9886;AV15-20120724	7/24/2012 1:41:10 PM	82247-334	0.2744	Pass	100.039	Pass
<i>AV16</i>						
IC-7107;AV16-20120607a	6/8/2012 12:12:55 AM	82232-334	0.2798	Pass		
CCV-7107;AV16-20120724	7/24/2012 5:03:06 PM	82232-334	0.2799	Pass	100.019	Pass
<i>AV17</i>						
IC-8874;AV17-20120607	6/8/2012 12:13:37 AM	82233-334	0.2631	Pass		
CCV-8874;AV17-20120724	7/24/2012 5:03:21 PM	82233-334	0.2669	Pass	101.451	Pass
<i>AV18</i>						
IC-8875;AV18-20120607	6/8/2012 12:13:58 AM	82234-334	0.2748	Pass		
CCV-8875;AV18-20120724	7/24/2012 5:05:40 PM	82234-334	0.2730	Pass	99.3381	Pass
<i>AV19</i>						
IC-8876;AV19-20120607	6/8/2012 12:14:05 AM	82235-334	0.2694	Pass		
CCV-8876;AV19-20120724	7/24/2012 5:03:44 PM	82235-334	0.2681	Pass	99.5055	Pass
<i>AV20</i>						
IC-8877;AV20-20120607	6/7/2012 7:50:28 PM	82236-334	0.2703	Pass		
CCV-8877;AV20-20120724	7/24/2012 1:38:45 PM	82236-334	0.2677	Pass	99.0551	Pass
<i>AV21</i>						
IC-9520;AV21-20120607	6/8/2012 12:14:09 AM	82237-334	0.2708	Pass		
CCV-9520;AV21-20120724	7/24/2012 5:03:53 PM	82237-334	0.2734	Pass	100.966	Pass
<i>AV22</i>						
IC-8879;AV22-20120607	6/8/2012 12:14:14 AM	82238-334	0.2679	Pass		
CCV-8879;AV22-20120724	7/24/2012 5:04:03 PM	82238-334	0.2639	Pass	98.5154	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 2 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV23</i>						
IC-9792;AV23-20120607	6/8/2012 12:14:18 AM	82240-334	0.2673	Pass		
CCV-9792;AV23-20120724	7/24/2012 5:04:14 PM	82240-334	0.2688	Pass	100.552	Pass
<i>AV24</i>						
IC-9793;AV24-20120607	6/8/2012 12:14:21 AM	82241-334	0.2734	Pass		
CCV-9793;AV24-20120724	7/24/2012 5:04:24 PM	82241-334	0.2766	Pass	101.156	Pass
<i>AV43</i>						
IC-9794;AV43-20120607	6/7/2012 7:50:31 PM	82242-334	0.2699	Pass		
CCV-9794;AV43-20120725	7/25/2012 10:28:07 PM	82242-334	0.2686	Pass	99.5158	Pass
<i>AV44</i>						
IC-9795;AV44-20120610	6/11/2012 3:27:57 PM	82243-334	0.2664	Pass		
CCV-9795;AV44-20120725	7/25/2012 10:28:12 PM	82243-334	0.2682	Pass	100.672	Pass
<i>AV45</i>						
IC-9817;AV45-20120610	6/11/2012 3:28:22 PM	82244-334	0.2704	Pass		
CCV-9817;AV45-20120725	7/25/2012 10:28:16 PM	82244-334	0.0001	Eval	5.53444	Fail
<i>AV46</i>						
IC-9884;AV46-20120610	6/11/2012 3:28:47 PM	82245-334	0.2849	Pass		
CCV-9884;AV46-20120725	7/25/2012 10:28:19 PM	82245-334	0.2804	Pass	98.4164	Pass
<i>AV47</i>						
IC-9885;AV47-20120611a	6/12/2012 1:04:12 AM	82246-334	0.2678	Pass		
<i>AV48</i>						
IC-9886;AV48-20120610	6/11/2012 3:29:40 PM	82247-334	0.2764	Pass		
CCV-9886;AV48-20120725	7/25/2012 10:28:31 PM	82247-334	0.0004	Eval	0.13021	Fail
<i>AV49</i>						
IC-7107;AV49-20120610	6/10/2012 8:17:41 PM	82232-334	0.2927	Pass		
CCV-7107;AV49-20120725	7/25/2012 10:28:34 PM	82232-334	0.2909	Pass	99.3834	Pass
<i>AV50</i>						
IC-8874;AV50-20120610	6/10/2012 8:17:58 PM	82233-334	0.2754	Pass		
CCV-8874;AV50-20120726	7/26/2012 1:58:10 PM	82233-334	0.2729	Pass	99.0921	Pass
<i>AV51</i>						
IC-8875;AV51-20120610	6/10/2012 8:18:12 PM	82234-334	0.2819	Pass		
CCV-8875;AV51-20120725	7/25/2012 10:28:38 PM	82234-334	0.2814	Pass	99.8447	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 3 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV52</i>						
IC-8876;AV52-20120610	6/10/2012 8:18:26 PM	82235-334	0.2911	Pass		
CCV-8876;AV52-20120726	7/26/2012 1:58:30 PM	82235-334	0.2925	Pass	100.496	Pass
<i>AV53</i>						
IC-8877;AV53-20120610	6/10/2012 8:18:38 PM	82236-334	0.2773	Pass		
CCV-8877;AV53-20120725	7/25/2012 10:28:41 PM	82236-334	0.2775	Pass	100.055	Pass
<i>AV54</i>						
IC-9520;AV54-20120610	6/10/2012 8:18:52 PM	82237-334	0.2798	Pass		
CCV-9520;AV54-20120726	7/26/2012 1:58:49 PM	82237-334	0.2760	Pass	98.6444	Pass
<i>AV55</i>						
IC-8879;AV55-20120610	6/10/2012 8:19:03 PM	82238-334	0.2720	Pass		
CCV-8879;AV55-20120725	7/25/2012 10:28:45 PM	82238-334	0.2697	Pass	99.1518	Pass
<i>AV56</i>						
IC-9792;AV56-20120610	6/10/2012 8:19:16 PM	82240-334	0.2709	Pass		
CCV-9792;AV56-20120725	7/25/2012 10:28:48 PM	82240-334	0.0003	Eval	0.11605	Fail
<i>AV57</i>						
IC-9793;AV57-20120610	6/10/2012 8:19:29 PM	82241-334	0.2764	Pass		
CCV-9793;AV57-20120725	7/25/2012 10:28:52 PM	82241-334	0.2763	Pass	99.9520	Pass
<i>AV58</i>						
IC-9794;AV58-20120610	6/10/2012 8:19:36 PM	82242-334	0.2550	Pass		
<i>AV59</i>						
IC-9795;AV59-20120610	6/10/2012 8:19:39 PM	82243-334	0.2753	Pass		
<i>AV60</i>						
IC-9817;AV60-20120610	6/10/2012 8:19:43 PM	82244-334	0.2682	Pass		
CCV-9817;AV60-20120725a	7/26/2012 12:42:30 AM	82244-334	0.2705	Pass	100.836	Pass
<i>AV61</i>						
IC-9884;AV61-20120610	6/10/2012 8:19:46 PM	82245-334	0.2792	Pass		
CCV-9884;AV61-20120725	7/26/2012 12:42:24 AM	82245-334	0.2785	Pass	99.7356	Pass
<i>AV62</i>						
IC-9885;AV62-20120610	6/10/2012 8:19:49 PM	82246-334	0.2742	Pass		
CCV-9885;AV62-20120725	7/26/2012 12:42:33 AM	82246-334	0.2738	Pass	99.8594	Pass
<i>AV63</i>						
IC-9886;AV63-20120610	6/10/2012 8:19:57 PM	82247-334	0.2707	Pass		
CCV-9886;AV63-20120725	7/26/2012 12:42:36 AM	82247-334	0.2716	Pass	100.323	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 4 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV64</i>						
IC-7107;AV64-20120610	6/11/2012 3:30:09 PM	82232-334	0.2935	Pass		
CCV-7107;AV64-20120726	7/26/2012 1:58:00 PM	82232-334	0.2935	Pass	99.9978	Pass
<i>AV65</i>						
IC-8874;AV65-20120610	6/11/2012 3:30:33 PM	82233-334	0.2759	Pass		
CCV-8874;AV65-20120725	7/25/2012 10:28:56 PM	82233-334	0.2745	Pass	99.4624	Pass
<i>AV66</i>						
IC-8875;AV66-20120610	6/11/2012 3:30:58 PM	82234-334	0.2846	Pass		
CCV-8875;AV66-20120725	7/26/2012 12:42:39 AM	82234-334	0.2809	Pass	98.6783	Pass
<i>AV67</i>						
IC-8876;AV67-20120610	6/11/2012 3:31:27 PM	82235-334	0.2953	Pass		
CCV-8876;AV67-20120726	7/26/2012 5:34:37 PM	82235-334	0.2975	Pass	100.722	Pass
<i>AV68</i>						
IC-8877;AV68-20120610	6/11/2012 3:31:53 PM	82236-334	0.2740	Pass		
CCV-8877;AV68-20120725	7/26/2012 12:42:42 AM	82236-334	0.2748	Pass	100.313	Pass
<i>AV69</i>						
IC-9520;AV69-20120610	6/11/2012 3:32:14 PM	82237-334	0.2763	Pass		
CCV-9520;AV69-20120725	7/25/2012 10:29:25 PM	82237-334	0.2730	Pass	98.8075	Pass
<i>AV70</i>						
IC-8879;AV70-20120610	6/11/2012 3:32:41 PM	82238-334	0.2732	Pass		
CCV-8879;AV70-20120725	7/26/2012 12:42:45 AM	82238-334	0.2708	Pass	99.1119	Pass
<i>AV71</i>						
IC-9792;AV71-20120610	6/11/2012 3:33:08 PM	82240-334	0.2763	Pass		
CCV-9792;AV71-20120725	7/26/2012 12:42:50 AM	82240-334	0.2755	Pass	99.7117	Pass
<i>AV72</i>						
IC-9793;AV72-20120610	6/11/2012 3:33:25 PM	82241-334	0.2910	Pass		
CCV-9793;AV72-20120725	7/26/2012 12:42:53 AM	82241-334	0.2858	Pass	98.2175	Pass
<i>AV73</i>						
IC-9794;AV73-20120610	6/11/2012 3:33:47 PM	82242-334	0.2766	Pass		
CCV-9794;AV73-20120725	7/26/2012 12:42:56 AM	82242-334	0.2759	Pass	99.7532	Pass
<i>AV74</i>						
IC-9795;AV74-20120611a	6/12/2012 1:04:18 AM	82243-334	0.2701	Pass		
CCV-9795;AV74-20120726	7/26/2012 8:37:17 AM	82243-334	0.2731	Pass	101.096	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 5 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV75</i>						
IC-9817;AV75-20120611a	6/12/2012 1:04:21 AM	82244-334	0.2656	Pass		
CCV-9817;AV75-20120724	7/24/2012 8:51:29 PM	82244-334	0.2666	Pass	100.388	Pass
<i>AV76</i>						
IC-9884;AV76-20120611a	6/12/2012 1:04:24 AM	82245-334	0.2723	Pass		
CCV-9884;AV76-20120724a	7/24/2012 10:38:47 PM	82245-334	0.2757	Pass	101.240	Pass
<i>AV77</i>						
IC-9885;AV77-20120612	6/12/2012 10:16:22 PM	82246-334	0.2674	Pass		
CCV-9885;AV77-20120724	7/24/2012 8:51:53 PM	82246-334	0.2687	Pass	100.497	Pass
<i>AV78</i>						
IC-9886;AV78-20120611a	6/12/2012 1:04:27 AM	82247-334	0.2751	Pass		
CCV-9886;AV78-20120724	7/24/2012 8:51:41 PM	82247-334	0.2748	Pass	99.8636	Pass
<i>AV79</i>						
IC-7107;AV79-20120611a	6/12/2012 1:04:30 AM	82232-334	0.2824	Pass		
CCV-7107;AV79-20120724	7/24/2012 8:51:57 PM	82232-334	0.2837	Pass	100.462	Pass
<i>AV80</i>						
IC-8874;AV80-20120611a	6/12/2012 1:04:34 AM	82233-334	0.2692	Pass		
CCV-8874;AV80-20120724	7/24/2012 8:51:46 PM	82233-334	0.2697	Pass	100.177	Pass
<i>AV81</i>						
IC-8875;AV81-20120611a	6/12/2012 1:04:37 AM	82234-334	0.2858	Pass		
CCV-8875;AV81-20120724	7/24/2012 8:51:49 PM	82234-334	0.2899	Pass	101.429	Pass
<i>AV82</i>						
IC-8876;AV82-20120611a	6/12/2012 1:04:40 AM	82235-334	0.2768	Pass		
CCV-8876;AV82-20120724	7/24/2012 8:52:00 PM	82235-334	0.2737	Pass	98.8822	Pass
<i>AV83</i>						
IC-8877;AV83-20120611a	6/12/2012 1:04:44 AM	82236-334	0.2727	Pass		
CCV-8877;AV83-20120724	7/24/2012 8:52:04 PM	82236-334	0.2757	Pass	101.099	Pass
<i>AV84</i>						
IC-9520;AV84-20120611a	6/12/2012 1:04:47 AM	82237-334	0.2790	Pass		
CCV-9520;AV84-20120724	7/24/2012 8:52:07 PM	82237-334	0.2748	Pass	98.4876	Pass
<i>AV85</i>						
IC-8879;AV85-20120611a	6/12/2012 1:04:50 AM	82238-334	0.2774	Pass		
CCV-8879;AV85-20120724	7/24/2012 8:52:11 PM	82238-334	0.2782	Pass	100.258	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 6 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV86</i>						
IC-9792;AV86-20120611a	6/12/2012 1:04:54 AM	82240-334	0.2769	Pass		
CCV-9792;AV86-20120724	7/24/2012 8:52:16 PM	82240-334	0.2771	Pass	100.046	Pass
<i>AV87</i>						
IC-9793;AV87-20120611a	6/12/2012 1:04:56 AM	82241-334	0.2951	Pass		
CCV-9793;AV87-20120724	7/24/2012 8:52:20 PM	82241-334	0.2909	Pass	98.5861	Pass
<i>AV88</i>						
IC-9794;AV88-20120611a	6/12/2012 1:04:59 AM	82242-334	0.2744	Pass		
CCV-9794;AV88-20120724	7/24/2012 5:04:33 PM	82242-334	0.2741	Pass	99.8889	Pass
<i>AV89</i>						
IC-9795;AV89-20120612	6/12/2012 3:39:24 PM	82243-334	0.2684	Pass		
CCV-9795;AV89-20120724	7/24/2012 5:04:44 PM	82243-334	0.2679	Pass	99.8091	Pass
<i>AV90</i>						
IC-9817;AV90-20120612	6/12/2012 3:39:50 PM	82244-334	0.2731	Pass		
CCV-9817;AV90	7/24/2012 5:05:02 PM	82244-334	0.2721	Pass	99.6298	Pass
<i>AV91</i>						
IC-9884;AV91-20120612	6/12/2012 3:40:10 PM	82245-334	0.2787	Pass		
CCV-9884;AV91-20120724	7/24/2012 11:50:47 PM	82245-334	0.2800	Pass	100.497	Pass
<i>AV92</i>						
IC-9885;AV92-20120613	6/13/2012 10:43:01 AM	82246-334	0.2705	Pass		
CCV-9885;AV92-20120724	7/24/2012 5:08:08 PM	82246-334	0.2723	Pass	100.677	Pass
<i>AV93</i>						
IC-9886;AV93-20120612	6/12/2012 3:40:55 PM	82247-334	0.2715	Pass		
CCV-9886;AV93-20120724	7/24/2012 5:08:42 PM	82247-334	0.2720	Pass	100.196	Pass
<i>AV94</i>						
IC-7107;AV94-20120612a	6/12/2012 3:41:17 PM	82232-334	0.2797	Pass		
CCV-7107;AV94-20120724	7/24/2012 10:38:52 PM	82232-334	0.2772	Pass	99.0992	Pass
<i>AV95</i>						
IC-8874;AV95-20120608	6/8/2012 8:45:55 AM	82233-334	0.2719	Pass		
CCV-8874;AV95-20120724	7/24/2012 10:38:55 PM	82233-334	0.2708	Pass	99.6240	Pass
<i>AV96</i>						
IC-8875;AV96-20120612	6/12/2012 3:41:40 PM	82234-334	0.2831	Pass		
CCV-8875;AV96-20120724	7/24/2012 10:39:01 PM	82234-334	0.0004	Eval	0.14859	Fail

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 7 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV97</i>						
IC-8876;AV97-20120612a	6/12/2012 10:16:26 PM	82235-334	0.2765	Pass		
CCV-8876;;AV97-20120724	7/24/2012 10:39:04 PM	82235-334	0.2779	Pass	100.508	Pass
<i>AV98</i>						
IC-8877;AV98-20120608	6/8/2012 8:46:02 AM	82236-334	0.2818	Pass		
CCV-8877;AV98-20120724	7/24/2012 5:06:05 PM	82236-334	0.2793	Pass	99.1155	Pass
<i>AV99</i>						
IC-9520;AV99-20120608	6/8/2012 8:46:10 AM	82237-334	0.2703	Pass		
<i>AV100</i>						
IC-8879;AV100-20120608	6/8/2012 8:46:24 AM	82238-334	0.2719	Pass		
CCV-8879;AV100-20120726	7/26/2012 1:58:58 PM	82238-334	0.2703	Pass	99.4168	Pass
<i>AV101</i>						
IC-9792;AV101-20120608	6/8/2012 8:46:34 AM	82240-334	0.2802	Pass		
CCV-9792;AV101-20120726	7/26/2012 8:37:09 AM	82240-334	0.2787	Pass	99.4560	Pass
<i>AV102</i>						
IC-9793;AV102-20120608	6/8/2012 8:46:41 AM	82241-334	0.2826	Pass		
CCV-9793;AV102-20120726	7/26/2012 8:37:21 AM	82241-334	0.2794	Pass	98.8711	Pass
<i>AV103</i>						
IC-9794;AV103-20120607	6/8/2012 12:14:29 AM	82242-334	0.2709	Pass		
CCV-9794;AV103-20120726	7/26/2012 1:59:26 PM	82242-334	0.2718	Pass	100.319	Pass
<i>AV104</i>						
IC-9795;AV104-20120607	6/8/2012 12:14:40 AM	82243-334	0.2646	Pass		
CCV-9795;AV104-20120726	7/26/2012 1:59:37 PM	82243-334	0.0056	Eval	2.11169	Fail
<i>AV105</i>						
IC-9817;AV105-20120607	6/8/2012 12:14:48 AM	82244-334	0.2474	Pass		
CCV-9817;AV10520120726	7/26/2012 1:59:46 PM	82244-334	0.2451	Pass	99.0547	Pass
<i>AV106</i>						
IC-9884;AV106-20120607	6/8/2012 12:15:09 AM	82245-334	0.2797	Pass		
CCV-9884;AV106-20120726	7/26/2012 1:59:55 PM	82245-334	0.2758	Pass	98.5711	Pass
<i>AV107</i>						
IC-9885;AV107-20120607	6/8/2012 12:14:52 AM	82246-334	0.2711	Pass		
CCV-9885;AV107-20120726	7/26/2012 2:00:04 PM	82246-334	0.2733	Pass	100.841	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 8 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV108</i>							
IC-9886;AV108-20120607	6/8/2012 12:14:56 AM	82247-334	0.2812	Pass			
CCV-9886;AV108-20120726	7/26/2012 2:00:19 PM	82247-334	0.2814	Pass	100.046	Pass	
<i>AV109</i>							
IC-7107;AV109-20120608	6/8/2012 8:46:47 AM	82232-334	0.2782	Pass			
CCV-7107;AV109-20120725	7/26/2012 12:42:58 AM	82232-334	0.2245	Pass	80.7030	Fail	
CCV-7107;AV109-20120726	7/26/2012 5:32:41 PM	82232-334	0.2819	Pass	101.326	Pass	
CCV-7107;AV109-20120726a	7/26/2012 7:44:53 PM	82232-334	0.2763	Pass	99.3002	Pass	
<i>AV111</i>							
IC-8875;AV111-20120608	6/8/2012 8:46:55 AM	82234-334	0.2800	Pass			
CCV-8875;AV111-20120726	7/26/2012 8:37:25 AM	82234-334	0.2787	Pass	99.5396	Pass	
<i>AV112</i>							
IC-8876;AV112-20120608	6/8/2012 8:47:01 AM	82235-334	0.2750	Pass			
CCV-8876;AV112-20120725	7/25/2012 10:31:58 PM	82235-334	0.2735	Pass	99.4658	Pass	
<i>AV113</i>							
IC-8877;AV113-20120607	6/8/2012 12:15:02 AM	82236-334	0.2765	Pass			
CCV-8877;AV113-20120726	7/26/2012 8:37:29 AM	82236-334	0.2772	Pass	100.255	Pass	
<i>AV114</i>							
IC-9520;AV114-20120612	6/12/2012 3:42:22 PM	82237-334	0.2746	Pass			
CCV-9520;AV114-20120726	7/26/2012 5:34:48 PM	82237-334	0.2758	Pass	100.401	Pass	
<i>AV115</i>							
IC-8879;AV115-20120612	6/12/2012 3:42:43 PM	82238-334	0.2756	Pass			
CCV-8879;AV115-20120726	7/26/2012 5:34:59 PM	82238-334	0.2762	Pass	100.213	Pass	
<i>AV116</i>							
IC-9792;AV116-20120612	6/12/2012 3:43:02 PM	82240-334	0.2914	Pass			
CCV-9792;AV116-20120726	7/26/2012 1:59:07 PM	82240-334	0.2773	Pass	95.1508	Pass	
<i>AV117</i>							
IC-9793;AV117-20120612	6/12/2012 3:43:27 PM	82241-334	0.2628	Pass			
CCV-9793;AV117-20120726	7/26/2012 1:59:16 PM	82241-334	0.2683	Pass	102.098	Pass	
<i>AV118</i>							
IC-9794;AV118-20120608	6/8/2012 8:47:07 AM	82242-334	0.2728	Pass			
CCV-9794;AV118-20120726	7/26/2012 8:37:33 AM	82242-334	0.2689	Pass	98.5708	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 9 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV119</i>							
IC-9795;AV119-20120608	6/8/2012 8:47:13 AM	82243-334	0.2655	Pass			
CCV-9795;AV119-20120726	7/26/2012 10:05:57 PM	82243-334	0.2655	Pass	99.9791	Pass	
<i>AV120</i>							
IC-9817;AV120-20120608	6/8/2012 8:47:18 AM	82244-334	0.2668	Pass			
CCV-9817;AV120-20120726	7/26/2012 8:37:37 AM	82244-334	0.2689	Pass	100.796	Pass	
<i>AV121</i>							
IC-9884;AV121-20120608	6/8/2012 8:54:38 AM	82245-334	0.2825	Pass			
CCV-9884;AV121-20120726	7/26/2012 8:37:41 AM	82245-334	0.2811	Pass	99.4897	Pass	
<i>AV122</i>							
IC-9885;AV122-20120608	6/8/2012 8:54:44 AM	82246-334	0.2678	Pass			
CCV-9885;AV122-20120726	7/26/2012 8:37:46 AM	82246-334	0.2712	Pass	101.254	Pass	
<i>AV123</i>							
IC-9886;AV123-20120614	6/15/2012 11:45:44 AM	82247-334	0.2691	Pass			
CCV-9886;AV123-20120726	7/26/2012 8:37:50 AM	82247-334	0.2654	Pass	98.6278	Pass	
<i>AV124</i>							
IC-7107;AV124-20120614	6/15/2012 11:46:08 AM	82232-334	0.2653	Pass			
CCV-7107;AV124-20120726	7/26/2012 10:16:23 PM	82232-334	0.2661	Pass	100.282	Pass	
<i>AV125</i>							
IC-8874;AV125-20120614	6/15/2012 11:46:45 AM	82233-334	0.2675	Pass			
CCV-8874;AV125-20120725	7/26/2012 12:43:01 AM	82233-334	0.2694	Pass	100.701	Pass	
<i>AV126</i>							
IC-8875;AV126-20120614	6/15/2012 11:47:26 AM	82234-334	0.2760	Pass			
CCV-8875;AV126-20120726	7/26/2012 1:58:20 PM	82234-334	0.2746	Pass	99.5062	Pass	
<i>AV127</i>							
IC-8876;AV127-20120614	6/15/2012 11:48:11 AM	82235-334	0.2775	Pass			
CCV-8876;AV127-20120725	7/26/2012 12:43:05 AM	82235-334	0.0003	Eval	0.11569	Fail	
<i>AV128</i>							
IC-8877;AV128-20120614	6/15/2012 11:48:54 AM	82236-334	0.2685	Pass			
CCV-8877;AV128-20120726	7/26/2012 1:58:40 PM	82236-334	0.0003	Eval	0.11553	Fail	
<i>AV129</i>							
IC-9520;AV129-20120614	6/15/2012 11:49:36 AM	82237-334	0.2710	Pass			
CCV-9520;AV129-20120725	7/26/2012 12:43:08 AM	82237-334	0.2730	Pass	100.742	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 10 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV130</i>				
IC-8879;AV130-20120614	6/15/2012 11:50:34 AM	82238-334	0.2707	Pass
CCV-8879;AV130-20120726	7/26/2012 8:37:58 AM	82238-334	0.2711	Pass 100.151 Pass
<i>AV131</i>				
IC-9792;AV131-20120612	6/12/2012 10:16:29 PM	82240-334	0.2777	Pass
CCV-9792;AV131-20120726	7/26/2012 7:43:47 PM	82240-334	0.2754	Pass 99.1770 Pass
<i>AV132</i>				
IC-9793;AV132-20120612	6/12/2012 10:16:32 PM	82241-334	0.2711	Pass
CCV-9793;AV132-20120726	7/26/2012 5:35:09 PM	82241-334	0.2728	Pass 100.644 Pass
<i>AV133</i>				
IC-9794;AV133-20120612	6/12/2012 3:43:51 PM	82242-334	0.2627	Pass
CCV-9794;AV133-20120726	7/26/2012 7:43:55 PM	82242-334	0.2629	Pass 100.084 Pass
<i>AV134</i>				
IC-9795;AV134-20120612	6/12/2012 10:16:35 PM	82243-334	0.2665	Pass
CCV-9795;AV134-20120726	7/26/2012 7:44:04 PM	82243-334	0.2637	Pass 98.9425 Pass
<i>AV135</i>				
IC-9817;AV135-20120612	6/12/2012 10:16:38 PM	82244-334	0.2610	Pass
CCV-9817;AV135-20120726	7/26/2012 7:44:16 PM	82244-334	0.2622	Pass 100.442 Pass
<i>AV136</i>				
IC-9884;AV136-20120612	6/12/2012 10:16:41 PM	82245-334	0.2745	Pass
CCV-9884;AV13620120726	7/26/2012 7:44:27 PM	82245-334	0.2725	Pass 99.2766 Pass
<i>AV137</i>				
IC-9885;AV137-20120621	6/21/2012 2:01:56 PM	82246-334	0.2674	Pass
CCV-9885;AV137-20120726	7/26/2012 7:44:35 PM	82246-334	0.2648	Pass 99.0375 Pass
<i>AV138</i>				
IC-9886;AV138-20120608	6/8/2012 8:55:45 AM	82247-334	0.2683	Pass
CCV-9886;AV138-20120726	7/26/2012 7:44:43 PM	82247-334	0.2672	Pass 99.5864 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 11 of 11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Monthly Backgrounds
Alpha Vision
July 2012
AV1-146

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:10:53PM 7/25/2012

Sample Name: ICB;AV60

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

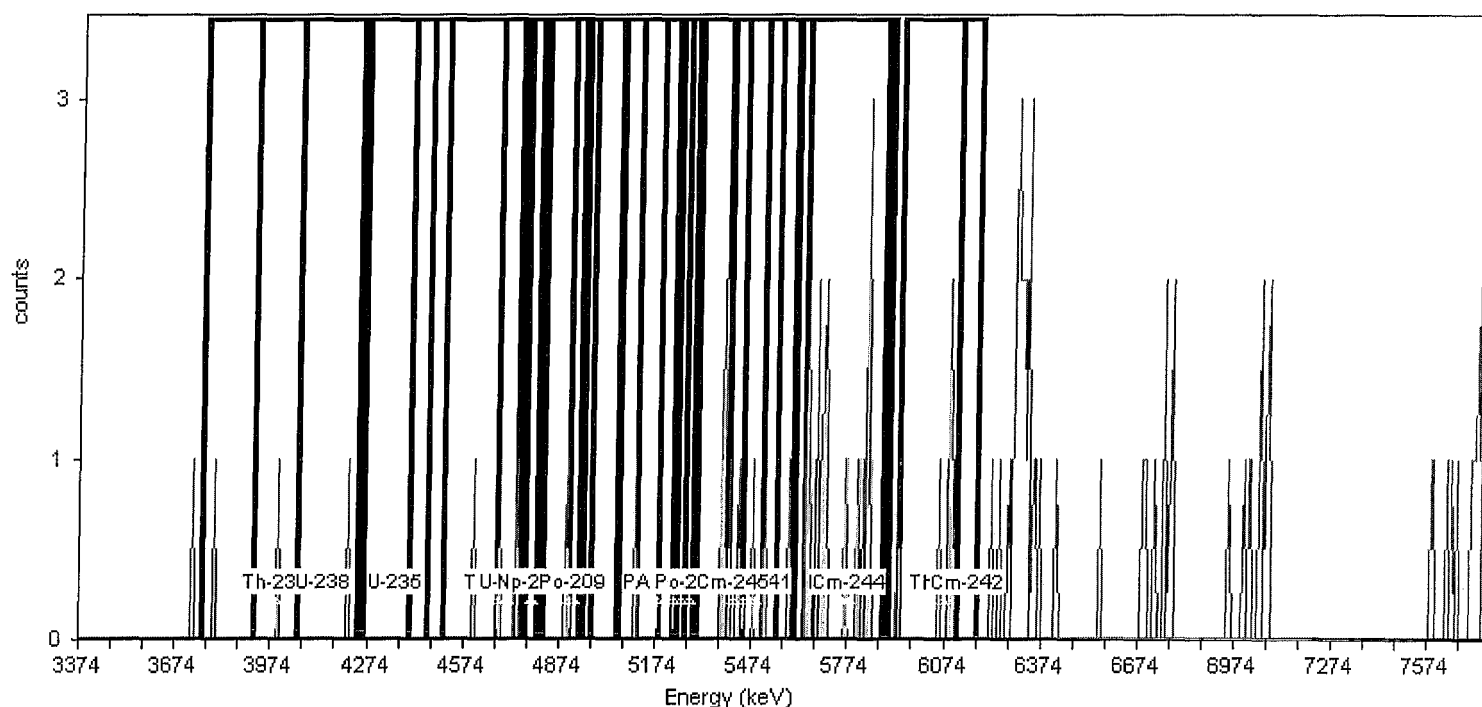
Acquisition

Detector: AV60, SN: 49-027117
Acquisition Start Date: 7/24/2012 9:07:18PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9817;AV60-20120610
Calibration Date: 6/10/2012 8:19:43PM

Energy Calibration Equation:

Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²

Efficiency: 26.82% +/- 0.32% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 91.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	3.00	3.125E-003	2.083E-003
U-234	4.71	4.51	4.82	3.00	3.125E-003	2.083E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	5.00	5.208E-003	2.552E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	7.00	7.292E-003	2.946E-003
Am-241	5.48	5.30	5.60	8.00	8.333E-003	3.125E-003
Cm-245	5.42	5.40	5.45	2.00	2.083E-003	1.804E-003
Pu-236	5.76	5.61	5.89	16.00	1.667E-002	4.295E-003
Cm-244	5.78	5.64	5.90	16.00	1.667E-002	4.295E-003
Th-227	6.07	5.93	6.18	6.00	6.250E-003	2.756E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV61

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV61, SN: 5-051JJ3
 Acquisition Start Date: 7/24/2012 9:07:19PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-9884;AV61-20120610
 Calibration Date: 6/10/2012 8:19:46PM

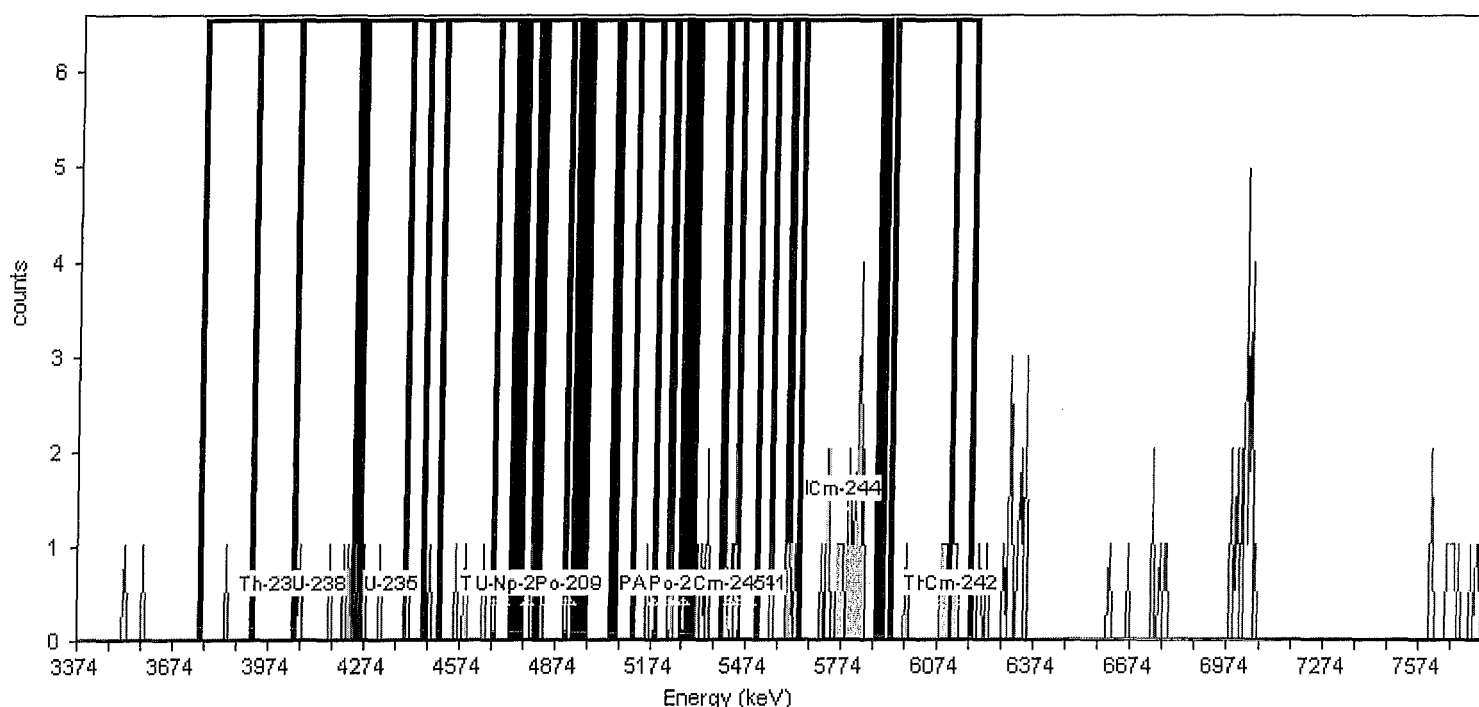
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.92% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 106.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	4.00	4.167E-003	2.329E-003
U-235	4.36	4.26	4.46	3.00	3.125E-003	2.083E-003
Th-230	4.68	4.40	4.75	5.00	5.208E-003	2.552E-003
U-234	4.71	4.51	4.82	4.00	4.167E-003	2.329E-003
Pu-242	4.90	4.68	4.95	2.00	2.083E-003	1.804E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	6.00	6.250E-003	2.756E-003
Th-228	5.45	5.19	5.51	9.00	9.375E-003	3.294E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	9.00	9.375E-003	3.294E-003
Am-241	5.48	5.30	5.60	10.00	1.042E-002	3.455E-003
Cm-245	5.42	5.40	5.45	4.00	4.167E-003	2.329E-003
Pu-236	5.76	5.61	5.89	22.00	2.292E-002	4.996E-003
Cm-244	5.78	5.64	5.90	20.00	2.083E-002	4.774E-003
Th-227	6.07	5.93	6.18	6.00	6.250E-003	2.756E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:11:17PM 7/25/2012

Sample Name: ICB;AV62

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV62 , SN: 49-115DD4
Acquisition Start Date: 7/24/2012 9:07:20PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9885;AV62-20120610
Calibration Date: 6/10/2012 8:19:49PM

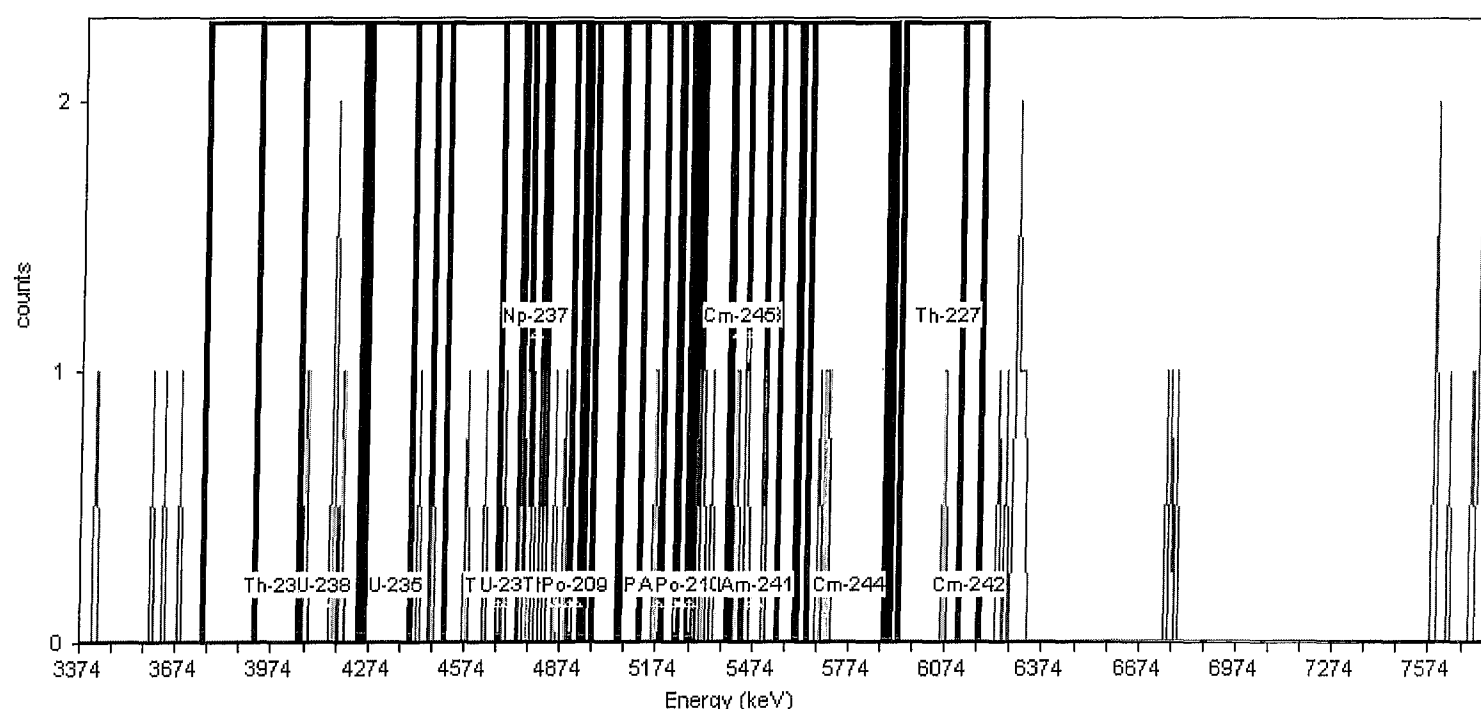
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.42% +/- 0.39% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 62.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	5.00	5.208E-003	2.552E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	6.00	6.250E-003	2.756E-003
U-234	4.71	4.51	4.82	9.00	9.375E-003	3.294E-003
Pu-242	4.90	4.68	4.95	9.00	9.375E-003	3.294E-003
Th-229	4.86	4.74	5.12	8.00	8.333E-003	3.125E-003
Np-237	4.78	4.77	4.81	3.00	3.125E-003	2.083E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	3.00	3.125E-003	2.083E-003
U-232	5.25	5.06	5.40	6.00	6.250E-003	2.756E-003
Th-228	5.45	5.19	5.51	9.00	9.375E-003	3.294E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	9.00	9.375E-003	3.294E-003
Am-241	5.48	5.30	5.60	9.00	9.375E-003	3.294E-003
Cm-245	5.42	5.40	5.45	3.00	3.125E-003	2.083E-003
Pu-236	5.76	5.61	5.89	4.00	4.167E-003	2.329E-003
Cm-244	5.78	5.64	5.90	4.00	4.167E-003	2.329E-003
Th-227	6.07	5.93	6.18	2.00	2.083E-003	1.804E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:11:34PM 7/25/2012

Sample Name: ICB;AV63

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV63 , SN: 47-029ff2

Acquisition Start Date: 7/24/2012 9:07:21PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-9886;AV63-20120610

Calibration Date: 6/10/2012 8:19:57PM

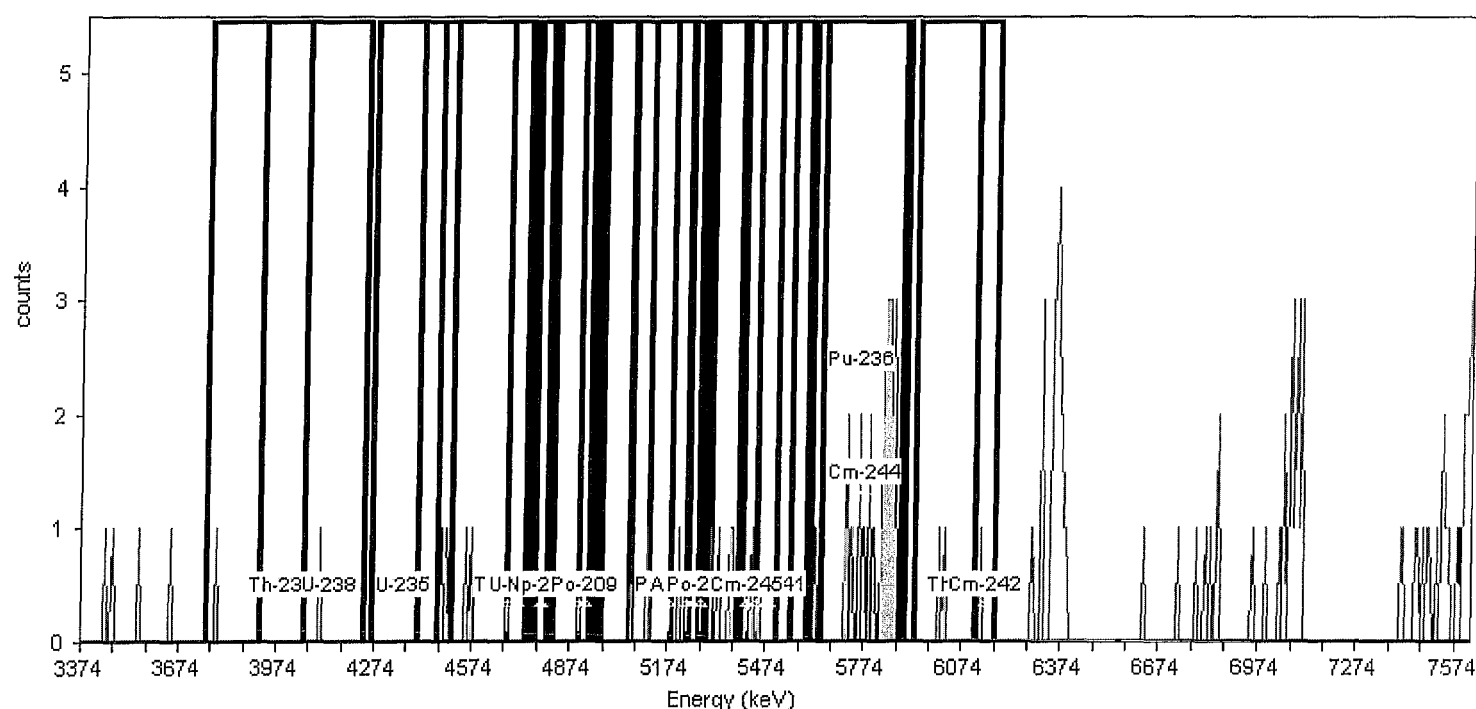
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.07% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 117.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	4.00	4.167E-003	2.329E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	3.00	3.125E-003	2.083E-003
Am-243	5.23	5.05	5.31	4.00	4.167E-003	2.329E-003
U-232	5.25	5.06	5.40	7.00	7.292E-003	2.946E-003
Th-228	5.45	5.19	5.51	8.00	8.333E-003	3.125E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	7.00	7.292E-003	2.946E-003
Am-241	5.48	5.30	5.60	7.00	7.292E-003	2.946E-003
Cm-245	5.42	5.40	5.45	2.00	2.083E-003	1.804E-003
Pu-236	5.76	5.61	5.89	27.00	2.813E-002	5.512E-003
Cm-244	5.78	5.64	5.90	26.00	2.708E-002	5.413E-003
Th-227	6.07	5.93	6.18	3.00	3.125E-003	2.083E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:11:40PM 7/25/2012

Sample Name: ICB;AV64

Sample

Spectrum #1 Analysis #1

Comment:

Batch Name: July2012b

Batch

Analyst: 60040

Description:

Acquisition

Detector: AV64 , SN: 47-029ee4

Acquisition Start Date: 7/24/2012 9:07:22PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-7107;AV64-20120610

Calibration Date: 6/11/2012 3:30:09PM

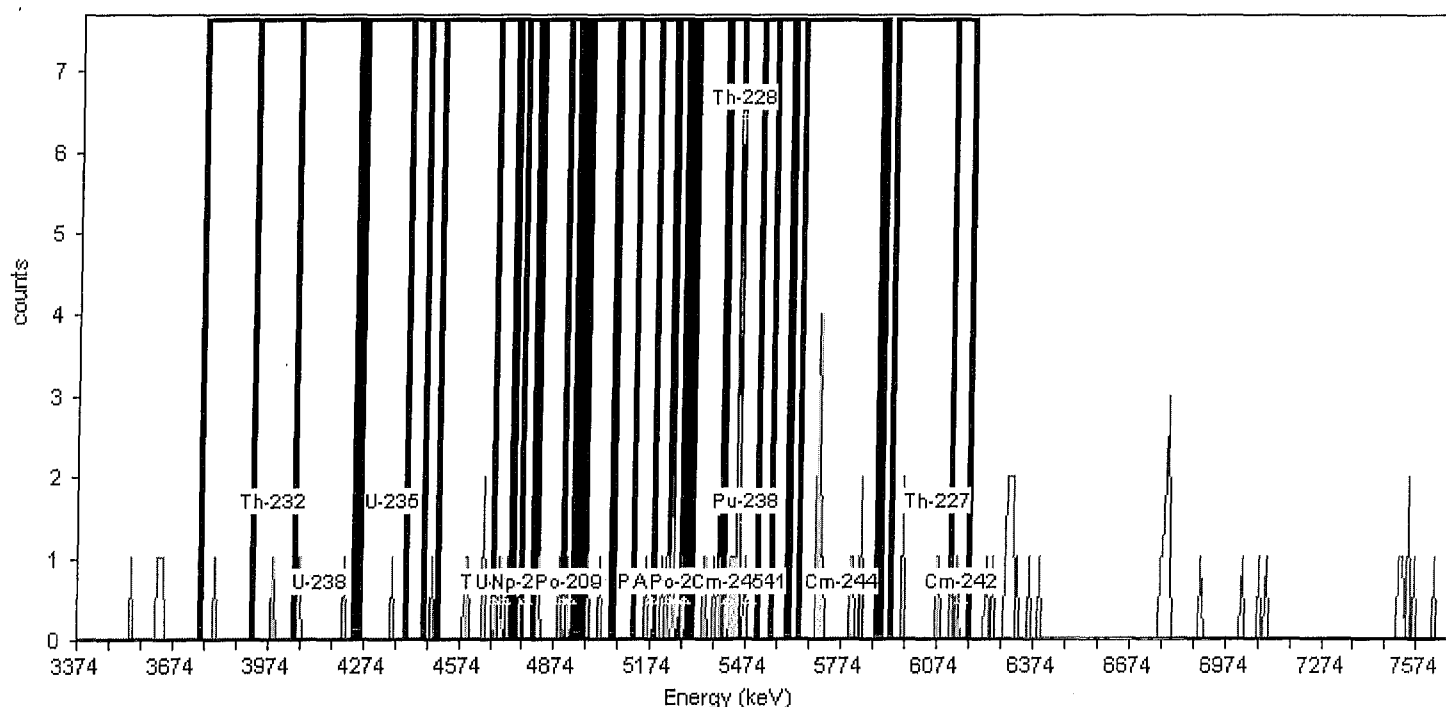
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.35% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 92.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	8.00	8.333E-003	3.125E-003
U-234	4.71	4.51	4.82	9.00	9.375E-003	3.294E-003
Pu-242	4.90	4.68	4.95	7.00	7.292E-003	2.946E-003
Th-229	4.86	4.74	5.12	6.00	6.250E-003	2.756E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	1.00	1.042E-003	1.473E-003
Pu-239	5.18	4.97	5.24	7.00	7.292E-003	2.946E-003
Am-243	5.23	5.05	5.31	7.00	7.292E-003	2.946E-003
U-232	5.25	5.06	5.40	11.00	1.146E-002	3.608E-003
Th-228	5.45	5.19	5.51	21.00	2.187E-002	4.886E-003
Po-210	5.28	5.23	5.29	4.00	4.167E-003	2.329E-003
Pu-238	5.47	5.27	5.55	16.00	1.667E-002	4.295E-003
Am-241	5.48	5.30	5.60	15.00	1.563E-002	4.167E-003
Cm-245	5.42	5.40	5.45	10.00	1.042E-002	3.455E-003
Pu-236	5.76	5.61	5.89	10.00	1.042E-002	3.455E-003
Cm-244	5.78	5.64	5.90	10.00	1.042E-002	3.455E-003
Th-227	6.07	5.93	6.18	6.00	6.250E-003	2.756E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:11:52PM 7/25/2012

Sample Name: ICB;AV65

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV65 , SN: 44-049JJ1

Acquisition Start Date: 7/24/2012 9:07:24PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-8874;AV65-20120610

Calibration Date: 6/11/2012 3:30:33PM

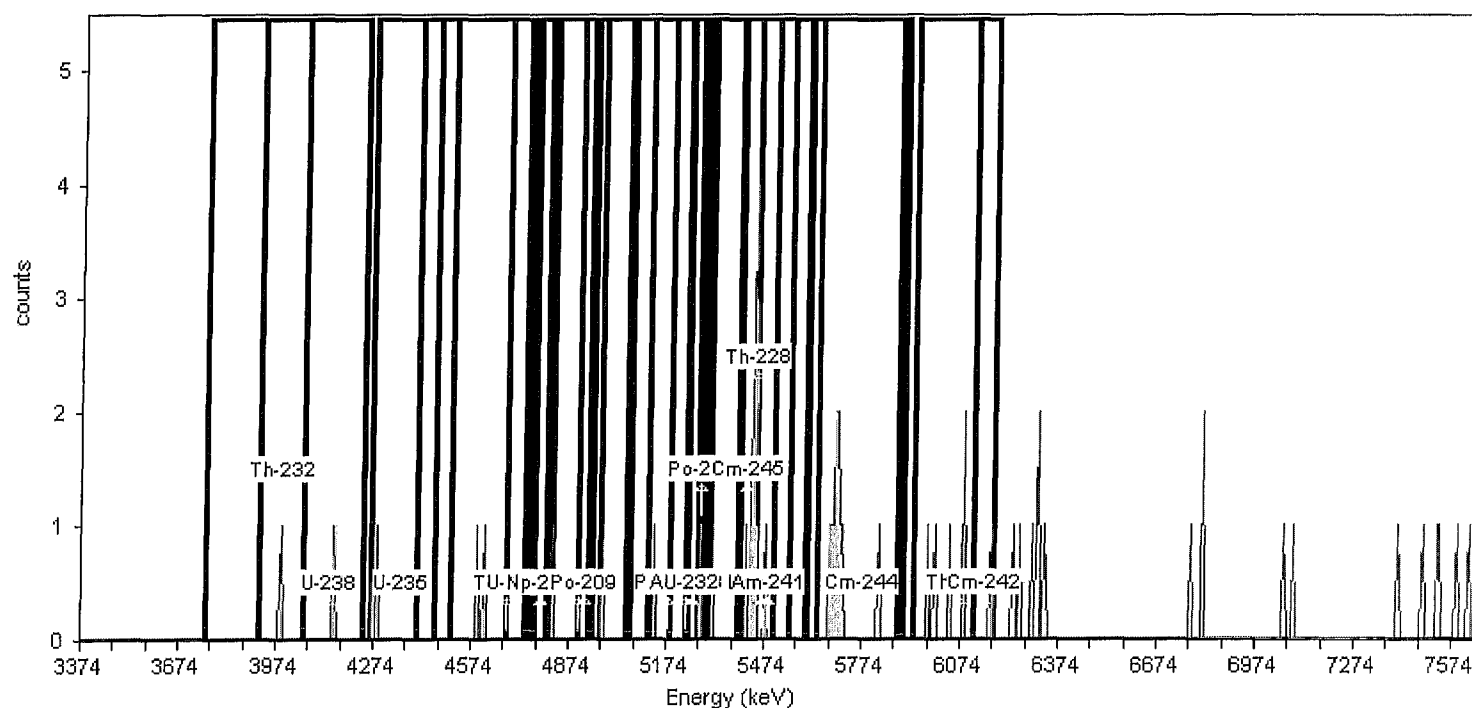
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.59% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05 Background ROI Library: Background ROI Library

Total Background Counts: 52.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	2.00	2.083E-003	1.804E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	3.00	3.125E-003	2.083E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	3.00	3.125E-003	2.083E-003
Th-228	5.45	5.19	5.51	11.00	1.146E-002	3.608E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	11.00	1.146E-002	3.608E-003
Am-241	5.48	5.30	5.60	10.00	1.042E-002	3.455E-003
Cm-245	5.42	5.40	5.45	8.00	8.333E-003	3.125E-003
Pu-236	5.76	5.61	5.89	9.00	9.375E-003	3.294E-003
Cm-244	5.78	5.64	5.90	9.00	9.375E-003	3.294E-003
Th-227	6.07	5.93	6.18	6.00	6.250E-003	2.756E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:15PM 7/25/2012

Sample Name: ICB;AV66

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV66 , SN: 48-158EE2
Acquisition Start Date: 7/24/2012 9:07:26PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-8875;AV66-20120610
Calibration Date: 6/11/2012 3:30:58PM

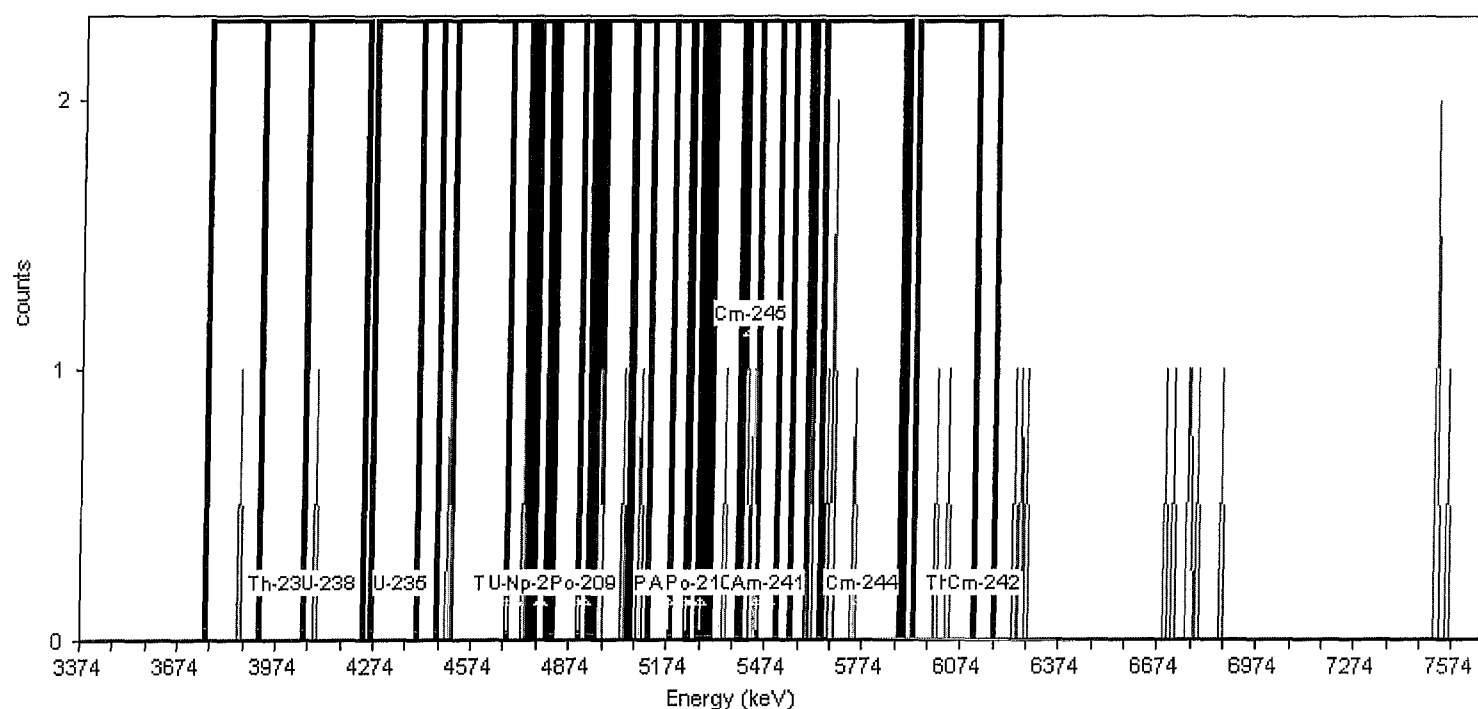
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.46% +/- 0.39% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 33.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	3.00	3.125E-003	2.083E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	2.00	2.083E-003	1.804E-003
Th-228	5.45	5.19	5.51	5.00	5.208E-003	2.552E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	4.00	4.167E-003	2.329E-003
Pu-236	5.76	5.61	5.89	5.00	5.208E-003	2.552E-003
Cm-244	5.78	5.64	5.90	4.00	4.167E-003	2.329E-003
Th-227	6.07	5.93	6.18	2.00	2.083E-003	1.804E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:09PM 7/25/2012

Sample Name: ICB;AV67

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV67 , SN: 48-046117

Acquisition Start Date: 7/24/2012 9:07:27PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-8876:AV67-20120610

Calibration Date: 6/11/2012 3:31:27PM

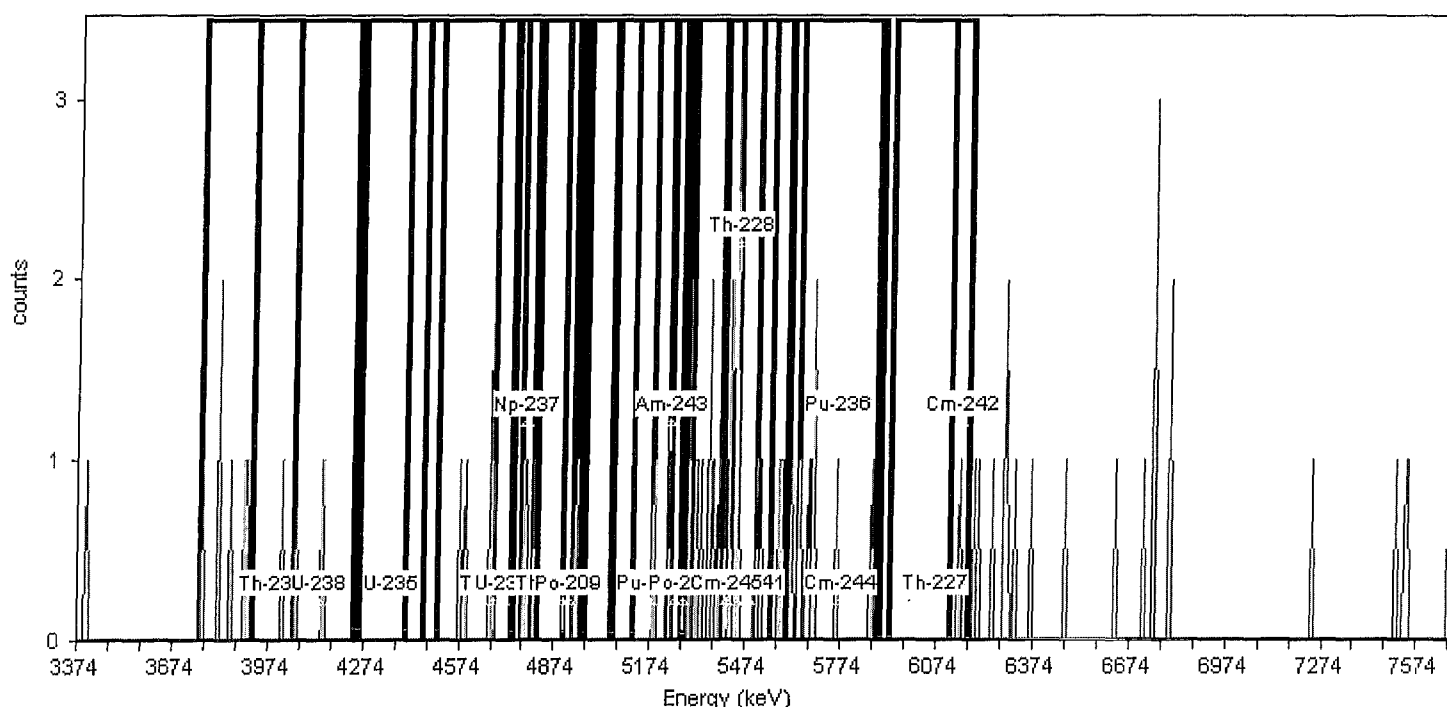
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366,95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.53% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundNo, Nucleide Library: Background ROI Library

Total Background Counts: 73.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	7.00	7.292E-003	2.946E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	4.00	4.167E-003	2.329E-003
U-234	4.71	4.51	4.82	7.00	7.292E-003	2.946E-003
Pu-242	4.90	4.68	4.95	4.00	4.167E-003	2.329E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	3.00	3.125E-003	2.083E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	4.00	4.167E-003	2.329E-003
U-232	5.25	5.06	5.40	11.00	1.146E-002	3.608E-003
Th-228	5.45	5.19	5.51	21.00	2.187E-002	4.886E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	20.00	2.083E-002	4.774E-003
Am-241	5.48	5.30	5.60	22.00	2.292E-002	4.996E-003
Cm-245	5.42	5.40	5.45	8.00	8.333E-003	3.125E-003
Pu-236	5.76	5.61	5.89	9.00	9.375E-003	3.294E-003
Cm-244	5.78	5.64	5.90	8.00	8.333E-003	3.125E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:20PM 7/25/2012

Sample Name: ICB;AV68

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV68 , SN: 48-45884

Acquisition Start Date: 7/24/2012 9:07:30PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-8877;AV68-20120610

Calibration Date: 6/11/2012 3:31:53PM

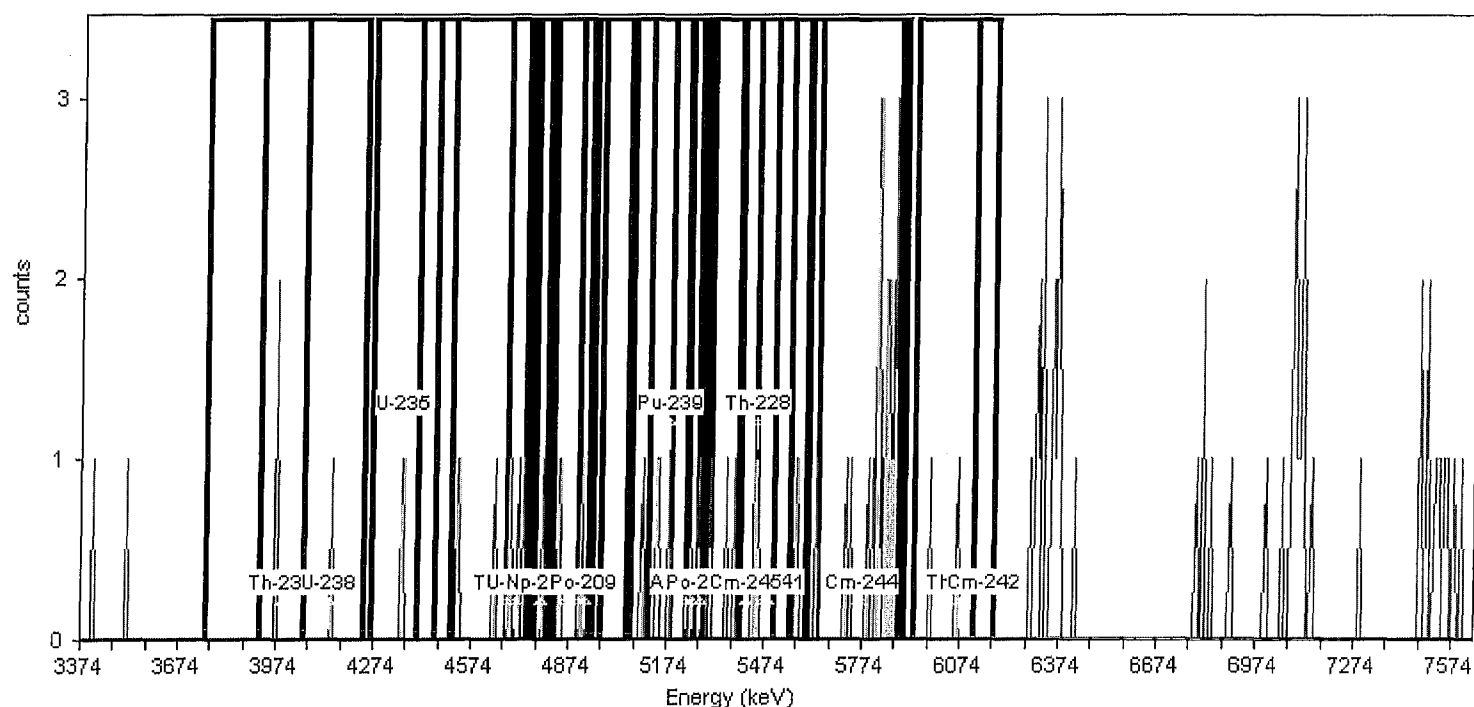
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.40% +/- 0.32% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 97.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	6.00	6.250E-003	2.756E-003
U-234	4.71	4.51	4.82	7.00	7.292E-003	2.946E-003
Pu-242	4.90	4.68	4.95	7.00	7.292E-003	2.946E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	1.00	1.042E-003	1.473E-003
Pu-239	5.18	4.97	5.24	4.00	4.167E-003	2.329E-003
Am-243	5.23	5.05	5.31	7.00	7.292E-003	2.946E-003
U-232	5.25	5.06	5.40	9.00	9.375E-003	3.294E-003
Th-228	5.45	5.19	5.51	8.00	8.333E-003	3.125E-003
Po-210	5.28	5.23	5.29	2.00	2.083E-003	1.804E-003
Pu-238	5.47	5.27	5.55	7.00	7.292E-003	2.946E-003
Am-241	5.48	5.30	5.60	7.00	7.292E-003	2.946E-003
Cm-245	5.42	5.40	5.45	2.00	2.083E-003	1.804E-003
Pu-236	5.76	5.61	5.89	18.00	1.875E-002	4.541E-003
Cm-244	5.78	5.64	5.90	17.00	1.771E-002	4.419E-003
Th-227	6.07	5.93	6.18	2.00	2.083E-003	1.804E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:26PM 7/25/2012

Sample Name: ICB;AV69

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV69 , SN: 49-155DD5
Acquisition Start Date: 7/24/2012 9:07:31PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: ICBV-8877;AV69-20120611a
Calibration Date: 6/11/2012 4:44:35PM

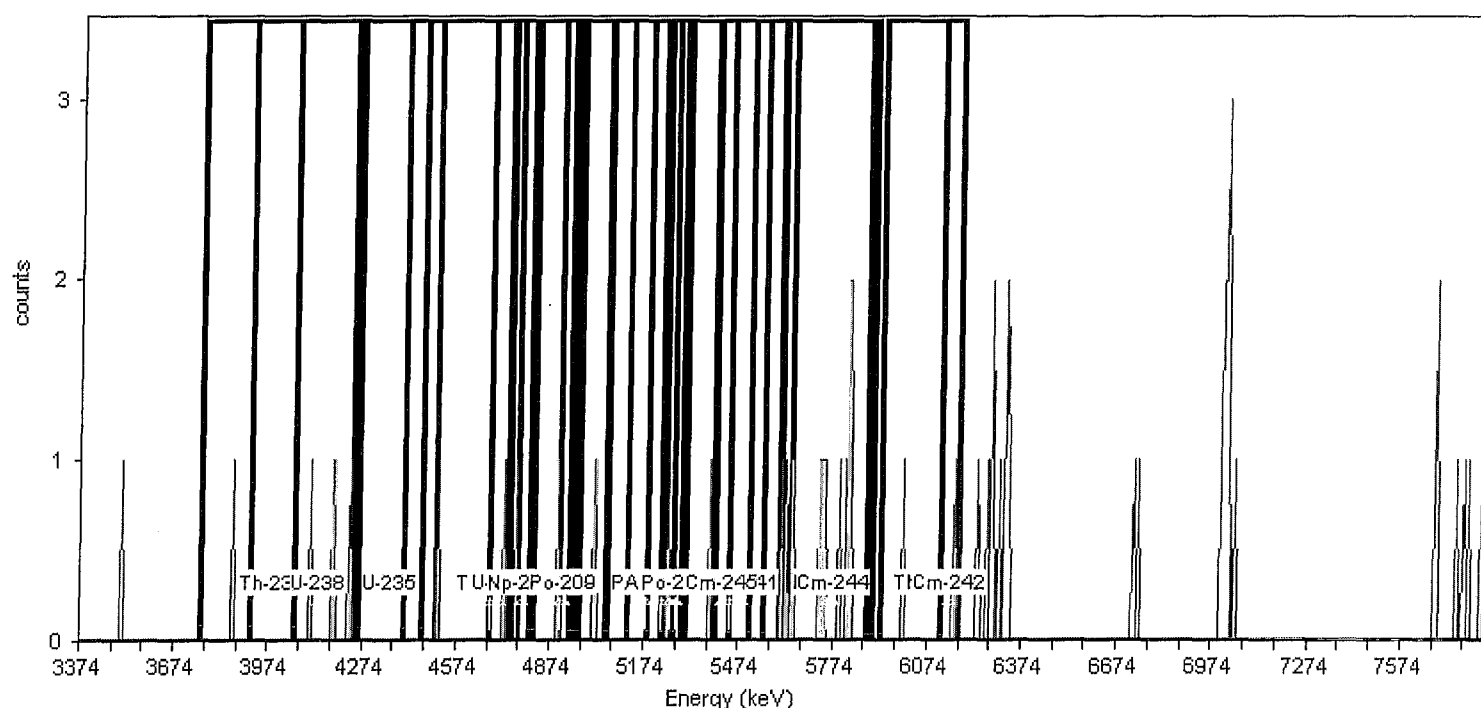
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.62% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 54.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	3.00	3.125E-003	2.083E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	2.00	2.083E-003	1.804E-003
Th-228	5.45	5.19	5.51	2.00	2.083E-003	1.804E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	1.00	1.042E-003	1.473E-003
Am-241	5.48	5.30	5.60	1.00	1.042E-003	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	14.00	1.458E-002	4.034E-003
Cm-244	5.78	5.64	5.90	12.00	1.250E-002	3.756E-003
Th-227	6.07	5.93	6.18	3.00	3.125E-003	2.083E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Monthly CCV
Alpha Vision
July 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)
<i>AV1</i>				
IC-7107;AV1-20120607	6/7/2012 3:02:16 PM	82232-334	0.2756	Pass
CCV-7107;AV1-20120724	7/24/2012 1:37:50 PM	82232-334	0.2749	Pass 99.7401 Pass
<i>AV2</i>				
IC-8874;AV2-20120607	6/7/2012 3:02:23 PM	82233-334	0.2693	Pass
CCV-8874;AV2-20120724	7/24/2012 1:38:06 PM	82233-334	0.2737	Pass 101.617 Pass
<i>AV3</i>				
IC-8875;AV3-20120607	6/7/2012 3:02:28 PM	82234-334	0.2857	Pass
CCV-8875;AV3-20120724	7/24/2012 1:38:18 PM	82234-334	0.2813	Pass 98.4574 Pass
<i>AV4</i>				
IC-8876;AV4-20120607	6/7/2012 3:02:32 PM	82235-334	0.2793	Pass
CCV-8876;AV4-20120724	7/24/2012 1:38:33 PM	82235-334	0.2759	Pass 98.7801 Pass
<i>AV6</i>				
IC-9520;AV6-20120607a	6/7/2012 3:56:30 PM	82237-334	0.2792	Pass
CCV-9520;AV6-20120724	7/24/2012 1:38:57 PM	82237-334	0.2815	Pass 100.837 Pass
<i>AV7</i>				
IC-8879;AV7-20120607	6/7/2012 4:03:51 PM	82238-334	0.2731	Pass
CCV-8879;AV7-20120724	7/24/2012 1:39:10 PM	82238-334	0.2696	Pass 98.7133 Pass
<i>AV8</i>				
IC-9792;AV8-20120607	6/7/2012 4:06:21 PM	82240-334	0.2787	Pass
CCV-9792;AV8-20120724	7/24/2012 1:39:22 PM	82240-334	0.2791	Pass 100.131 Pass
<i>AV9</i>				
IC-9793;AV9-20120607	6/7/2012 4:06:26 PM	82241-334	0.2781	Pass
CCV-9793;AV9-20120724	7/24/2012 1:39:34 PM	82241-334	0.2797	Pass 100.590 Pass
<i>AV10</i>				
IC-9794;AV10-20120621	6/21/2012 2:01:39 PM	82242-334	0.2725	Pass
<i>AV11</i>				
IC-9795;AV11-20120607	6/7/2012 7:50:12 PM	82243-334	0.2751	Pass
CCV-9795;AV11-20120724	7/24/2012 1:40:24 PM	82243-334	0.2762	Pass 100.416 Pass
<i>AV12</i>				
IC-9817;AV12-20120607	6/7/2012 7:50:16 PM	82244-334	0.2699	Pass
CCV-9817;AV12-20120724	7/24/2012 1:40:35 PM	82244-334	0.2659	Pass 98.5073 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 1 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV13</i>						
IC-9884;AV13-20120607	6/7/2012 7:50:19 PM	82245-334	0.2758	Pass		
CCV-9884;AV13-20120724	7/24/2012 1:40:46 PM	82245-334	0.2906	Pass	105.355	Fail
CCV-9884;AV13-20120724a	7/24/2012 5:02:56 PM	82245-334	0.2748	Pass	99.6538	Pass
CCV-9884;AV13-20120725	7/25/2012 11:44:29 AM	82245-334	0.2727	Pass	98.8754	Pass
<i>AV14</i>						
IC-9885;AV14-20120607	6/7/2012 7:50:22 PM	82246-334	0.2724	Pass		
CCV-9885;AV14-20120724	7/24/2012 1:41:00 PM	82246-334	0.2691	Pass	98.7814	Pass
<i>AV15</i>						
IC-9886;AV15-20120607	6/7/2012 7:50:24 PM	82247-334	0.2743	Pass		
CCV-9886;AV15-20120724	7/24/2012 1:41:10 PM	82247-334	0.2744	Pass	100.039	Pass
<i>AV16</i>						
IC-7107;AV16-20120607a	6/8/2012 12:12:55 AM	82232-334	0.2798	Pass		
CCV-7107;AV16-20120724	7/24/2012 5:03:06 PM	82232-334	0.2799	Pass	100.019	Pass
<i>AV17</i>						
IC-8874;AV17-20120607	6/8/2012 12:13:37 AM	82233-334	0.2631	Pass		
CCV-8874;AV17-20120724	7/24/2012 5:03:21 PM	82233-334	0.2669	Pass	101.451	Pass
<i>AV18</i>						
IC-8875;AV18-20120607	6/8/2012 12:13:58 AM	82234-334	0.2748	Pass		
CCV-8875;AV18-20120724	7/24/2012 5:05:40 PM	82234-334	0.2730	Pass	99.3381	Pass
<i>AV19</i>						
IC-8876;AV19-20120607	6/8/2012 12:14:05 AM	82235-334	0.2694	Pass		
CCV-8876;AV19-20120724	7/24/2012 5:03:44 PM	82235-334	0.2681	Pass	99.5055	Pass
<i>AV20</i>						
IC-8877;AV20-20120607	6/7/2012 7:50:28 PM	82236-334	0.2703	Pass		
CCV-8877;AV20-20120724	7/24/2012 1:38:45 PM	82236-334	0.2677	Pass	99.0551	Pass
<i>AV21</i>						
IC-9520;AV21-20120607	6/8/2012 12:14:09 AM	82237-334	0.2708	Pass		
CCV-9520;AV21-20120724	7/24/2012 5:03:53 PM	82237-334	0.2734	Pass	100.966	Pass
<i>AV22</i>						
IC-8879;AV22-20120607	6/8/2012 12:14:14 AM	82238-334	0.2679	Pass		
CCV-8879;AV22-20120724	7/24/2012 5:04:03 PM	82238-334	0.2639	Pass	98.5154	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 2 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV23</i>						
IC-9792;AV23-20120607	6/8/2012 12:14:18 AM	82240-334	0.2673	Pass		
CCV-9792;AV23-20120724	7/24/2012 5:04:14 PM	82240-334	0.2688	Pass	100.552	Pass
<i>AV24</i>						
IC-9793;AV24-20120607	6/8/2012 12:14:21 AM	82241-334	0.2734	Pass		
CCV-9793;AV24-20120724	7/24/2012 5:04:24 PM	82241-334	0.2766	Pass	101.156	Pass
<i>AV43</i>						
IC-9794;AV43-20120607	6/7/2012 7:50:31 PM	82242-334	0.2699	Pass		
CCV-9794;AV43-20120725	7/25/2012 10:28:07 PM	82242-334	0.2686	Pass	99.5158	Pass
<i>AV44</i>						
IC-9795;AV44-20120610	6/11/2012 3:27:57 PM	82243-334	0.2664	Pass		
CCV-9795;AV44-20120725	7/25/2012 10:28:12 PM	82243-334	0.2682	Pass	100.672	Pass
<i>AV45</i>						
IC-9817;AV45-20120610	6/11/2012 3:28:22 PM	82244-334	0.2704	Pass		
CCV-9817;AV45-20120725	7/25/2012 10:28:16 PM	82244-334	0.0001	Eval	5.53444	Fail
<i>AV46</i>						
IC-9884;AV46-20120610	6/11/2012 3:28:47 PM	82245-334	0.2849	Pass		
CCV-9884;AV46-20120725	7/25/2012 10:28:19 PM	82245-334	0.2804	Pass	98.4164	Pass
<i>AV47</i>						
IC-9885;AV47-20120611a	6/12/2012 1:04:12 AM	82246-334	0.2678	Pass		
<i>AV48</i>						
IC-9886;AV48-20120610	6/11/2012 3:29:40 PM	82247-334	0.2764	Pass		
CCV-9886;AV48-20120725	7/25/2012 10:28:31 PM	82247-334	0.0004	Eval	0.13021	Fail
<i>AV49</i>						
IC-7107;AV49-20120610	6/10/2012 8:17:41 PM	82232-334	0.2927	Pass		
CCV-7107;AV49-20120725	7/25/2012 10:28:34 PM	82232-334	0.2909	Pass	99.3834	Pass
<i>AV50</i>						
IC-8874;AV50-20120610	6/10/2012 8:17:58 PM	82233-334	0.2754	Pass		
CCV-8874;AV50-20120726	7/26/2012 1:58:10 PM	82233-334	0.2729	Pass	99.0921	Pass
<i>AV51</i>						
IC-8875;AV51-20120610	6/10/2012 8:18:12 PM	82234-334	0.2819	Pass		
CCV-8875;AV51-20120725	7/25/2012 10:28:38 PM	82234-334	0.2814	Pass	99.8447	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 3 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV52</i>						
IC-8876;AV52-20120610	6/10/2012 8:18:26 PM	82235-334	0.2911	Pass		
CCV-8876;AV52-20120726	7/26/2012 1:58:30 PM	82235-334	0.2925	Pass	100.496	Pass
<i>AV53</i>						
IC-8877;AV53-20120610	6/10/2012 8:18:38 PM	82236-334	0.2773	Pass		
CCV-8877;AV53-20120725	7/25/2012 10:28:41 PM	82236-334	0.2775	Pass	100.055	Pass
<i>AV54</i>						
IC-9520;AV54-20120610	6/10/2012 8:18:52 PM	82237-334	0.2798	Pass		
CCV-9520;AV54-20120726	7/26/2012 1:58:49 PM	82237-334	0.2760	Pass	98.6444	Pass
<i>AV55</i>						
IC-8879;AV55-20120610	6/10/2012 8:19:03 PM	82238-334	0.2720	Pass		
CCV-8879;AV55-20120725	7/25/2012 10:28:45 PM	82238-334	0.2697	Pass	99.1518	Pass
<i>AV56</i>						
IC-9792;AV56-20120610	6/10/2012 8:19:16 PM	82240-334	0.2709	Pass		
CCV-9792;AV56-20120725	7/25/2012 10:28:48 PM	82240-334	0.0003	Eval	0.11605	Fail
<i>AV57</i>						
IC-9793;AV57-20120610	6/10/2012 8:19:29 PM	82241-334	0.2764	Pass		
CCV-9793;AV57-20120725	7/25/2012 10:28:52 PM	82241-334	0.2763	Pass	99.9520	Pass
<i>AV58</i>						
IC-9794;AV58-20120610	6/10/2012 8:19:36 PM	82242-334	0.2550	Pass		
<i>AV59</i>						
IC-9795;AV59-20120610	6/10/2012 8:19:39 PM	82243-334	0.2753	Pass		
<i>AV60</i>						
IC-9817;AV60-20120610	6/10/2012 8:19:43 PM	82244-334	0.2682	Pass		
CCV-9817;AV60-20120725a	7/26/2012 12:42:30 AM	82244-334	0.2705	Pass	100.836	Pass
<i>AV61</i>						
IC-9884;AV61-20120610	6/10/2012 8:19:46 PM	82245-334	0.2792	Pass		
CCV-9884;AV61-20120725	7/26/2012 12:42:24 AM	82245-334	0.2785	Pass	99.7356	Pass
<i>AV62</i>						
IC-9885;AV62-20120610	6/10/2012 8:19:49 PM	82246-334	0.2742	Pass		
CCV-9885;AV62-20120725	7/26/2012 12:42:33 AM	82246-334	0.2738	Pass	99.8594	Pass
<i>AV63</i>						
IC-9886;AV63-20120610	6/10/2012 8:19:57 PM	82247-334	0.2707	Pass		
CCV-9886;AV63-20120725	7/26/2012 12:42:36 AM	82247-334	0.2716	Pass	100.323	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 4 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV64</i>						
IC-7107;AV64-20120610	6/11/2012 3:30:09 PM	82232-334	0.2935	Pass		
CCV-7107;AV64-20120726	7/26/2012 1:58:00 PM	82232-334	0.2935	Pass	99.9978	Pass
<i>AV65</i>						
IC-8874;AV65-20120610	6/11/2012 3:30:33 PM	82233-334	0.2759	Pass		
CCV-8874;AV65-20120725	7/25/2012 10:28:56 PM	82233-334	0.2745	Pass	99.4624	Pass
<i>AV66</i>						
IC-8875;AV66-20120610	6/11/2012 3:30:58 PM	82234-334	0.2846	Pass		
CCV-8875;AV66-20120725	7/26/2012 12:42:39 AM	82234-334	0.2809	Pass	98.6783	Pass
<i>AV67</i>						
IC-8876;AV67-20120610	6/11/2012 3:31:27 PM	82235-334	0.2953	Pass		
CCV-8876;AV67-20120726	7/26/2012 5:34:37 PM	82235-334	0.2975	Pass	100.722	Pass
<i>AV68</i>						
IC-8877;AV68-20120610	6/11/2012 3:31:53 PM	82236-334	0.2740	Pass		
CCV-8877;AV68-20120725	7/26/2012 12:42:42 AM	82236-334	0.2748	Pass	100.313	Pass
<i>AV69</i>						
IC-9520;AV69-20120610	6/11/2012 3:32:14 PM	82237-334	0.2763	Pass		
CCV-9520;AV69-20120725	7/25/2012 10:29:25 PM	82237-334	0.2730	Pass	98.8075	Pass
<i>AV70</i>						
IC-8879;AV70-20120610	6/11/2012 3:32:41 PM	82238-334	0.2732	Pass		
CCV-8879;AV70-20120725	7/26/2012 12:42:45 AM	82238-334	0.2708	Pass	99.1119	Pass
<i>AV71</i>						
IC-9792;AV71-20120610	6/11/2012 3:33:08 PM	82240-334	0.2763	Pass		
CCV-9792;AV71-20120725	7/26/2012 12:42:50 AM	82240-334	0.2755	Pass	99.7117	Pass
<i>AV72</i>						
IC-9793;AV72-20120610	6/11/2012 3:33:25 PM	82241-334	0.2910	Pass		
CCV-9793;AV72-20120725	7/26/2012 12:42:53 AM	82241-334	0.2858	Pass	98.2175	Pass
<i>AV73</i>						
IC-9794;AV73-20120610	6/11/2012 3:33:47 PM	82242-334	0.2766	Pass		
CCV-9794;AV73-20120725	7/26/2012 12:42:56 AM	82242-334	0.2759	Pass	99.7532	Pass
<i>AV74</i>						
IC-9795;AV74-20120611a	6/12/2012 1:04:18 AM	82243-334	0.2701	Pass		
CCV-9795;AV74-20120726	7/26/2012 8:37:17 AM	82243-334	0.2731	Pass	101.096	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 5 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV75</i>				
IC-9817;AV75-20120611a	6/12/2012 1:04:21 AM	82244-334	0.2656	Pass
CCV-9817;AV75-20120724	7/24/2012 8:51:29 PM	82244-334	0.2666	Pass 100.388 Pass
<i>AV76</i>				
IC-9884;AV76-20120611a	6/12/2012 1:04:24 AM	82245-334	0.2723	Pass
CCV-9884;AV76-20120724a	7/24/2012 10:38:47 PM	82245-334	0.2757	Pass 101.240 Pass
<i>AV77</i>				
IC-9885;AV77-20120612	6/12/2012 10:16:22 PM	82246-334	0.2674	Pass
CCV-9885;AV77-20120724	7/24/2012 8:51:53 PM	82246-334	0.2687	Pass 100.497 Pass
<i>AV78</i>				
IC-9886;AV78-20120611a	6/12/2012 1:04:27 AM	82247-334	0.2751	Pass
CCV-9886;AV78-20120724	7/24/2012 8:51:41 PM	82247-334	0.2748	Pass 99.8636 Pass
<i>AV79</i>				
IC-7107;AV79-20120611a	6/12/2012 1:04:30 AM	82232-334	0.2824	Pass
CCV-7107;AV79-20120724	7/24/2012 8:51:57 PM	82232-334	0.2837	Pass 100.462 Pass
<i>AV80</i>				
IC-8874;AV80-20120611a	6/12/2012 1:04:34 AM	82233-334	0.2692	Pass
CCV-8874;AV80-20120724	7/24/2012 8:51:46 PM	82233-334	0.2697	Pass 100.177 Pass
<i>AV81</i>				
IC-8875;AV81-20120611a	6/12/2012 1:04:37 AM	82234-334	0.2858	Pass
CCV-8875;AV81-20120724	7/24/2012 8:51:49 PM	82234-334	0.2899	Pass 101.429 Pass
<i>AV82</i>				
IC-8876;AV82-20120611a	6/12/2012 1:04:40 AM	82235-334	0.2768	Pass
CCV-8876;AV82-20120724	7/24/2012 8:52:00 PM	82235-334	0.2737	Pass 98.8822 Pass
<i>AV83</i>				
IC-8877;AV83-20120611a	6/12/2012 1:04:44 AM	82236-334	0.2727	Pass
CCV-8877;AV83-20120724	7/24/2012 8:52:04 PM	82236-334	0.2757	Pass 101.099 Pass
<i>AV84</i>				
IC-9520;AV84-20120611a	6/12/2012 1:04:47 AM	82237-334	0.2790	Pass
CCV-9520;AV84-20120724	7/24/2012 8:52:07 PM	82237-334	0.2748	Pass 98.4876 Pass
<i>AV85</i>				
IC-8879;AV85-20120611a	6/12/2012 1:04:50 AM	82238-334	0.2774	Pass
CCV-8879;AV85-20120724	7/24/2012 8:52:11 PM	82238-334	0.2782	Pass 100.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 6 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV86</i>						
IC-9792;AV86-20120611a	6/12/2012 1:04:54 AM	82240-334	0.2769	Pass		
CCV-9792;AV86-20120724	7/24/2012 8:52:16 PM	82240-334	0.2771	Pass	100.046	Pass
<i>AV87</i>						
IC-9793;AV87-20120611a	6/12/2012 1:04:56 AM	82241-334	0.2951	Pass		
CCV-9793;AV87-20120724	7/24/2012 8:52:20 PM	82241-334	0.2909	Pass	98.5861	Pass
<i>AV88</i>						
IC-9794;AV88-20120611a	6/12/2012 1:04:59 AM	82242-334	0.2744	Pass		
CCV-9794;AV88-20120724	7/24/2012 5:04:33 PM	82242-334	0.2741	Pass	99.8889	Pass
<i>AV89</i>						
IC-9795;AV89-20120612	6/12/2012 3:39:24 PM	82243-334	0.2684	Pass		
CCV-9795;AV89-20120724	7/24/2012 5:04:44 PM	82243-334	0.2679	Pass	99.8091	Pass
<i>AV90</i>						
IC-9817;AV90-20120612	6/12/2012 3:39:50 PM	82244-334	0.2731	Pass		
CCV-9817;AV90	7/24/2012 5:05:02 PM	82244-334	0.2721	Pass	99.6298	Pass
<i>AV91</i>						
IC-9884;AV91-20120612	6/12/2012 3:40:10 PM	82245-334	0.2787	Pass		
CCV-9884;AV91-20120724	7/24/2012 11:50:47 PM	82245-334	0.2800	Pass	100.497	Pass
<i>AV92</i>						
IC-9885;AV92-20120613	6/13/2012 10:43:01 AM	82246-334	0.2705	Pass		
CCV-9885;AV92-20120724	7/24/2012 5:08:08 PM	82246-334	0.2723	Pass	100.677	Pass
<i>AV93</i>						
IC-9886;AV93-20120612	6/12/2012 3:40:55 PM	82247-334	0.2715	Pass		
CCV-9886;AV93-20120724	7/24/2012 5:08:42 PM	82247-334	0.2720	Pass	100.196	Pass
<i>AV94</i>						
IC-7107;AV94-20120612a	6/12/2012 3:41:17 PM	82232-334	0.2797	Pass		
CCV-7107;AV94-20120724	7/24/2012 10:38:52 PM	82232-334	0.2772	Pass	99.0992	Pass
<i>AV95</i>						
IC-8874;AV95-20120608	6/8/2012 8:45:55 AM	82233-334	0.2719	Pass		
CCV-8874;AV95-20120724	7/24/2012 10:38:55 PM	82233-334	0.2708	Pass	99.6240	Pass
<i>AV96</i>						
IC-8875;AV96-20120612	6/12/2012 3:41:40 PM	82234-334	0.2831	Pass		
CCV-8875;AV96-20120724	7/24/2012 10:39:01 PM	82234-334	0.0004	Eval	0.14859	Fail

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 7 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV97</i>						
IC-8876;AV97-20120612a	6/12/2012 10:16:26 PM	82235-334	0.2765	Pass		
CCV-8876;;AV97-20120724	7/24/2012 10:39:04 PM	82235-334	0.2779	Pass	100.508	Pass
<i>AV98</i>						
IC-8877;AV98-20120608	6/8/2012 8:46:02 AM	82236-334	0.2818	Pass		
CCV-8877;AV98-20120724	7/24/2012 5:06:05 PM	82236-334	0.2793	Pass	99.1155	Pass
<i>AV99</i>						
IC-9520;AV99-20120608	6/8/2012 8:46:10 AM	82237-334	0.2703	Pass		
<i>AV100</i>						
IC-8879;AV100-20120608	6/8/2012 8:46:24 AM	82238-334	0.2719	Pass		
CCV-8879;AV100-20120726	7/26/2012 1:58:58 PM	82238-334	0.2703	Pass	99.4168	Pass
<i>AV101</i>						
IC-9792;AV101-20120608	6/8/2012 8:46:34 AM	82240-334	0.2802	Pass		
CCV-9792;AV101-20120726	7/26/2012 8:37:09 AM	82240-334	0.2787	Pass	99.4560	Pass
<i>AV102</i>						
IC-9793;AV102-20120608	6/8/2012 8:46:41 AM	82241-334	0.2826	Pass		
CCV-9793;AV102-20120726	7/26/2012 8:37:21 AM	82241-334	0.2794	Pass	98.8711	Pass
<i>AV103</i>						
IC-9794;AV103-20120607	6/8/2012 12:14:29 AM	82242-334	0.2709	Pass		
CCV-9794;AV103-20120726	7/26/2012 1:59:26 PM	82242-334	0.2718	Pass	100.319	Pass
<i>AV104</i>						
IC-9795;AV104-20120607	6/8/2012 12:14:40 AM	82243-334	0.2646	Pass		
CCV-9795;AV104-20120726	7/26/2012 1:59:37 PM	82243-334	0.0056	Eval	2.11169	Fail
<i>AV105</i>						
IC-9817;AV105-20120607	6/8/2012 12:14:48 AM	82244-334	0.2474	Pass		
CCV-9817;AV10520120726	7/26/2012 1:59:46 PM	82244-334	0.2451	Pass	99.0547	Pass
<i>AV106</i>						
IC-9884;AV106-20120607	6/8/2012 12:15:09 AM	82245-334	0.2797	Pass		
CCV-9884;AV106-20120726	7/26/2012 1:59:55 PM	82245-334	0.2758	Pass	98.5711	Pass
<i>AV107</i>						
IC-9885;AV107-20120607	6/8/2012 12:14:52 AM	82246-334	0.2711	Pass		
CCV-9885;AV107-20120726	7/26/2012 2:00:04 PM	82246-334	0.2733	Pass	100.841	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 8 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV108</i>							
IC-9886;AV108-20120607	6/8/2012 12:14:56 AM	82247-334	0.2812	Pass			
CCV-9886;AV108-20120726	7/26/2012 2:00:19 PM	82247-334	0.2814	Pass	100.046	Pass	
<i>AV109</i>							
IC-7107;AV109-20120608	6/8/2012 8:46:47 AM	82232-334	0.2782	Pass			
CCV-7107;AV109-20120725	7/26/2012 12:42:58 AM	82232-334	0.2245	Pass	80.7030	Fail	
CCV-7107;AV109-20120726	7/26/2012 5:32:41 PM	82232-334	0.2819	Pass	101.326	Pass	
CCV-7107;AV109-20120726a	7/26/2012 7:44:53 PM	82232-334	0.2763	Pass	99.3002	Pass	
<i>AV111</i>							
IC-8875;AV111-20120608	6/8/2012 8:46:55 AM	82234-334	0.2800	Pass			
CCV-8875;AV111-20120726	7/26/2012 8:37:25 AM	82234-334	0.2787	Pass	99.5396	Pass	
<i>AV112</i>							
IC-8876;AV112-20120608	6/8/2012 8:47:01 AM	82235-334	0.2750	Pass			
CCV-8876;AV112-20120725	7/25/2012 10:31:58 PM	82235-334	0.2735	Pass	99.4658	Pass	
<i>AV113</i>							
IC-8877;AV113-20120607	6/8/2012 12:15:02 AM	82236-334	0.2765	Pass			
CCV-8877;AV113-20120726	7/26/2012 8:37:29 AM	82236-334	0.2772	Pass	100.255	Pass	
<i>AV114</i>							
IC-9520;AV114-20120612	6/12/2012 3:42:22 PM	82237-334	0.2746	Pass			
CCV-9520;AV114-20120726	7/26/2012 5:34:48 PM	82237-334	0.2758	Pass	100.401	Pass	
<i>AV115</i>							
IC-8879;AV115-20120612	6/12/2012 3:42:43 PM	82238-334	0.2756	Pass			
CCV-8879;AV115-20120726	7/26/2012 5:34:59 PM	82238-334	0.2762	Pass	100.213	Pass	
<i>AV116</i>							
IC-9792;AV116-20120612	6/12/2012 3:43:02 PM	82240-334	0.2914	Pass			
CCV-9792;AV116-20120726	7/26/2012 1:59:07 PM	82240-334	0.2773	Pass	95.1508	Pass	
<i>AV117</i>							
IC-9793;AV117-20120612	6/12/2012 3:43:27 PM	82241-334	0.2628	Pass			
CCV-9793;AV117-20120726	7/26/2012 1:59:16 PM	82241-334	0.2683	Pass	102.098	Pass	
<i>AV118</i>							
IC-9794;AV118-20120608	6/8/2012 8:47:07 AM	82242-334	0.2728	Pass			
CCV-9794;AV118-20120726	7/26/2012 8:37:33 AM	82242-334	0.2689	Pass	98.5708	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 9 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV119</i>							
IC-9795;AV119-20120608	6/8/2012 8:47:13 AM	82243-334	0.2655	Pass			
CCV-9795;AV119-20120726	7/26/2012 10:05:57 PM	82243-334	0.2655	Pass	99.9791	Pass	
<i>AV120</i>							
IC-9817;AV120-20120608	6/8/2012 8:47:18 AM	82244-334	0.2668	Pass			
CCV-9817;AV120-20120726	7/26/2012 8:37:37 AM	82244-334	0.2689	Pass	100.796	Pass	
<i>AV121</i>							
IC-9884;AV121-20120608	6/8/2012 8:54:38 AM	82245-334	0.2825	Pass			
CCV-9884;AV121-20120726	7/26/2012 8:37:41 AM	82245-334	0.2811	Pass	99.4897	Pass	
<i>AV122</i>							
IC-9885;AV122-20120608	6/8/2012 8:54:44 AM	82246-334	0.2678	Pass			
CCV-9885;AV122-20120726	7/26/2012 8:37:46 AM	82246-334	0.2712	Pass	101.254	Pass	
<i>AV123</i>							
IC-9886;AV123-20120614	6/15/2012 11:45:44 AM	82247-334	0.2691	Pass			
CCV-9886;AV123-20120726	7/26/2012 8:37:50 AM	82247-334	0.2654	Pass	98.6278	Pass	
<i>AV124</i>							
IC-7107;AV124-20120614	6/15/2012 11:46:08 AM	82232-334	0.2653	Pass			
CCV-7107;AV124-20120726	7/26/2012 10:16:23 PM	82232-334	0.2661	Pass	100.282	Pass	
<i>AV125</i>							
IC-8874;AV125-20120614	6/15/2012 11:46:45 AM	82233-334	0.2675	Pass			
CCV-8874;AV125-20120725	7/26/2012 12:43:01 AM	82233-334	0.2694	Pass	100.701	Pass	
<i>AV126</i>							
IC-8875;AV126-20120614	6/15/2012 11:47:26 AM	82234-334	0.2760	Pass			
CCV-8875;AV126-20120726	7/26/2012 1:58:20 PM	82234-334	0.2746	Pass	99.5062	Pass	
<i>AV127</i>							
IC-8876;AV127-20120614	6/15/2012 11:48:11 AM	82235-334	0.2775	Pass			
CCV-8876;AV127-20120725	7/26/2012 12:43:05 AM	82235-334	0.0003	Eval	0.11569	Fail	
<i>AV128</i>							
IC-8877;AV128-20120614	6/15/2012 11:48:54 AM	82236-334	0.2685	Pass			
CCV-8877;AV128-20120726	7/26/2012 1:58:40 PM	82236-334	0.0003	Eval	0.11553	Fail	
<i>AV129</i>							
IC-9520;AV129-20120614	6/15/2012 11:49:36 AM	82237-334	0.2710	Pass			
CCV-9520;AV129-20120725	7/26/2012 12:43:08 AM	82237-334	0.2730	Pass	100.742	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 10 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV130</i>				
IC-8879;AV130-20120614	6/15/2012 11:50:34 AM	82238-334	0.2707	Pass
CCV-8879;AV130-20120726	7/26/2012 8:37:58 AM	82238-334	0.2711	Pass 100.151 Pass
<i>AV131</i>				
IC-9792;AV131-20120612	6/12/2012 10:16:29 PM	82240-334	0.2777	Pass
CCV-9792;AV131-20120726	7/26/2012 7:43:47 PM	82240-334	0.2754	Pass 99.1770 Pass
<i>AV132</i>				
IC-9793;AV132-20120612	6/12/2012 10:16:32 PM	82241-334	0.2711	Pass
CCV-9793;AV132-20120726	7/26/2012 5:35:09 PM	82241-334	0.2728	Pass 100.644 Pass
<i>AV133</i>				
IC-9794;AV133-20120612	6/12/2012 3:43:51 PM	82242-334	0.2627	Pass
CCV-9794;AV133-20120726	7/26/2012 7:43:55 PM	82242-334	0.2629	Pass 100.084 Pass
<i>AV134</i>				
IC-9795;AV134-20120612	6/12/2012 10:16:35 PM	82243-334	0.2665	Pass
CCV-9795;AV134-20120726	7/26/2012 7:44:04 PM	82243-334	0.2637	Pass 98.9425 Pass
<i>AV135</i>				
IC-9817;AV135-20120612	6/12/2012 10:16:38 PM	82244-334	0.2610	Pass
CCV-9817;AV135-20120726	7/26/2012 7:44:16 PM	82244-334	0.2622	Pass 100.442 Pass
<i>AV136</i>				
IC-9884;AV136-20120612	6/12/2012 10:16:41 PM	82245-334	0.2745	Pass
CCV-9884;AV13620120726	7/26/2012 7:44:27 PM	82245-334	0.2725	Pass 99.2766 Pass
<i>AV137</i>				
IC-9885;AV137-20120621	6/21/2012 2:01:56 PM	82246-334	0.2674	Pass
CCV-9885;AV137-20120726	7/26/2012 7:44:35 PM	82246-334	0.2648	Pass 99.0375 Pass
<i>AV138</i>				
IC-9886;AV138-20120608	6/8/2012 8:55:45 AM	82247-334	0.2683	Pass
CCV-9886;AV138-20120726	7/26/2012 7:44:43 PM	82247-334	0.2672	Pass 99.5864 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 11 of 11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Monthly Backgrounds
Alpha Vision
July 2012
AV1-146

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:38PM 7/25/2012

Sample Name: ICB;AV70

Comment:

Sample

Spectrum #1 Analysis #1

Batch

Batch Name: July2012b

Description:

Analyst: 60040

Acquisition

Detector: AV70 , SN: 48-158FF1
Acquisition Start Date: 7/24/2012 9:07:33PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-8879;AV70-20120610
Calibration Date: 6/11/2012 3:32:41PM

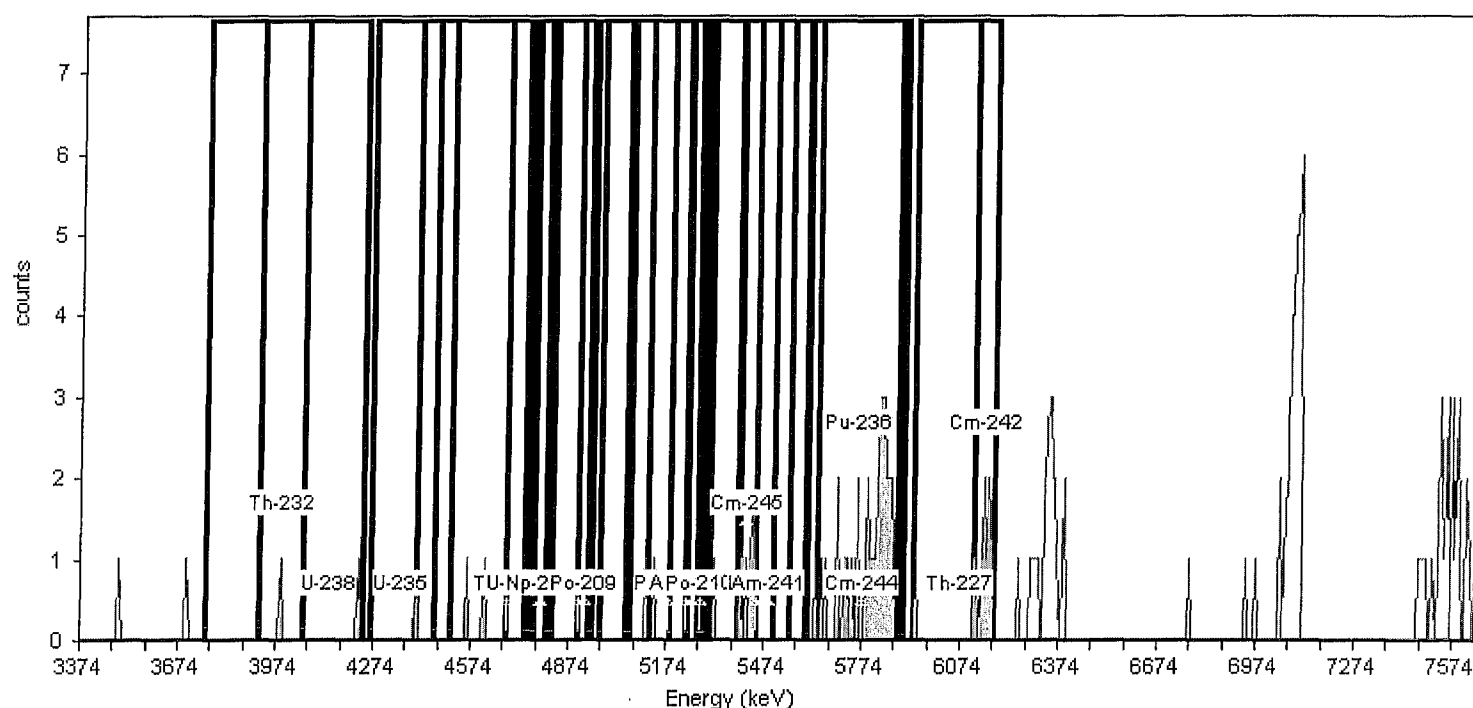
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.32% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 136.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	3.00	3.125E-003	2.083E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	1.00	1.042E-003	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	6.00	6.250E-003	2.756E-003
Am-241	5.48	5.30	5.60	6.00	6.250E-003	2.756E-003
Cm-245	5.42	5.40	5.45	5.00	5.208E-003	2.552E-003
Pu-236	5.76	5.61	5.89	32.00	3.333E-002	5.984E-003
Cm-244	5.78	5.64	5.90	31.00	3.229E-002	5.893E-003
Th-227	6.07	5.93	6.18	10.00	1.042E-002	3.455E-003
Cm-242	6.15	6.12	6.18	9.00	9.375E-003	3.294E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:55PM 7/25/2012

Sample Name: ICB;AV71

Comment:

Sample

Spectrum #1 Analysis #1

Batch

Batch Name: July2012b

Description:

Analyst: 60040

Acquisition

Detector: AV71 , SN: 48-158EE6
Acquisition Start Date: 7/24/2012 9:07:35PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9792;AV71-20120610
Calibration Date: 6/11/2012 3:33:08PM

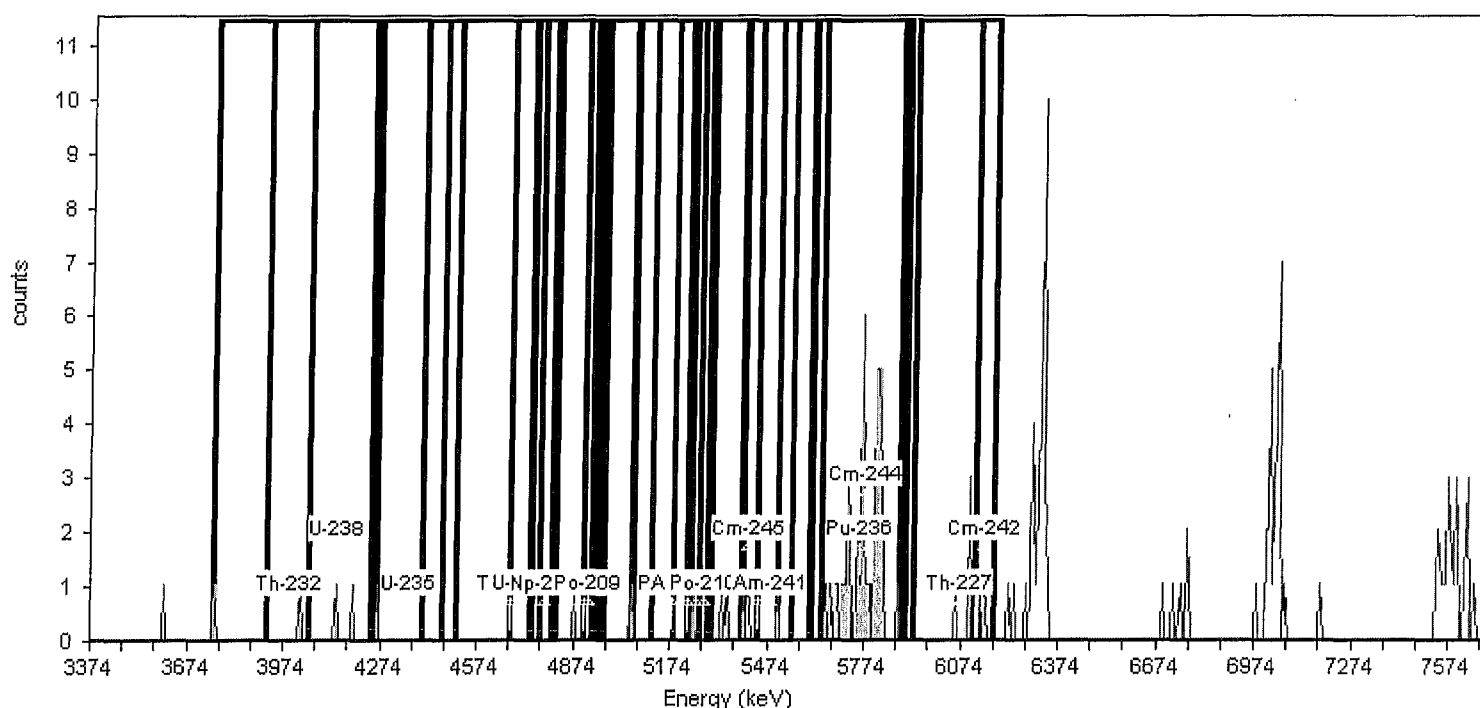
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.63% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 148.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	2.00	2.083E-003	1.804E-003
Pu-236	5.76	5.61	5.89	41.00	4.271E-002	6.751E-003
Cm-244	5.78	5.64	5.90	41.00	4.271E-002	6.751E-003
Th-227	6.07	5.93	6.18	8.00	8.333E-003	3.125E-003
Cm-242	6.15	6.12	6.18	4.00	4.167E-003	2.329E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:13:06PM 7/25/2012

Sample Name: ICB;AV72

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV72, SN: 48-05a21
Acquisition Start Date: 7/24/2012 9:07:35PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9793;AV72-20120610
Calibration Date: 6/11/2012 3:33:25PM

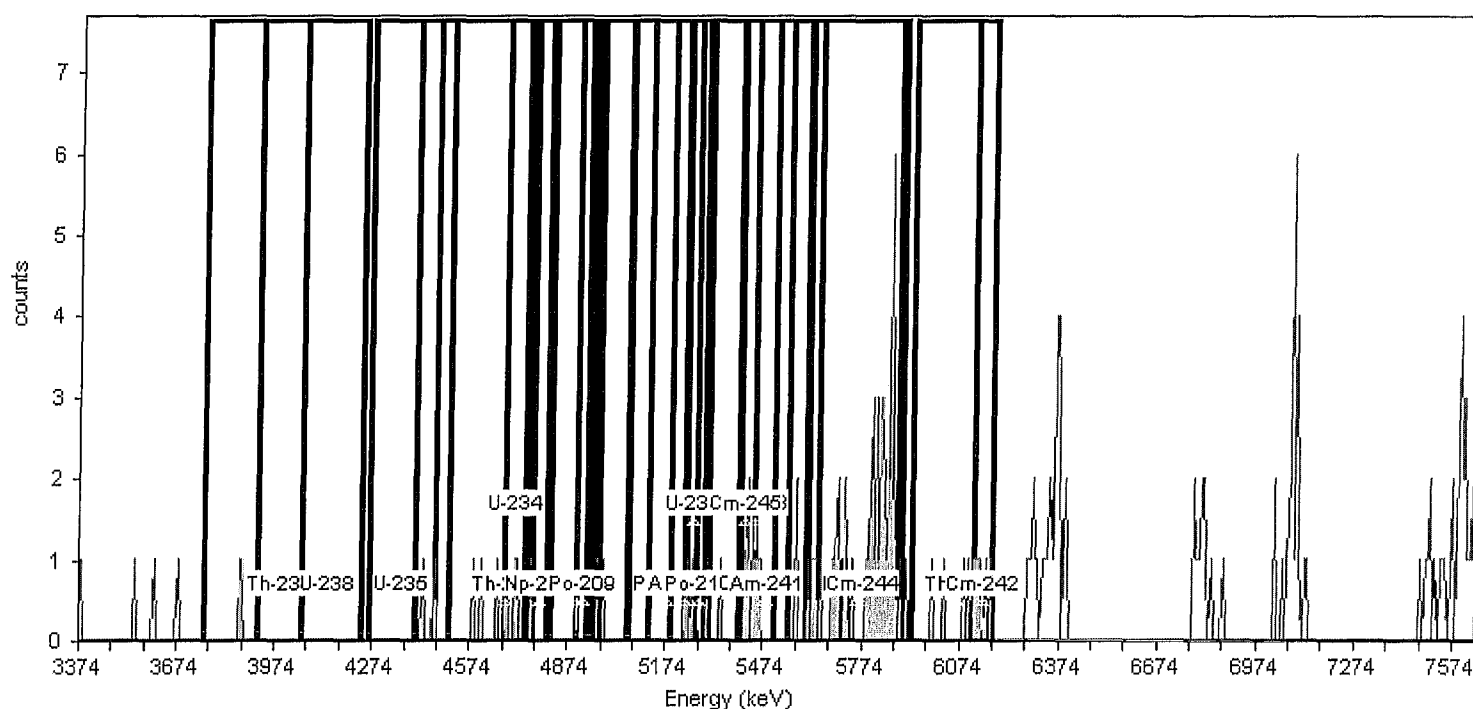
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.10% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 163.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	2.00	2.083E-003	1.804E-003
Th-230	4.68	4.40	4.75	8.00	8.333E-003	3.125E-003
U-234	4.71	4.51	4.82	7.00	7.292E-003	2.946E-003
Pu-242	4.90	4.68	4.95	4.00	4.167E-003	2.329E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	3.00	3.125E-003	2.083E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	11.00	1.146E-002	3.608E-003
Po-210	5.28	5.23	5.29	2.00	2.083E-003	1.804E-003
Pu-238	5.47	5.27	5.55	9.00	9.375E-003	3.294E-003
Am-241	5.48	5.30	5.60	11.00	1.146E-002	3.608E-003
Cm-245	5.42	5.40	5.45	5.00	5.208E-003	2.552E-003
Pu-236	5.76	5.61	5.89	39.00	4.062E-002	6.588E-003
Cm-244	5.78	5.64	5.90	37.00	3.854E-002	6.421E-003
Th-227	6.07	5.93	6.18	10.00	1.042E-002	3.455E-003
Cm-242	6.15	6.12	6.18	6.00	6.250E-003	2.756E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV73

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV73 , SN: 49-155N4
Acquisition Start Date: 7/24/2012 9:07:37PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9794;AV73-20120610
Calibration Date: 6/11/2012 3:33:47PM

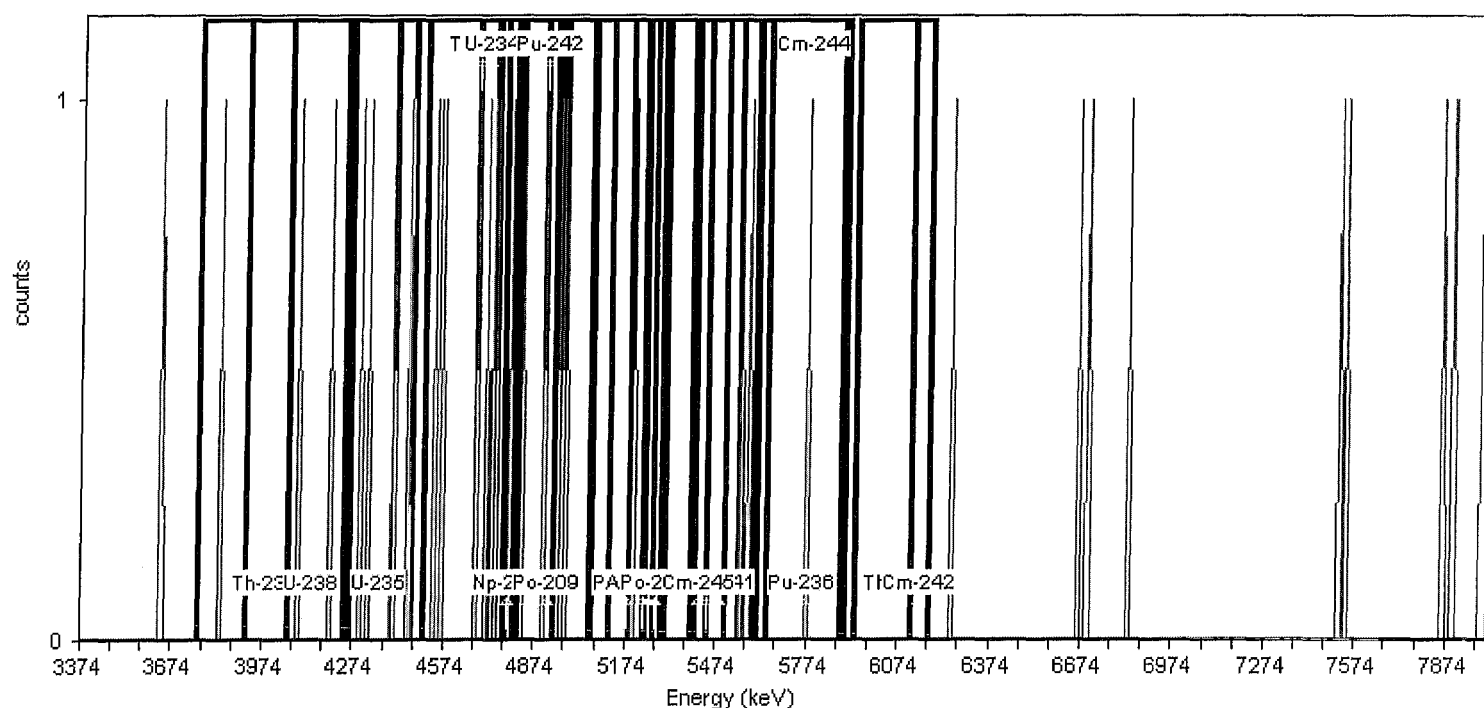
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.66% +/- 0.34% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 36.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	4.00	4.167E-003	2.329E-003
Th-230	4.68	4.40	4.75	9.00	9.375E-003	3.294E-003
U-234	4.71	4.51	4.82	8.00	8.333E-003	3.125E-003
Pu-242	4.90	4.68	4.95	8.00	8.333E-003	3.125E-003
Th-229	4.86	4.74	5.12	7.00	7.292E-003	2.946E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	1.00	1.042E-003	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	1.00	1.042E-003	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	2.00	2.083E-003	1.804E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	1.00	1.042E-003	1.473E-003
Cm-244	5.78	5.64	5.90	1.00	1.042E-003	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:13:30PM 7/25/2012

Sample Name: ICB;AV74

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV74 , SN: 50-051C6
Acquisition Start Date: 7/24/2012 9:07:39PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9795;AV74-20120611a
Calibration Date: 6/12/2012 1:04:18AM

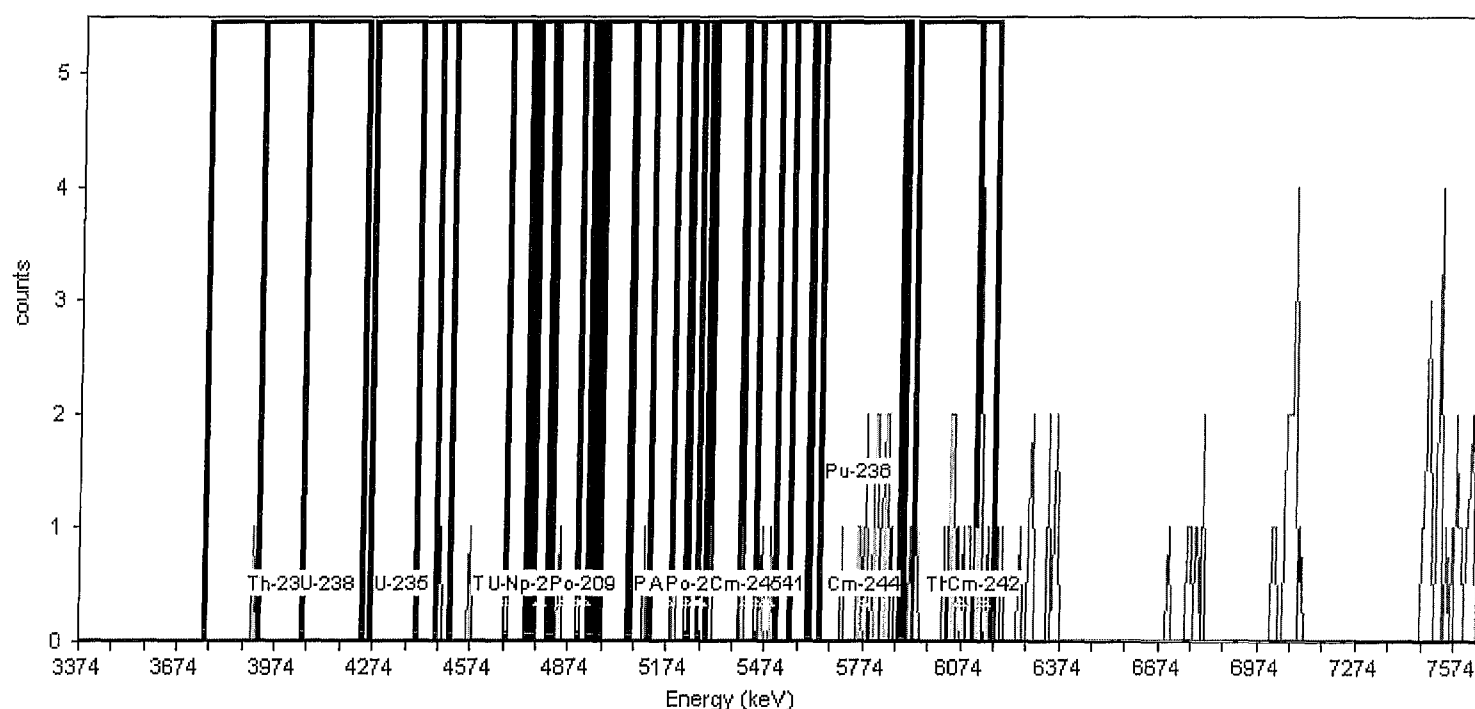
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.01% +/- 0.35% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 104.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	3.00	3.125E-003	2.083E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	5.00	5.208E-003	2.552E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	4.00	4.167E-003	2.329E-003
Am-241	5.48	5.30	5.60	4.00	4.167E-003	2.329E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	16.00	1.667E-002	4.295E-003
Cm-244	5.78	5.64	5.90	16.00	1.667E-002	4.295E-003
Th-227	6.07	5.93	6.18	17.00	1.771E-002	4.419E-003
Cm-242	6.15	6.12	6.18	7.00	7.292E-003	2.946E-003

THE LEADER IN ENVIRONMENTAL TESTING

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
11:35:53AM 7/24/2012

Sample Name: ICB;AV75

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012a

Description:

Batch

Analyst: 60040

Detector: AV75 , SN: 46-033P6

Acquisition Start Date: 7/23/2012 7:27:05PM

Live Time: 960.00 min.

Real Time: 960.95 min.

Calibration Name: IC-9817;AV75-20120611a

Calibration Date: 6/12/2012 1:04:21AM

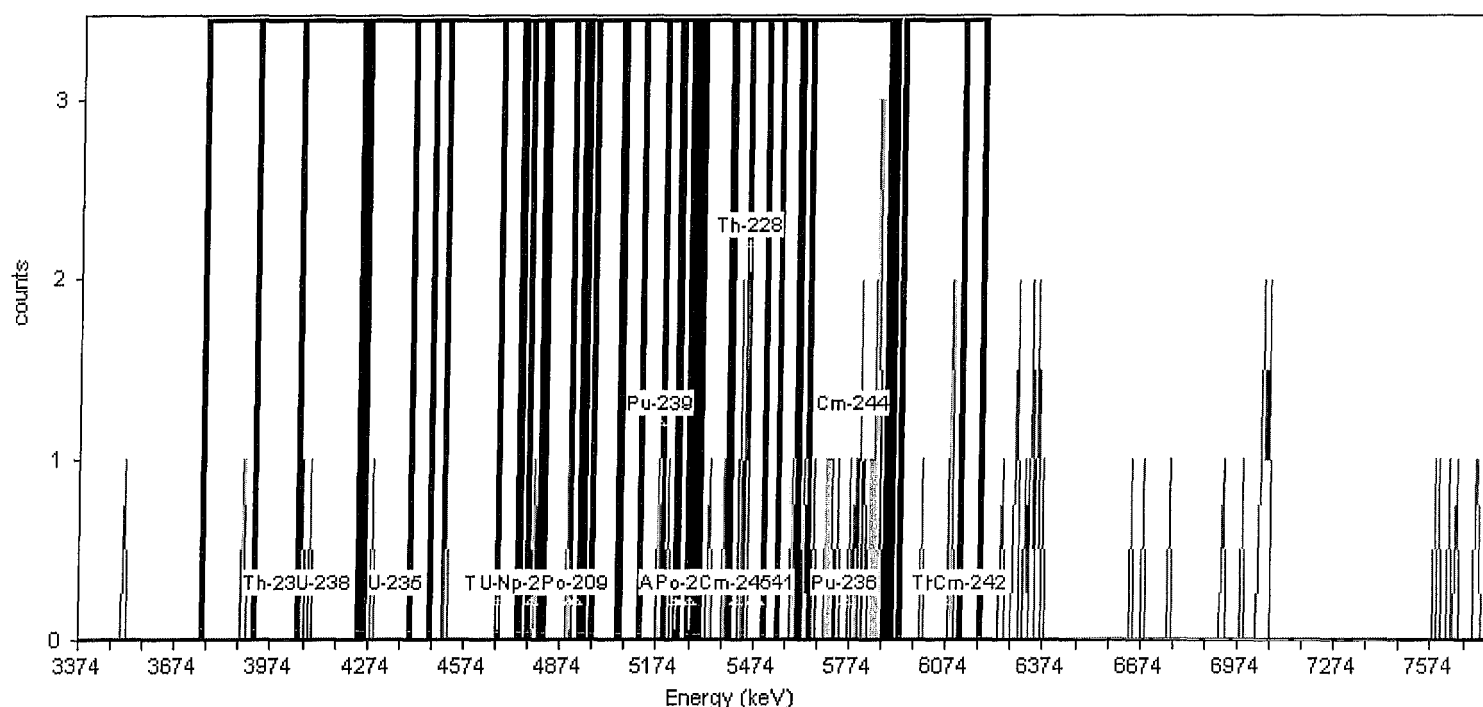
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.56% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_Background Nucplide Library: Background ROI Library

Total Background Counts: 67.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	2.00	2.083E-003	1.804E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	7.00	7.292E-003	2.946E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	6.00	6.250E-003	2.756E-003
Am-241	5.48	5.30	5.60	7.00	7.292E-003	2.946E-003
Cm-245	5.42	5.40	5.45	4.00	4.167E-003	2.329E-003
Pu-236	5.76	5.61	5.89	18.00	1.875E-002	4.541E-003
Cm-244	5.78	5.64	5.90	17.00	1.771E-002	4.419E-003
Th-227	6.07	5.93	6.18	3.00	3.125E-003	2.083E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
11:35:59AM 7/24/2012

Sample Name: ICB;AV76

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012a

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV76 , SN: 49-155N6

Acquisition Start Date: 7/23/2012 7:27:06PM

Live Time: 960.00 min.

Real Time: 960.95 min.

Calibration Name: IC-9884;AV76-20120611a

Calibration Date: 6/12/2012 1:04:24AM

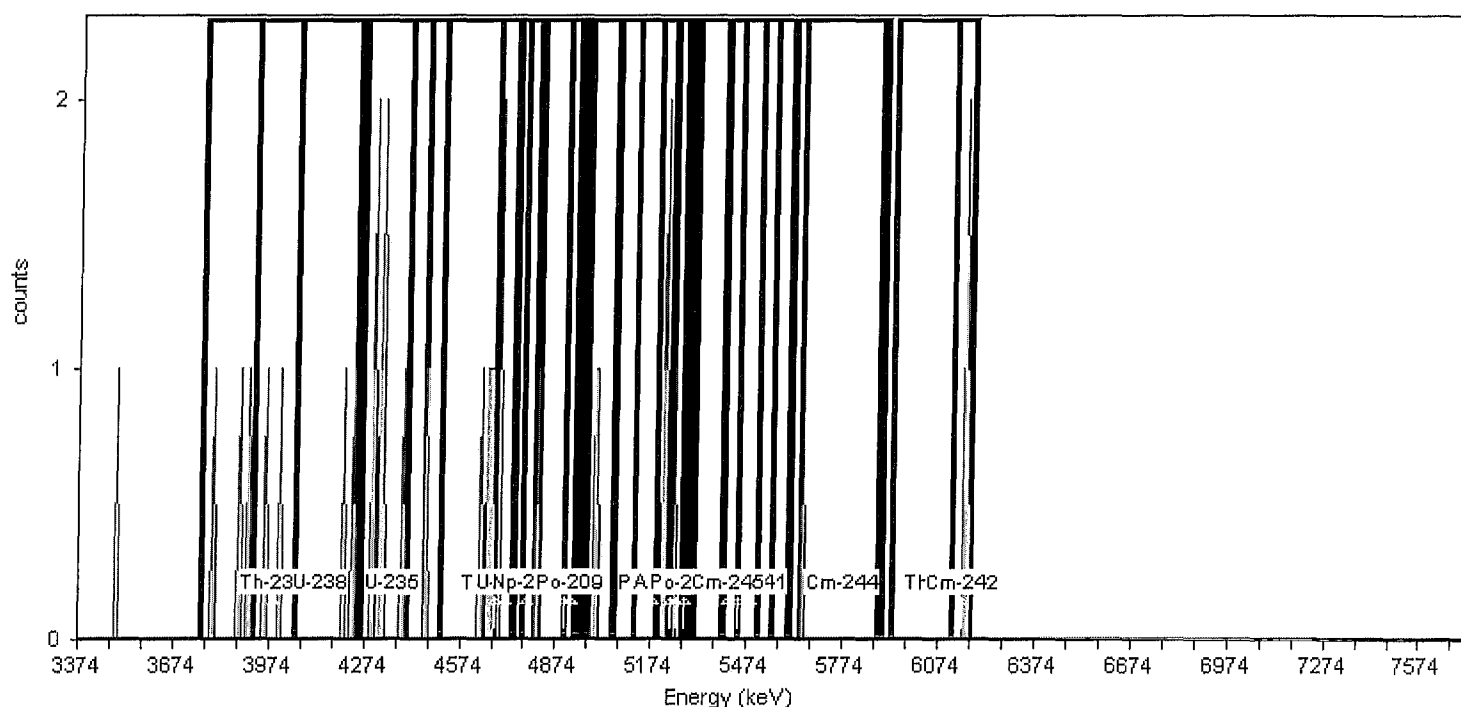
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.23% +/- 0.38% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 35.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	5.00	5.208E-003	2.552E-003
U-238	4.14	3.92	4.24	4.00	4.167E-003	2.329E-003
U-235	4.36	4.26	4.46	9.00	9.375E-003	3.294E-003
Th-230	4.68	4.40	4.75	7.00	7.292E-003	2.946E-003
U-234	4.71	4.51	4.82	7.00	7.292E-003	2.946E-003
Pu-242	4.90	4.68	4.95	3.00	3.125E-003	2.083E-003
Th-229	4.86	4.74	5.12	3.00	3.125E-003	2.083E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	5.00	5.208E-003	2.552E-003
Am-243	5.23	5.05	5.31	4.00	4.167E-003	2.329E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	4.00	4.167E-003	2.329E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	1.00	1.042E-003	1.473E-003
Cm-244	5.78	5.64	5.90	1.00	1.042E-003	1.473E-003
Th-227	6.07	5.93	6.18	4.00	4.167E-003	2.329E-003
Cm-242	6.15	6.12	6.18	4.00	4.167E-003	2.329E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
11:36:05AM 7/24/2012

Sample Name: ICB;AV77

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012a

Analyst: 60040

Description:

Acquisition

Detector: AV77, SN: 49-155N7

Acquisition Start Date: 7/23/2012 7:27:07PM

Live Time: 960.00 min.

Real Time: 960.95 min.

Calibration Name: IC-9885;AV77-20120612

Calibration Date: 6/12/2012 10:16:22PM

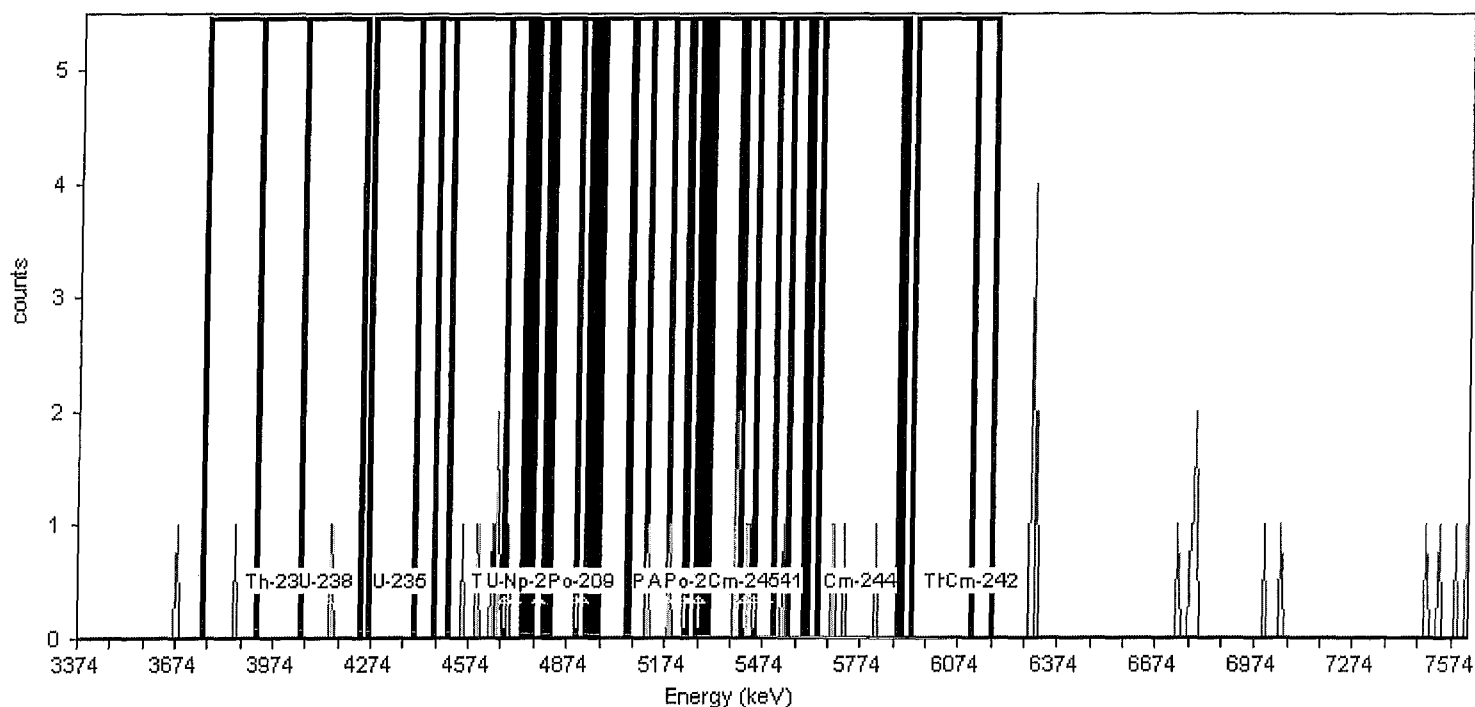
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.74% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 40.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	7.00	7.292E-003	2.946E-003
U-234	4.71	4.51	4.82	7.00	7.292E-003	2.946E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	1.00	1.042E-003	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	5.00	5.208E-003	2.552E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	6.00	6.250E-003	2.756E-003
Am-241	5.48	5.30	5.60	6.00	6.250E-003	2.756E-003
Cm-245	5.42	5.40	5.45	4.00	4.167E-003	2.329E-003
Pu-236	5.76	5.61	5.89	4.00	4.167E-003	2.329E-003
Cm-244	5.78	5.64	5.90	4.00	4.167E-003	2.329E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
11:36:11AM 7/24/2012

Sample Name: ICB;AV78

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012a

Analyst: 60040

Description:

Acquisition

Detector: AV78 , SN: 46-033FF4

Acquisition Start Date: 7/23/2012 7:27:09PM

Live Time: 960.00 min.

Real Time: 960.95 min.

Calibration Name: IC-9886;AV78-20120611a

Calibration Date: 6/12/2012 1:04:27AM

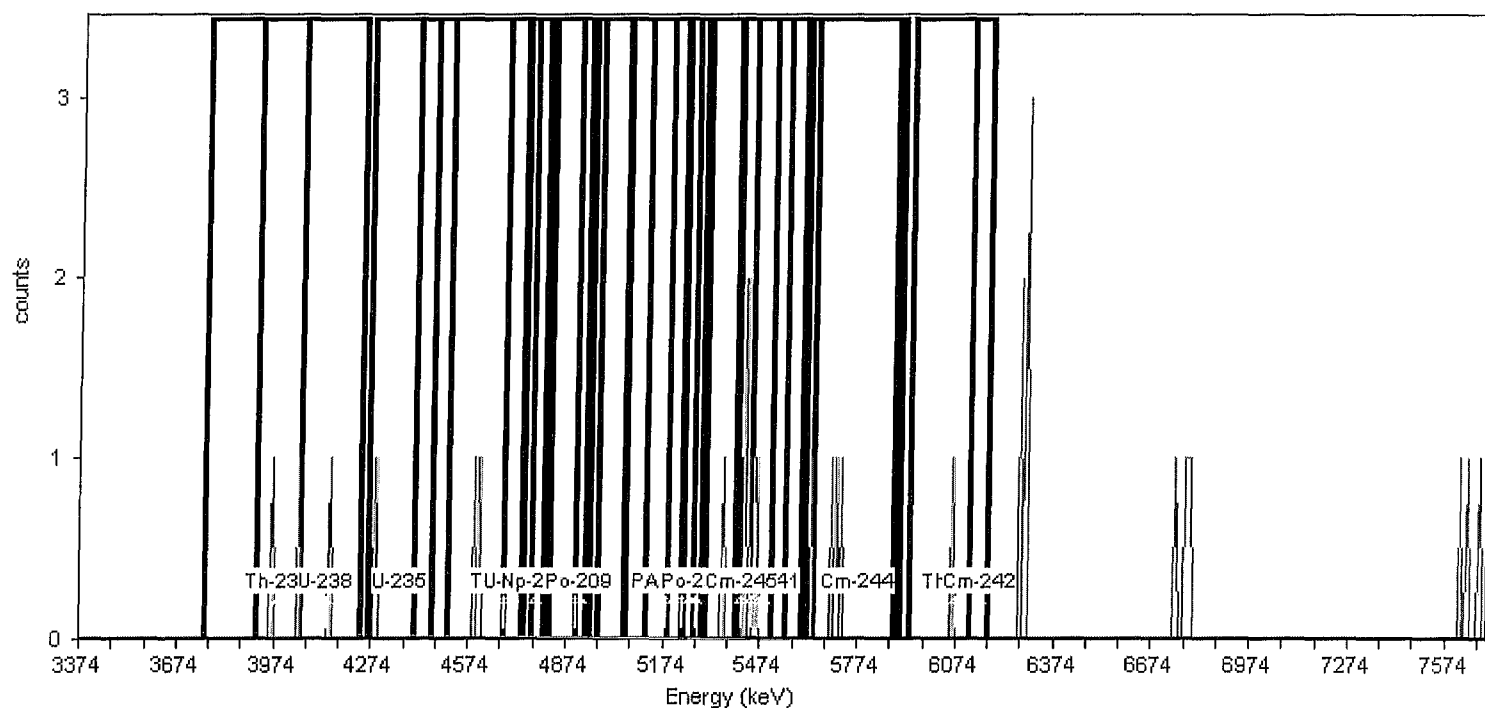
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.51% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 29.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	6.00	6.250E-003	2.756E-003
Am-241	5.48	5.30	5.60	6.00	6.250E-003	2.756E-003
Cm-245	5.42	5.40	5.45	3.00	3.125E-003	2.083E-003
Pu-236	5.76	5.61	5.89	4.00	4.167E-003	2.329E-003
Cm-244	5.78	5.64	5.90	3.00	3.125E-003	2.083E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
11:36:17AM 7/24/2012

Sample Name: ICB;AV79

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012a

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV79, SN: 46-033Q5
Acquisition Start Date: 7/23/2012 7:27:11PM
Live Time: 960.00 min.
Real Time: 960.95 min.
Calibration Name: IC-7107;AV79-20120611a
Calibration Date: 6/12/2012 1:04:30AM

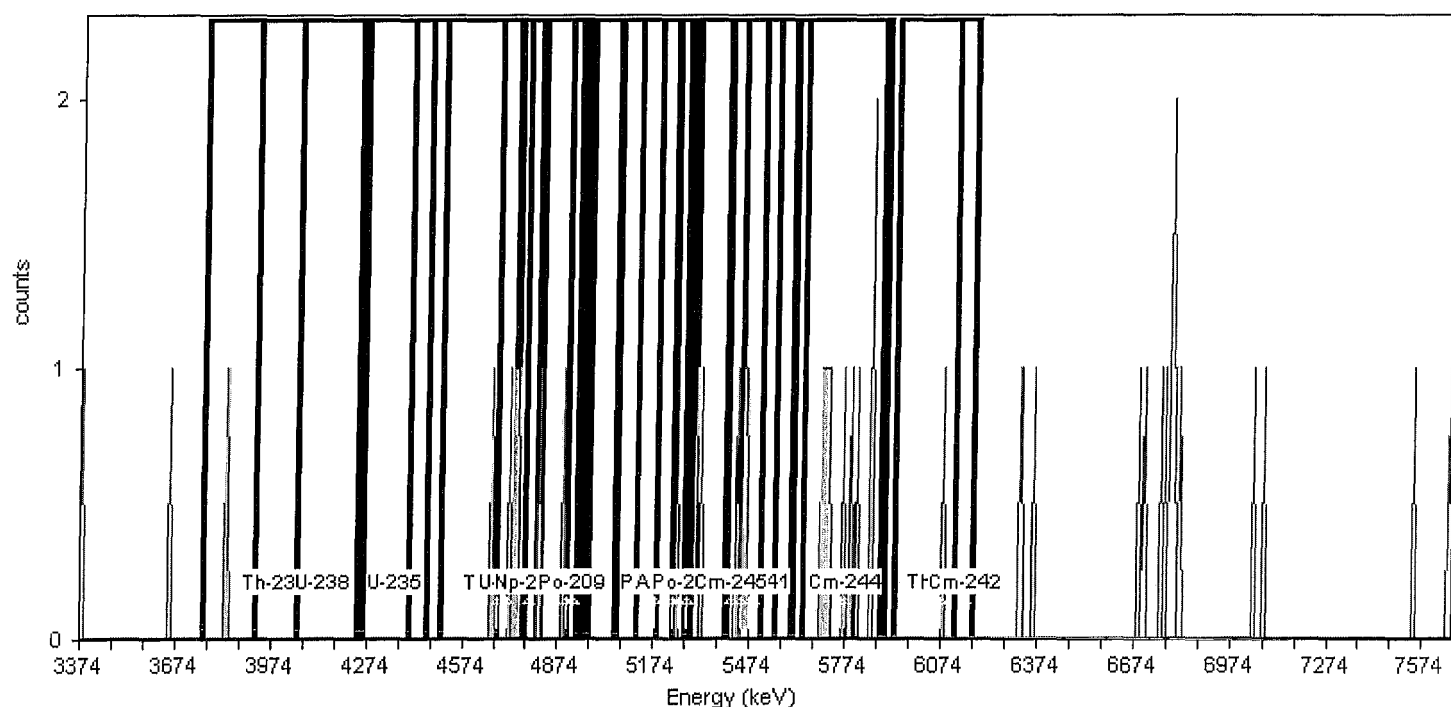
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.24% +/- 0.31% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 42.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	5.00	5.208E-003	2.552E-003
U-234	4.71	4.51	4.82	6.00	6.250E-003	2.756E-003
Pu-242	4.90	4.68	4.95	6.00	6.250E-003	2.756E-003
Th-229	4.86	4.74	5.12	4.00	4.167E-003	2.329E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	3.00	3.125E-003	2.083E-003
Th-228	5.45	5.19	5.51	6.00	6.250E-003	2.756E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	9.00	9.375E-003	3.294E-003
Cm-244	5.78	5.64	5.90	9.00	9.375E-003	3.294E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Monthly CCV
Alpha Vision
July 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)
<i>AV1</i>				
IC-7107;AV1-20120607	6/7/2012 3:02:16 PM	82232-334	0.2756	Pass
CCV-7107;AV1-20120724	7/24/2012 1:37:50 PM	82232-334	0.2749	Pass 99.7401 Pass
<i>AV2</i>				
IC-8874;AV2-20120607	6/7/2012 3:02:23 PM	82233-334	0.2693	Pass
CCV-8874;AV2-20120724	7/24/2012 1:38:06 PM	82233-334	0.2737	Pass 101.617 Pass
<i>AV3</i>				
IC-8875;AV3-20120607	6/7/2012 3:02:28 PM	82234-334	0.2857	Pass
CCV-8875;AV3-20120724	7/24/2012 1:38:18 PM	82234-334	0.2813	Pass 98.4574 Pass
<i>AV4</i>				
IC-8876;AV4-20120607	6/7/2012 3:02:32 PM	82235-334	0.2793	Pass
CCV-8876;AV4-20120724	7/24/2012 1:38:33 PM	82235-334	0.2759	Pass 98.7801 Pass
<i>AV6</i>				
IC-9520;AV6-20120607a	6/7/2012 3:56:30 PM	82237-334	0.2792	Pass
CCV-9520;AV6-20120724	7/24/2012 1:38:57 PM	82237-334	0.2815	Pass 100.837 Pass
<i>AV7</i>				
IC-8879;AV7-20120607	6/7/2012 4:03:51 PM	82238-334	0.2731	Pass
CCV-8879;AV7-20120724	7/24/2012 1:39:10 PM	82238-334	0.2696	Pass 98.7133 Pass
<i>AV8</i>				
IC-9792;AV8-20120607	6/7/2012 4:06:21 PM	82240-334	0.2787	Pass
CCV-9792;AV8-20120724	7/24/2012 1:39:22 PM	82240-334	0.2791	Pass 100.131 Pass
<i>AV9</i>				
IC-9793;AV9-20120607	6/7/2012 4:06:26 PM	82241-334	0.2781	Pass
CCV-9793;AV9-20120724	7/24/2012 1:39:34 PM	82241-334	0.2797	Pass 100.590 Pass
<i>AV10</i>				
IC-9794;AV10-20120621	6/21/2012 2:01:39 PM	82242-334	0.2725	Pass
<i>AV11</i>				
IC-9795;AV11-20120607	6/7/2012 7:50:12 PM	82243-334	0.2751	Pass
CCV-9795;AV11-20120724	7/24/2012 1:40:24 PM	82243-334	0.2762	Pass 100.416 Pass
<i>AV12</i>				
IC-9817;AV12-20120607	6/7/2012 7:50:16 PM	82244-334	0.2699	Pass
CCV-9817;AV12-20120724	7/24/2012 1:40:35 PM	82244-334	0.2659	Pass 98.5073 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 1 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV13</i>						
IC-9884;AV13-20120607	6/7/2012 7:50:19 PM	82245-334	0.2758	Pass		
CCV-9884;AV13-20120724	7/24/2012 1:40:46 PM	82245-334	0.2906	Pass	105.355	Fail
CCV-9884;AV13-20120724a	7/24/2012 5:02:56 PM	82245-334	0.2748	Pass	99.6538	Pass
CCV-9884;AV13-20120725	7/25/2012 11:44:29 AM	82245-334	0.2727	Pass	98.8754	Pass
<i>AV14</i>						
IC-9885;AV14-20120607	6/7/2012 7:50:22 PM	82246-334	0.2724	Pass		
CCV-9885;AV14-20120724	7/24/2012 1:41:00 PM	82246-334	0.2691	Pass	98.7814	Pass
<i>AV15</i>						
IC-9886;AV15-20120607	6/7/2012 7:50:24 PM	82247-334	0.2743	Pass		
CCV-9886;AV15-20120724	7/24/2012 1:41:10 PM	82247-334	0.2744	Pass	100.039	Pass
<i>AV16</i>						
IC-7107;AV16-20120607a	6/8/2012 12:12:55 AM	82232-334	0.2798	Pass		
CCV-7107;AV16-20120724	7/24/2012 5:03:06 PM	82232-334	0.2799	Pass	100.019	Pass
<i>AV17</i>						
IC-8874;AV17-20120607	6/8/2012 12:13:37 AM	82233-334	0.2631	Pass		
CCV-8874;AV17-20120724	7/24/2012 5:03:21 PM	82233-334	0.2669	Pass	101.451	Pass
<i>AV18</i>						
IC-8875;AV18-20120607	6/8/2012 12:13:58 AM	82234-334	0.2748	Pass		
CCV-8875;AV18-20120724	7/24/2012 5:05:40 PM	82234-334	0.2730	Pass	99.3381	Pass
<i>AV19</i>						
IC-8876;AV19-20120607	6/8/2012 12:14:05 AM	82235-334	0.2694	Pass		
CCV-8876;AV19-20120724	7/24/2012 5:03:44 PM	82235-334	0.2681	Pass	99.5055	Pass
<i>AV20</i>						
IC-8877;AV20-20120607	6/7/2012 7:50:28 PM	82236-334	0.2703	Pass		
CCV-8877;AV20-20120724	7/24/2012 1:38:45 PM	82236-334	0.2677	Pass	99.0551	Pass
<i>AV21</i>						
IC-9520;AV21-20120607	6/8/2012 12:14:09 AM	82237-334	0.2708	Pass		
CCV-9520;AV21-20120724	7/24/2012 5:03:53 PM	82237-334	0.2734	Pass	100.966	Pass
<i>AV22</i>						
IC-8879;AV22-20120607	6/8/2012 12:14:14 AM	82238-334	0.2679	Pass		
CCV-8879;AV22-20120724	7/24/2012 5:04:03 PM	82238-334	0.2639	Pass	98.5154	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 2 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV23</i>						
IC-9792;AV23-20120607	6/8/2012 12:14:18 AM	82240-334	0.2673	Pass		
CCV-9792;AV23-20120724	7/24/2012 5:04:14 PM	82240-334	0.2688	Pass	100.552	Pass
<i>AV24</i>						
IC-9793;AV24-20120607	6/8/2012 12:14:21 AM	82241-334	0.2734	Pass		
CCV-9793;AV24-20120724	7/24/2012 5:04:24 PM	82241-334	0.2766	Pass	101.156	Pass
<i>AV43</i>						
IC-9794;AV43-20120607	6/7/2012 7:50:31 PM	82242-334	0.2699	Pass		
CCV-9794;AV43-20120725	7/25/2012 10:28:07 PM	82242-334	0.2686	Pass	99.5158	Pass
<i>AV44</i>						
IC-9795;AV44-20120610	6/11/2012 3:27:57 PM	82243-334	0.2664	Pass		
CCV-9795;AV44-20120725	7/25/2012 10:28:12 PM	82243-334	0.2682	Pass	100.672	Pass
<i>AV45</i>						
IC-9817;AV45-20120610	6/11/2012 3:28:22 PM	82244-334	0.2704	Pass		
CCV-9817;AV45-20120725	7/25/2012 10:28:16 PM	82244-334	0.0001	Eval	5.53444	Fail
<i>AV46</i>						
IC-9884;AV46-20120610	6/11/2012 3:28:47 PM	82245-334	0.2849	Pass		
CCV-9884;AV46-20120725	7/25/2012 10:28:19 PM	82245-334	0.2804	Pass	98.4164	Pass
<i>AV47</i>						
IC-9885;AV47-20120611a	6/12/2012 1:04:12 AM	82246-334	0.2678	Pass		
<i>AV48</i>						
IC-9886;AV48-20120610	6/11/2012 3:29:40 PM	82247-334	0.2764	Pass		
CCV-9886;AV48-20120725	7/25/2012 10:28:31 PM	82247-334	0.0004	Eval	0.13021	Fail
<i>AV49</i>						
IC-7107;AV49-20120610	6/10/2012 8:17:41 PM	82232-334	0.2927	Pass		
CCV-7107;AV49-20120725	7/25/2012 10:28:34 PM	82232-334	0.2909	Pass	99.3834	Pass
<i>AV50</i>						
IC-8874;AV50-20120610	6/10/2012 8:17:58 PM	82233-334	0.2754	Pass		
CCV-8874;AV50-20120726	7/26/2012 1:58:10 PM	82233-334	0.2729	Pass	99.0921	Pass
<i>AV51</i>						
IC-8875;AV51-20120610	6/10/2012 8:18:12 PM	82234-334	0.2819	Pass		
CCV-8875;AV51-20120725	7/25/2012 10:28:38 PM	82234-334	0.2814	Pass	99.8447	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 3 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV52</i>				
IC-8876;AV52-20120610	6/10/2012 8:18:26 PM	82235-334	0.2911	Pass
CCV-8876;AV52-20120726	7/26/2012 1:58:30 PM	82235-334	0.2925	Pass 100.496 Pass
<i>AV53</i>				
IC-8877;AV53-20120610	6/10/2012 8:18:38 PM	82236-334	0.2773	Pass
CCV-8877;AV53-20120725	7/25/2012 10:28:41 PM	82236-334	0.2775	Pass 100.055 Pass
<i>AV54</i>				
IC-9520;AV54-20120610	6/10/2012 8:18:52 PM	82237-334	0.2798	Pass
CCV-9520;AV54-20120726	7/26/2012 1:58:49 PM	82237-334	0.2760	Pass 98.6444 Pass
<i>AV55</i>				
IC-8879;AV55-20120610	6/10/2012 8:19:03 PM	82238-334	0.2720	Pass
CCV-8879;AV55-20120725	7/25/2012 10:28:45 PM	82238-334	0.2697	Pass 99.1518 Pass
<i>AV56</i>				
IC-9792;AV56-20120610	6/10/2012 8:19:16 PM	82240-334	0.2709	Pass
CCV-9792;AV56-20120725	7/25/2012 10:28:48 PM	82240-334	0.0003	Eval 0.11605 Fail
<i>AV57</i>				
IC-9793;AV57-20120610	6/10/2012 8:19:29 PM	82241-334	0.2764	Pass
CCV-9793;AV57-20120725	7/25/2012 10:28:52 PM	82241-334	0.2763	Pass 99.9520 Pass
<i>AV58</i>				
IC-9794;AV58-20120610	6/10/2012 8:19:36 PM	82242-334	0.2550	Pass
<i>AV59</i>				
IC-9795;AV59-20120610	6/10/2012 8:19:39 PM	82243-334	0.2753	Pass
<i>AV60</i>				
IC-9817;AV60-20120610	6/10/2012 8:19:43 PM	82244-334	0.2682	Pass
CCV-9817;AV60-20120725a	7/26/2012 12:42:30 AM	82244-334	0.2705	Pass 100.836 Pass
<i>AV61</i>				
IC-9884;AV61-20120610	6/10/2012 8:19:46 PM	82245-334	0.2792	Pass
CCV-9884;AV61-20120725	7/26/2012 12:42:24 AM	82245-334	0.2785	Pass 99.7356 Pass
<i>AV62</i>				
IC-9885;AV62-20120610	6/10/2012 8:19:49 PM	82246-334	0.2742	Pass
CCV-9885;AV62-20120725	7/26/2012 12:42:33 AM	82246-334	0.2738	Pass 99.8594 Pass
<i>AV63</i>				
IC-9886;AV63-20120610	6/10/2012 8:19:57 PM	82247-334	0.2707	Pass
CCV-9886;AV63-20120725	7/26/2012 12:42:36 AM	82247-334	0.2716	Pass 100.323 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 4 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV64</i>						
IC-7107;AV64-20120610	6/11/2012 3:30:09 PM	82232-334	0.2935	Pass		
CCV-7107;AV64-20120726	7/26/2012 1:58:00 PM	82232-334	0.2935	Pass	99.9978	Pass
<i>AV65</i>						
IC-8874;AV65-20120610	6/11/2012 3:30:33 PM	82233-334	0.2759	Pass		
CCV-8874;AV65-20120725	7/25/2012 10:28:56 PM	82233-334	0.2745	Pass	99.4624	Pass
<i>AV66</i>						
IC-8875;AV66-20120610	6/11/2012 3:30:58 PM	82234-334	0.2846	Pass		
CCV-8875;AV66-20120725	7/26/2012 12:42:39 AM	82234-334	0.2809	Pass	98.6783	Pass
<i>AV67</i>						
IC-8876;AV67-20120610	6/11/2012 3:31:27 PM	82235-334	0.2953	Pass		
CCV-8876;AV67-20120726	7/26/2012 5:34:37 PM	82235-334	0.2975	Pass	100.722	Pass
<i>AV68</i>						
IC-8877;AV68-20120610	6/11/2012 3:31:53 PM	82236-334	0.2740	Pass		
CCV-8877;AV68-20120725	7/26/2012 12:42:42 AM	82236-334	0.2748	Pass	100.313	Pass
<i>AV69</i>						
IC-9520;AV69-20120610	6/11/2012 3:32:14 PM	82237-334	0.2763	Pass		
CCV-9520;AV69-20120725	7/25/2012 10:29:25 PM	82237-334	0.2730	Pass	98.8075	Pass
<i>AV70</i>						
IC-8879;AV70-20120610	6/11/2012 3:32:41 PM	82238-334	0.2732	Pass		
CCV-8879;AV70-20120725	7/26/2012 12:42:45 AM	82238-334	0.2708	Pass	99.1119	Pass
<i>AV71</i>						
IC-9792;AV71-20120610	6/11/2012 3:33:08 PM	82240-334	0.2763	Pass		
CCV-9792;AV71-20120725	7/26/2012 12:42:50 AM	82240-334	0.2755	Pass	99.7117	Pass
<i>AV72</i>						
IC-9793;AV72-20120610	6/11/2012 3:33:25 PM	82241-334	0.2910	Pass		
CCV-9793;AV72-20120725	7/26/2012 12:42:53 AM	82241-334	0.2858	Pass	98.2175	Pass
<i>AV73</i>						
IC-9794;AV73-20120610	6/11/2012 3:33:47 PM	82242-334	0.2766	Pass		
CCV-9794;AV73-20120725	7/26/2012 12:42:56 AM	82242-334	0.2759	Pass	99.7532	Pass
<i>AV74</i>						
IC-9795;AV74-20120611a	6/12/2012 1:04:18 AM	82243-334	0.2701	Pass		
CCV-9795;AV74-20120726	7/26/2012 8:37:17 AM	82243-334	0.2731	Pass	101.096	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 5 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV75</i>						
IC-9817;AV75-20120611a	6/12/2012 1:04:21 AM	82244-334	0.2656	Pass		
CCV-9817;AV75-20120724	7/24/2012 8:51:29 PM	82244-334	0.2666	Pass	100.388	Pass
<i>AV76</i>						
IC-9884;AV76-20120611a	6/12/2012 1:04:24 AM	82245-334	0.2723	Pass		
CCV-9884;AV76-20120724a	7/24/2012 10:38:47 PM	82245-334	0.2757	Pass	101.240	Pass
<i>AV77</i>						
IC-9885;AV77-20120612	6/12/2012 10:16:22 PM	82246-334	0.2674	Pass		
CCV-9885;AV77-20120724	7/24/2012 8:51:53 PM	82246-334	0.2687	Pass	100.497	Pass
<i>AV78</i>						
IC-9886;AV78-20120611a	6/12/2012 1:04:27 AM	82247-334	0.2751	Pass		
CCV-9886;AV78-20120724	7/24/2012 8:51:41 PM	82247-334	0.2748	Pass	99.8636	Pass
<i>AV79</i>						
IC-7107;AV79-20120611a	6/12/2012 1:04:30 AM	82232-334	0.2824	Pass		
CCV-7107;AV79-20120724	7/24/2012 8:51:57 PM	82232-334	0.2837	Pass	100.462	Pass
<i>AV80</i>						
IC-8874;AV80-20120611a	6/12/2012 1:04:34 AM	82233-334	0.2692	Pass		
CCV-8874;AV80-20120724	7/24/2012 8:51:46 PM	82233-334	0.2697	Pass	100.177	Pass
<i>AV81</i>						
IC-8875;AV81-20120611a	6/12/2012 1:04:37 AM	82234-334	0.2858	Pass		
CCV-8875;AV81-20120724	7/24/2012 8:51:49 PM	82234-334	0.2899	Pass	101.429	Pass
<i>AV82</i>						
IC-8876;AV82-20120611a	6/12/2012 1:04:40 AM	82235-334	0.2768	Pass		
CCV-8876;AV82-20120724	7/24/2012 8:52:00 PM	82235-334	0.2737	Pass	98.8822	Pass
<i>AV83</i>						
IC-8877;AV83-20120611a	6/12/2012 1:04:44 AM	82236-334	0.2727	Pass		
CCV-8877;AV83-20120724	7/24/2012 8:52:04 PM	82236-334	0.2757	Pass	101.099	Pass
<i>AV84</i>						
IC-9520;AV84-20120611a	6/12/2012 1:04:47 AM	82237-334	0.2790	Pass		
CCV-9520;AV84-20120724	7/24/2012 8:52:07 PM	82237-334	0.2748	Pass	98.4876	Pass
<i>AV85</i>						
IC-8879;AV85-20120611a	6/12/2012 1:04:50 AM	82238-334	0.2774	Pass		
CCV-8879;AV85-20120724	7/24/2012 8:52:11 PM	82238-334	0.2782	Pass	100.258	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 6 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV86</i>						
IC-9792;AV86-20120611a	6/12/2012 1:04:54 AM	82240-334	0.2769	Pass		
CCV-9792;AV86-20120724	7/24/2012 8:52:16 PM	82240-334	0.2771	Pass	100.046	Pass
<i>AV87</i>						
IC-9793;AV87-20120611a	6/12/2012 1:04:56 AM	82241-334	0.2951	Pass		
CCV-9793;AV87-20120724	7/24/2012 8:52:20 PM	82241-334	0.2909	Pass	98.5861	Pass
<i>AV88</i>						
IC-9794;AV88-20120611a	6/12/2012 1:04:59 AM	82242-334	0.2744	Pass		
CCV-9794;AV88-20120724	7/24/2012 5:04:33 PM	82242-334	0.2741	Pass	99.8889	Pass
<i>AV89</i>						
IC-9795;AV89-20120612	6/12/2012 3:39:24 PM	82243-334	0.2684	Pass		
CCV-9795;AV89-20120724	7/24/2012 5:04:44 PM	82243-334	0.2679	Pass	99.8091	Pass
<i>AV90</i>						
IC-9817;AV90-20120612	6/12/2012 3:39:50 PM	82244-334	0.2731	Pass		
CCV-9817;AV90	7/24/2012 5:05:02 PM	82244-334	0.2721	Pass	99.6298	Pass
<i>AV91</i>						
IC-9884;AV91-20120612	6/12/2012 3:40:10 PM	82245-334	0.2787	Pass		
CCV-9884;AV91-20120724	7/24/2012 11:50:47 PM	82245-334	0.2800	Pass	100.497	Pass
<i>AV92</i>						
IC-9885;AV92-20120613	6/13/2012 10:43:01 AM	82246-334	0.2705	Pass		
CCV-9885;AV92-20120724	7/24/2012 5:08:08 PM	82246-334	0.2723	Pass	100.677	Pass
<i>AV93</i>						
IC-9886;AV93-20120612	6/12/2012 3:40:55 PM	82247-334	0.2715	Pass		
CCV-9886;AV93-20120724	7/24/2012 5:08:42 PM	82247-334	0.2720	Pass	100.196	Pass
<i>AV94</i>						
IC-7107;AV94-20120612a	6/12/2012 3:41:17 PM	82232-334	0.2797	Pass		
CCV-7107;AV94-20120724	7/24/2012 10:38:52 PM	82232-334	0.2772	Pass	99.0992	Pass
<i>AV95</i>						
IC-8874;AV95-20120608	6/8/2012 8:45:55 AM	82233-334	0.2719	Pass		
CCV-8874;AV95-20120724	7/24/2012 10:38:55 PM	82233-334	0.2708	Pass	99.6240	Pass
<i>AV96</i>						
IC-8875;AV96-20120612	6/12/2012 3:41:40 PM	82234-334	0.2831	Pass		
CCV-8875;AV96-20120724	7/24/2012 10:39:01 PM	82234-334	0.0004	Eval	0.14859	Fail

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 7 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV97</i>						
IC-8876;AV97-20120612a	6/12/2012 10:16:26 PM	82235-334	0.2765	Pass		
CCV-8876;;AV97-20120724	7/24/2012 10:39:04 PM	82235-334	0.2779	Pass	100.508	Pass
<i>AV98</i>						
IC-8877;AV98-20120608	6/8/2012 8:46:02 AM	82236-334	0.2818	Pass		
CCV-8877;AV98-20120724	7/24/2012 5:06:05 PM	82236-334	0.2793	Pass	99.1155	Pass
<i>AV99</i>						
IC-9520;AV99-20120608	6/8/2012 8:46:10 AM	82237-334	0.2703	Pass		
<i>AV100</i>						
IC-8879;AV100-20120608	6/8/2012 8:46:24 AM	82238-334	0.2719	Pass		
CCV-8879;AV100-20120726	7/26/2012 1:58:58 PM	82238-334	0.2703	Pass	99.4168	Pass
<i>AV101</i>						
IC-9792;AV101-20120608	6/8/2012 8:46:34 AM	82240-334	0.2802	Pass		
CCV-9792;AV101-20120726	7/26/2012 8:37:09 AM	82240-334	0.2787	Pass	99.4560	Pass
<i>AV102</i>						
IC-9793;AV102-20120608	6/8/2012 8:46:41 AM	82241-334	0.2826	Pass		
CCV-9793;AV102-20120726	7/26/2012 8:37:21 AM	82241-334	0.2794	Pass	98.8711	Pass
<i>AV103</i>						
IC-9794;AV103-20120607	6/8/2012 12:14:29 AM	82242-334	0.2709	Pass		
CCV-9794;AV103-20120726	7/26/2012 1:59:26 PM	82242-334	0.2718	Pass	100.319	Pass
<i>AV104</i>						
IC-9795;AV104-20120607	6/8/2012 12:14:40 AM	82243-334	0.2646	Pass		
CCV-9795;AV104-20120726	7/26/2012 1:59:37 PM	82243-334	0.0056	Eval	2.11169	Fail
<i>AV105</i>						
IC-9817;AV105-20120607	6/8/2012 12:14:48 AM	82244-334	0.2474	Pass		
CCV-9817;AV10520120726	7/26/2012 1:59:46 PM	82244-334	0.2451	Pass	99.0547	Pass
<i>AV106</i>						
IC-9884;AV106-20120607	6/8/2012 12:15:09 AM	82245-334	0.2797	Pass		
CCV-9884;AV106-20120726	7/26/2012 1:59:55 PM	82245-334	0.2758	Pass	98.5711	Pass
<i>AV107</i>						
IC-9885;AV107-20120607	6/8/2012 12:14:52 AM	82246-334	0.2711	Pass		
CCV-9885;AV107-20120726	7/26/2012 2:00:04 PM	82246-334	0.2733	Pass	100.841	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 8 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV108</i>							
IC-9886;AV108-20120607	6/8/2012 12:14:56 AM	82247-334	0.2812	Pass			
CCV-9886;AV108-20120726	7/26/2012 2:00:19 PM	82247-334	0.2814	Pass	100.046	Pass	
<i>AV109</i>							
IC-7107;AV109-20120608	6/8/2012 8:46:47 AM	82232-334	0.2782	Pass			
CCV-7107;AV109-20120725	7/26/2012 12:42:58 AM	82232-334	0.2245	Pass	80.7030	Fail	
CCV-7107;AV109-20120726	7/26/2012 5:32:41 PM	82232-334	0.2819	Pass	101.326	Pass	
CCV-7107;AV109-20120726a	7/26/2012 7:44:53 PM	82232-334	0.2763	Pass	99.3002	Pass	
<i>AV111</i>							
IC-8875;AV111-20120608	6/8/2012 8:46:55 AM	82234-334	0.2800	Pass			
CCV-8875;AV111-20120726	7/26/2012 8:37:25 AM	82234-334	0.2787	Pass	99.5396	Pass	
<i>AV112</i>							
IC-8876;AV112-20120608	6/8/2012 8:47:01 AM	82235-334	0.2750	Pass			
CCV-8876;AV112-20120725	7/25/2012 10:31:58 PM	82235-334	0.2735	Pass	99.4658	Pass	
<i>AV113</i>							
IC-8877;AV113-20120607	6/8/2012 12:15:02 AM	82236-334	0.2765	Pass			
CCV-8877;AV113-20120726	7/26/2012 8:37:29 AM	82236-334	0.2772	Pass	100.255	Pass	
<i>AV114</i>							
IC-9520;AV114-20120612	6/12/2012 3:42:22 PM	82237-334	0.2746	Pass			
CCV-9520;AV114-20120726	7/26/2012 5:34:48 PM	82237-334	0.2758	Pass	100.401	Pass	
<i>AV115</i>							
IC-8879;AV115-20120612	6/12/2012 3:42:43 PM	82238-334	0.2756	Pass			
CCV-8879;AV115-20120726	7/26/2012 5:34:59 PM	82238-334	0.2762	Pass	100.213	Pass	
<i>AV116</i>							
IC-9792;AV116-20120612	6/12/2012 3:43:02 PM	82240-334	0.2914	Pass			
CCV-9792;AV116-20120726	7/26/2012 1:59:07 PM	82240-334	0.2773	Pass	95.1508	Pass	
<i>AV117</i>							
IC-9793;AV117-20120612	6/12/2012 3:43:27 PM	82241-334	0.2628	Pass			
CCV-9793;AV117-20120726	7/26/2012 1:59:16 PM	82241-334	0.2683	Pass	102.098	Pass	
<i>AV118</i>							
IC-9794;AV118-20120608	6/8/2012 8:47:07 AM	82242-334	0.2728	Pass			
CCV-9794;AV118-20120726	7/26/2012 8:37:33 AM	82242-334	0.2689	Pass	98.5708	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 9 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV119</i>							
IC-9795;AV119-20120608	6/8/2012 8:47:13 AM	82243-334	0.2655	Pass			
CCV-9795;AV119-20120726	7/26/2012 10:05:57 PM	82243-334	0.2655	Pass	99.9791	Pass	
<i>AV120</i>							
IC-9817;AV120-20120608	6/8/2012 8:47:18 AM	82244-334	0.2668	Pass			
CCV-9817;AV120-20120726	7/26/2012 8:37:37 AM	82244-334	0.2689	Pass	100.796	Pass	
<i>AV121</i>							
IC-9884;AV121-20120608	6/8/2012 8:54:38 AM	82245-334	0.2825	Pass			
CCV-9884;AV121-20120726	7/26/2012 8:37:41 AM	82245-334	0.2811	Pass	99.4897	Pass	
<i>AV122</i>							
IC-9885;AV122-20120608	6/8/2012 8:54:44 AM	82246-334	0.2678	Pass			
CCV-9885;AV122-20120726	7/26/2012 8:37:46 AM	82246-334	0.2712	Pass	101.254	Pass	
<i>AV123</i>							
IC-9886;AV123-20120614	6/15/2012 11:45:44 AM	82247-334	0.2691	Pass			
CCV-9886;AV123-20120726	7/26/2012 8:37:50 AM	82247-334	0.2654	Pass	98.6278	Pass	
<i>AV124</i>							
IC-7107;AV124-20120614	6/15/2012 11:46:08 AM	82232-334	0.2653	Pass			
CCV-7107;AV124-20120726	7/26/2012 10:16:23 PM	82232-334	0.2661	Pass	100.282	Pass	
<i>AV125</i>							
IC-8874;AV125-20120614	6/15/2012 11:46:45 AM	82233-334	0.2675	Pass			
CCV-8874;AV125-20120725	7/26/2012 12:43:01 AM	82233-334	0.2694	Pass	100.701	Pass	
<i>AV126</i>							
IC-8875;AV126-20120614	6/15/2012 11:47:26 AM	82234-334	0.2760	Pass			
CCV-8875;AV126-20120726	7/26/2012 1:58:20 PM	82234-334	0.2746	Pass	99.5062	Pass	
<i>AV127</i>							
IC-8876;AV127-20120614	6/15/2012 11:48:11 AM	82235-334	0.2775	Pass			
CCV-8876;AV127-20120725	7/26/2012 12:43:05 AM	82235-334	0.0003	Eval	0.11569	Fail	
<i>AV128</i>							
IC-8877;AV128-20120614	6/15/2012 11:48:54 AM	82236-334	0.2685	Pass			
CCV-8877;AV128-20120726	7/26/2012 1:58:40 PM	82236-334	0.0003	Eval	0.11553	Fail	
<i>AV129</i>							
IC-9520;AV129-20120614	6/15/2012 11:49:36 AM	82237-334	0.2710	Pass			
CCV-9520;AV129-20120725	7/26/2012 12:43:08 AM	82237-334	0.2730	Pass	100.742	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 10 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV130</i>				
IC-8879;AV130-20120614	6/15/2012 11:50:34 AM	82238-334	0.2707	Pass
CCV-8879;AV130-20120726	7/26/2012 8:37:58 AM	82238-334	0.2711	Pass 100.151 Pass
<i>AV131</i>				
IC-9792;AV131-20120612	6/12/2012 10:16:29 PM	82240-334	0.2777	Pass
CCV-9792;AV131-20120726	7/26/2012 7:43:47 PM	82240-334	0.2754	Pass 99.1770 Pass
<i>AV132</i>				
IC-9793;AV132-20120612	6/12/2012 10:16:32 PM	82241-334	0.2711	Pass
CCV-9793;AV132-20120726	7/26/2012 5:35:09 PM	82241-334	0.2728	Pass 100.644 Pass
<i>AV133</i>				
IC-9794;AV133-20120612	6/12/2012 3:43:51 PM	82242-334	0.2627	Pass
CCV-9794;AV133-20120726	7/26/2012 7:43:55 PM	82242-334	0.2629	Pass 100.084 Pass
<i>AV134</i>				
IC-9795;AV134-20120612	6/12/2012 10:16:35 PM	82243-334	0.2665	Pass
CCV-9795;AV134-20120726	7/26/2012 7:44:04 PM	82243-334	0.2637	Pass 98.9425 Pass
<i>AV135</i>				
IC-9817;AV135-20120612	6/12/2012 10:16:38 PM	82244-334	0.2610	Pass
CCV-9817;AV135-20120726	7/26/2012 7:44:16 PM	82244-334	0.2622	Pass 100.442 Pass
<i>AV136</i>				
IC-9884;AV136-20120612	6/12/2012 10:16:41 PM	82245-334	0.2745	Pass
CCV-9884;AV13620120726	7/26/2012 7:44:27 PM	82245-334	0.2725	Pass 99.2766 Pass
<i>AV137</i>				
IC-9885;AV137-20120621	6/21/2012 2:01:56 PM	82246-334	0.2674	Pass
CCV-9885;AV137-20120726	7/26/2012 7:44:35 PM	82246-334	0.2648	Pass 99.0375 Pass
<i>AV138</i>				
IC-9886;AV138-20120608	6/8/2012 8:55:45 AM	82247-334	0.2683	Pass
CCV-9886;AV138-20120726	7/26/2012 7:44:43 PM	82247-334	0.2672	Pass 99.5864 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 11 of 11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Monthly Backgrounds
Alpha Vision
July 2012
AV1-146

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV111

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV111, SN: 49-037E6
 Acquisition Start Date: 7/24/2012 9:06:19PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-8875;AV111-20120608
 Calibration Date: 6/8/2012 8:46:55AM

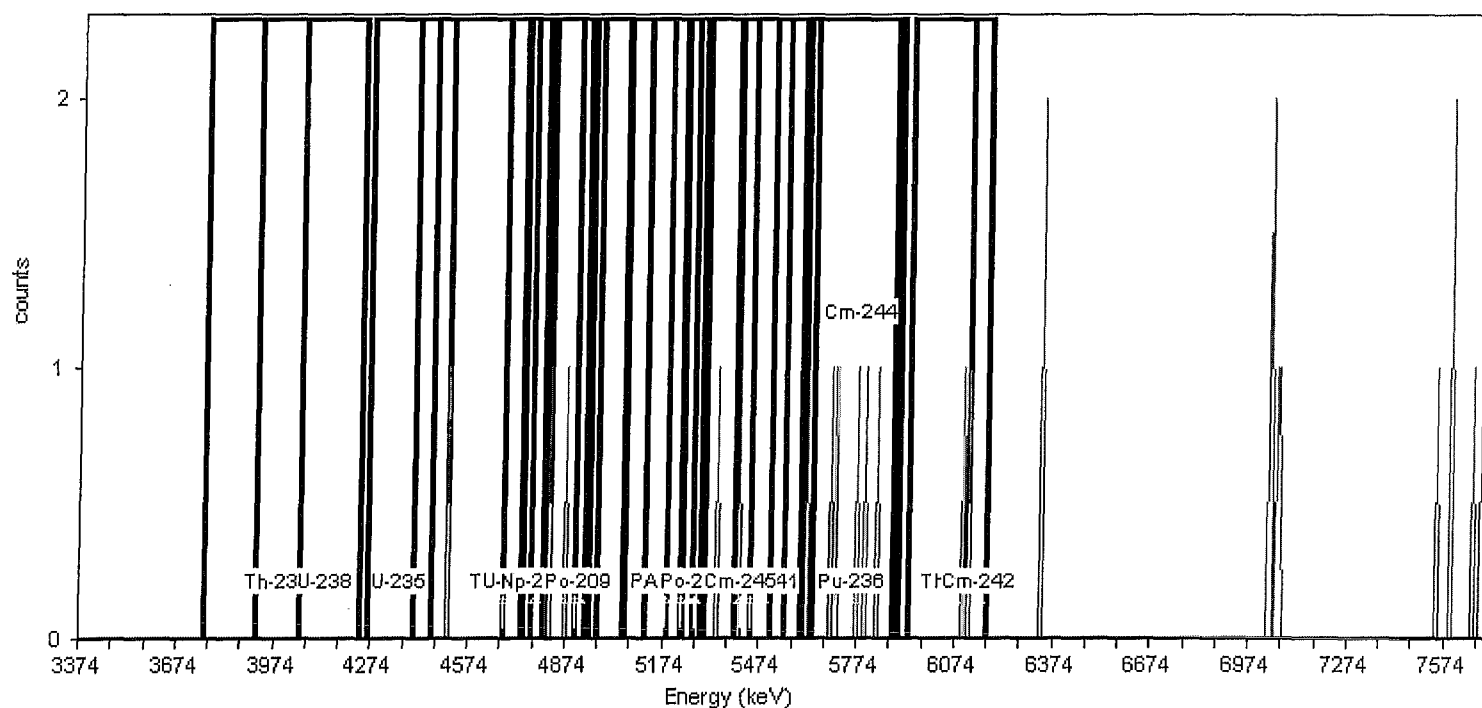
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.00% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 25.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	2.00	2.083E-003	1.804E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	2.00	2.083E-003	1.804E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	2.00	2.083E-003	1.804E-003
Am-241	5.48	5.30	5.60	2.00	2.083E-003	1.804E-003
Cm-245	5.42	5.40	5.45	1.00	1.042E-003	1.473E-003
Pu-236	5.76	5.61	5.89	6.00	6.250E-003	2.756E-003
Cm-244	5.78	5.64	5.90	5.00	5.208E-003	2.552E-003
Th-227	6.07	5.93	6.18	2.00	2.083E-003	1.804E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

TestAmerica

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:12:43PM 7/25/2012

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV112

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV112 , SN: 49-037G7
Acquisition Start Date: 7/24/2012 9:06:21PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-8876;AV112-20120608
Calibration Date: 6/8/2012 8:47:01AM

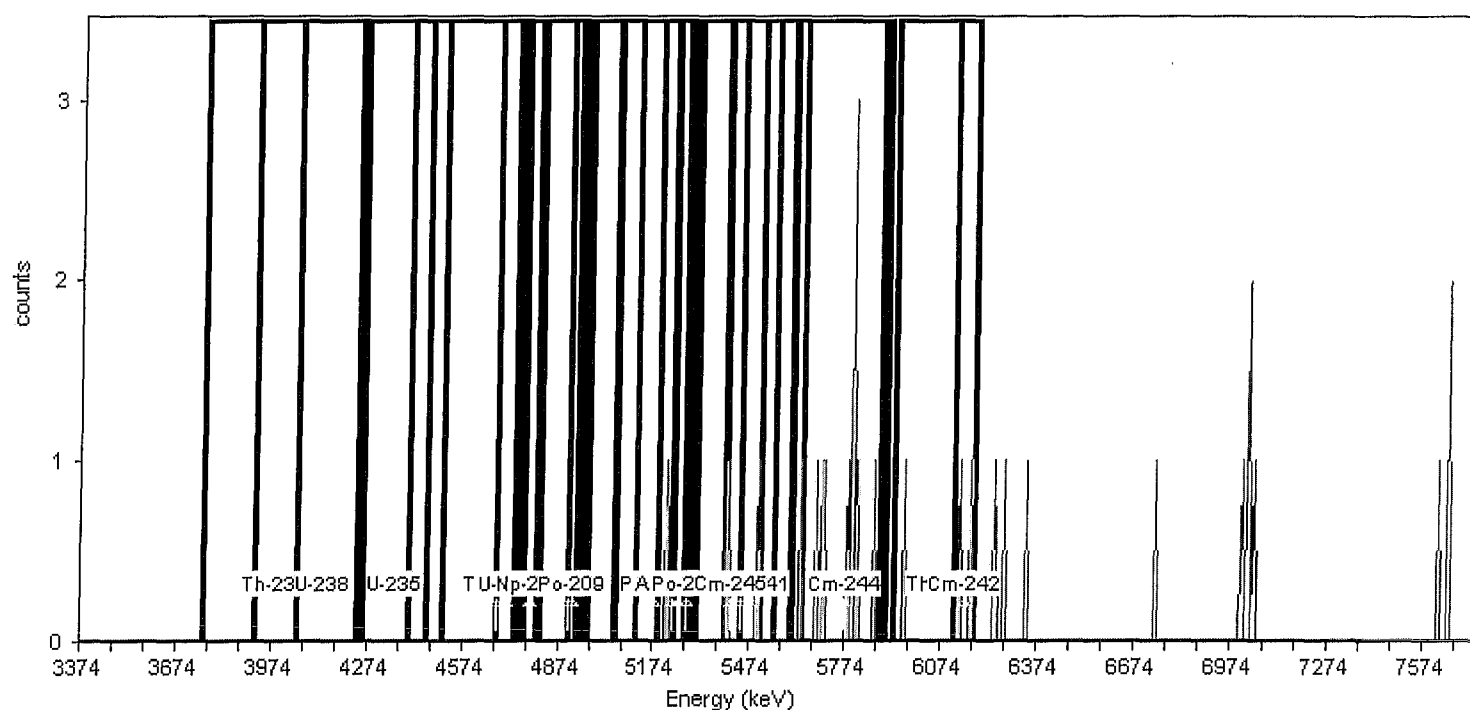
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.50% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_Background, Nuclide Library: Background ROI Library

Total Background Counts: 29.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	2.00	2.083E-003	1.804E-003
Th-228	5.45	5.19	5.51	4.00	4.167E-003	2.329E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	3.00	3.125E-003	2.083E-003
Am-241	5.48	5.30	5.60	3.00	3.125E-003	2.083E-003
Cm-245	5.42	5.40	5.45	2.00	2.083E-003	1.804E-003
Pu-236	5.76	5.61	5.89	10.00	1.042E-002	3.455E-003
Cm-244	5.78	5.64	5.90	9.00	9.375E-003	3.294E-003
Th-227	6.07	5.93	6.18	3.00	3.125E-003	2.083E-003
Cm-242	6.15	6.12	6.18	2.00	2.083E-003	1.804E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV113

Sample

Spectrum #1 Analysis #1

Comment:

Batch Name: July2012b

Batch

Analyst: 60040

Description:

Acquisition

Detector: AV113 , SN: 49-037X5
 Acquisition Start Date: 7/24/2012 9:06:22PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-8877;AV113-20120607
 Calibration Date: 6/8/2012 12:15:02AM

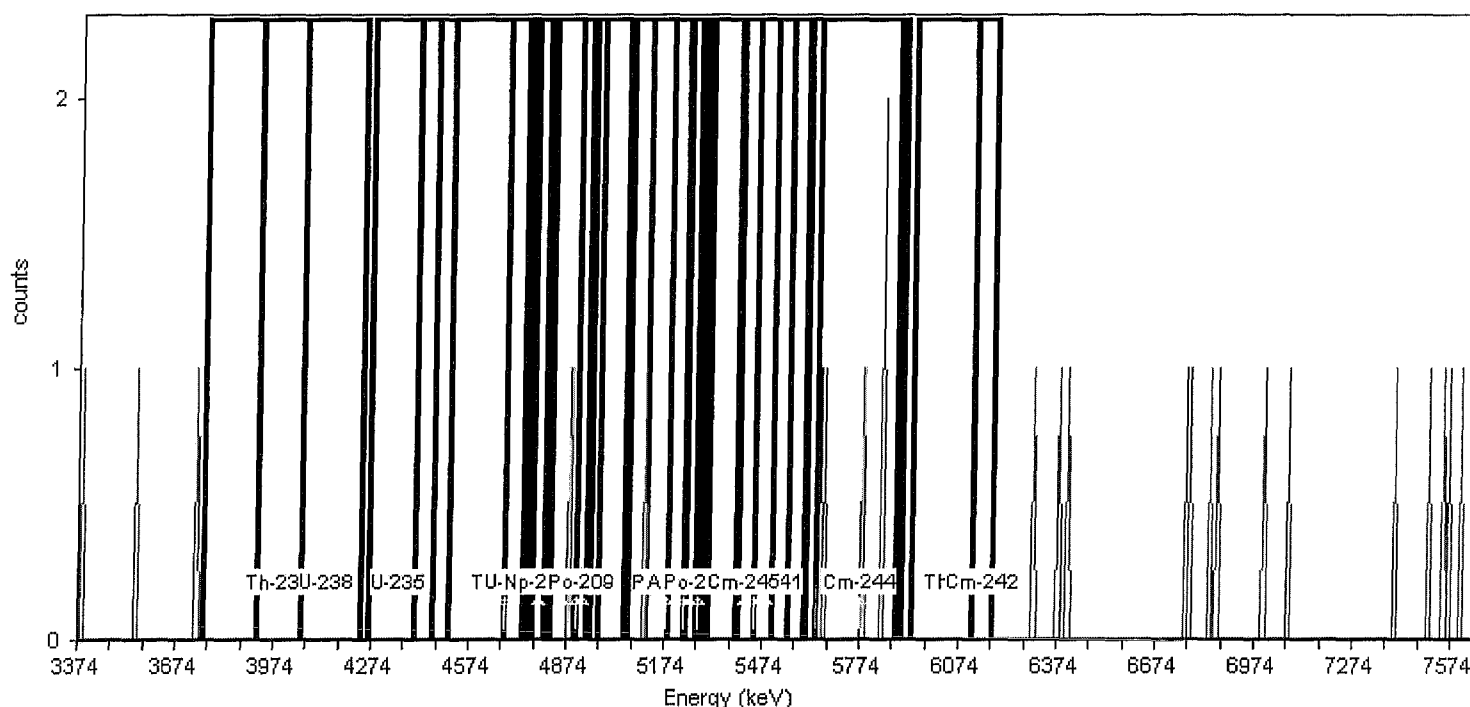
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.65% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 24.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	5.00	5.208E-003	2.552E-003
Cm-244	5.78	5.64	5.90	5.00	5.208E-003	2.552E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:13:12PM 7/25/2012

Sample Name: ICB;AV114

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Detector: AV114 , SN: 49-037E7

Acquisition Start Date: 7/24/2012 9:06:23PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-9520:AV114-20120612

Calibration Date: 6/12/2012 3:42:22PM

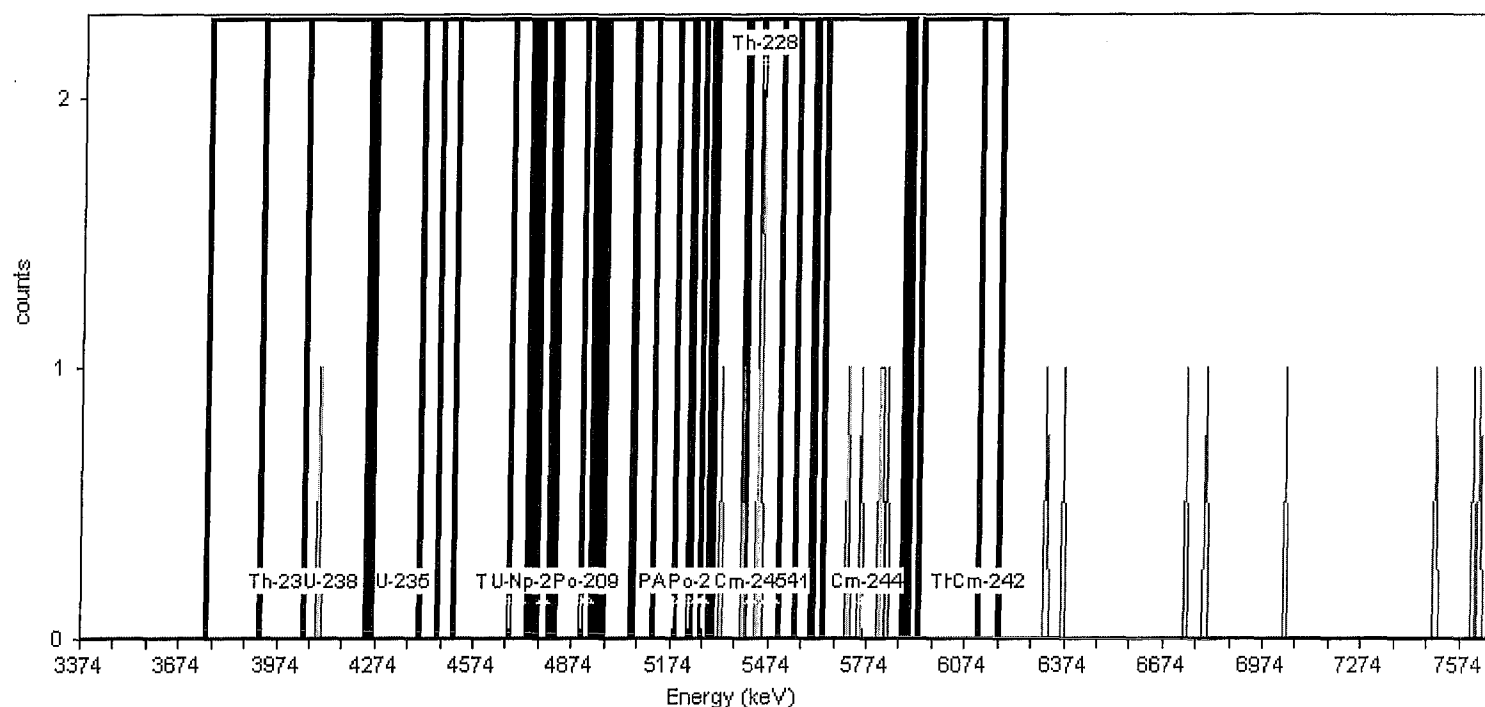
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366,95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.46% \pm 0.37% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_Background, Nuclide Library: Background ROI Library

Total Background Counts: 19.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	2.00	2.083E-003	1.804E-003
Th-228	5.45	5.19	5.51	5.00	5.208E-003	2.552E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	4.00	4.167E-003	2.329E-003
Pu-236	5.76	5.61	5.89	5.00	5.208E-003	2.552E-003
Cm-244	5.78	5.64	5.90	5.00	5.208E-003	2.552E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:13:24PM 7/25/2012

Sample Name: ICB;AV115

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV115 , SN: 49-037E4
Acquisition Start Date: 7/24/2012 9:06:24PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-8879;AV115-20120612
Calibration Date: 6/12/2012 3:42:43PM

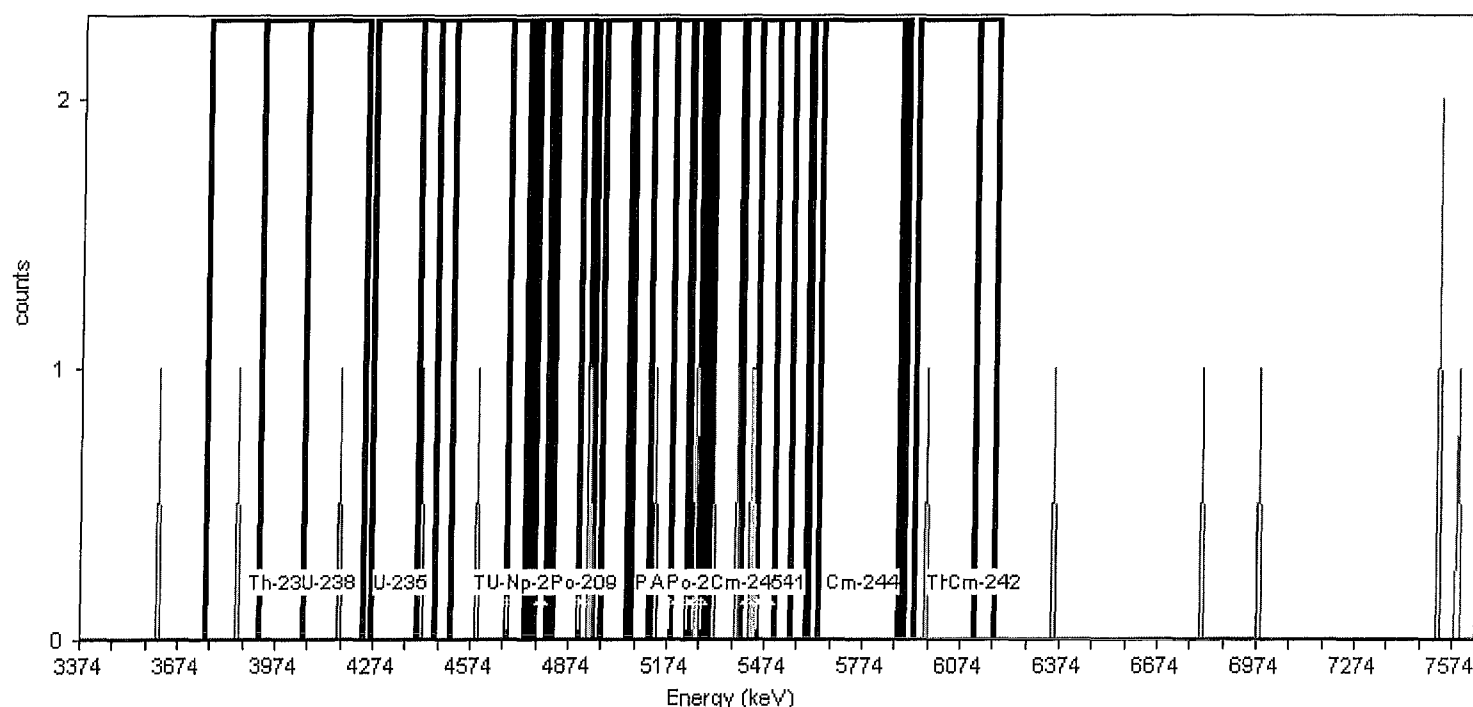
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.56% \pm 0.36% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundNo, Nucleide Library: Background ROI Library

Total Background Counts: 20.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	2.00	2.083E-003	1.804E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	2.00	2.083E-003	1.804E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	1.00	1.042E-003	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	5.00	5.208E-003	2.552E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	4.00	4.167E-003	2.329E-003
Am-241	5.48	5.30	5.60	4.00	4.167E-003	2.329E-003
Cm-245	5.42	5.40	5.45	2.00	2.083E-003	1.804E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV116

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV116 , SN: 49-034G1
 Acquisition Start Date: 7/24/2012 9:06:25PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-9792;AV116-20120612
 Calibration Date: 6/12/2012 3:43:02PM

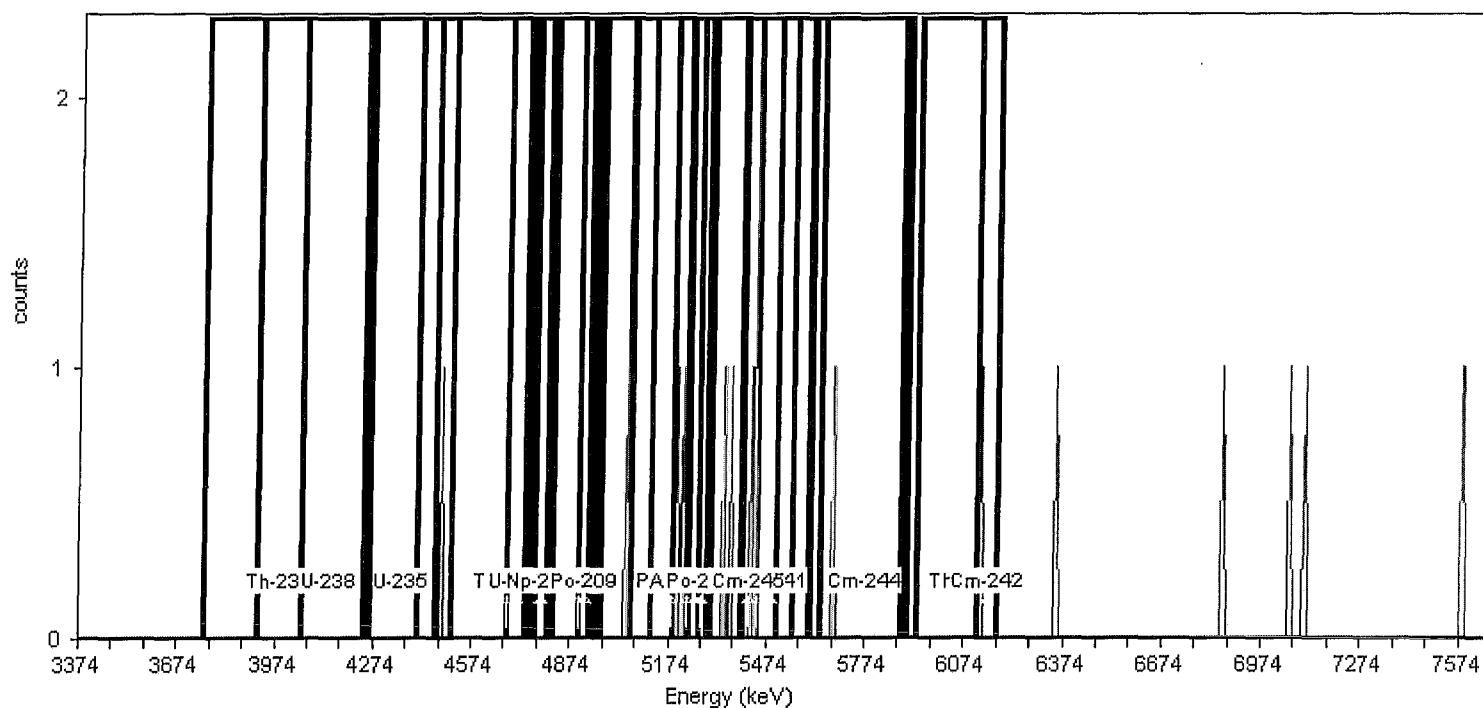
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 29.14% +/- 0.33% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 17.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	1.00	1.042E-003	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	3.00	3.125E-003	2.083E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	7.00	7.292E-003	2.946E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	5.00	5.208E-003	2.552E-003
Cm-245	5.42	5.40	5.45	3.00	3.125E-003	2.083E-003
Pu-236	5.76	5.61	5.89	1.00	1.042E-003	1.473E-003
Cm-244	5.78	5.64	5.90	1.00	1.042E-003	1.473E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	1.00	1.042E-003	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:13:42PM 7/25/2012

Sample Name: ICB;AV117

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV117, SN: 49-037X4
Acquisition Start Date: 7/24/2012 9:06:26PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9793;AV117-20120612
Calibration Date: 6/12/2012 3:43:27PM

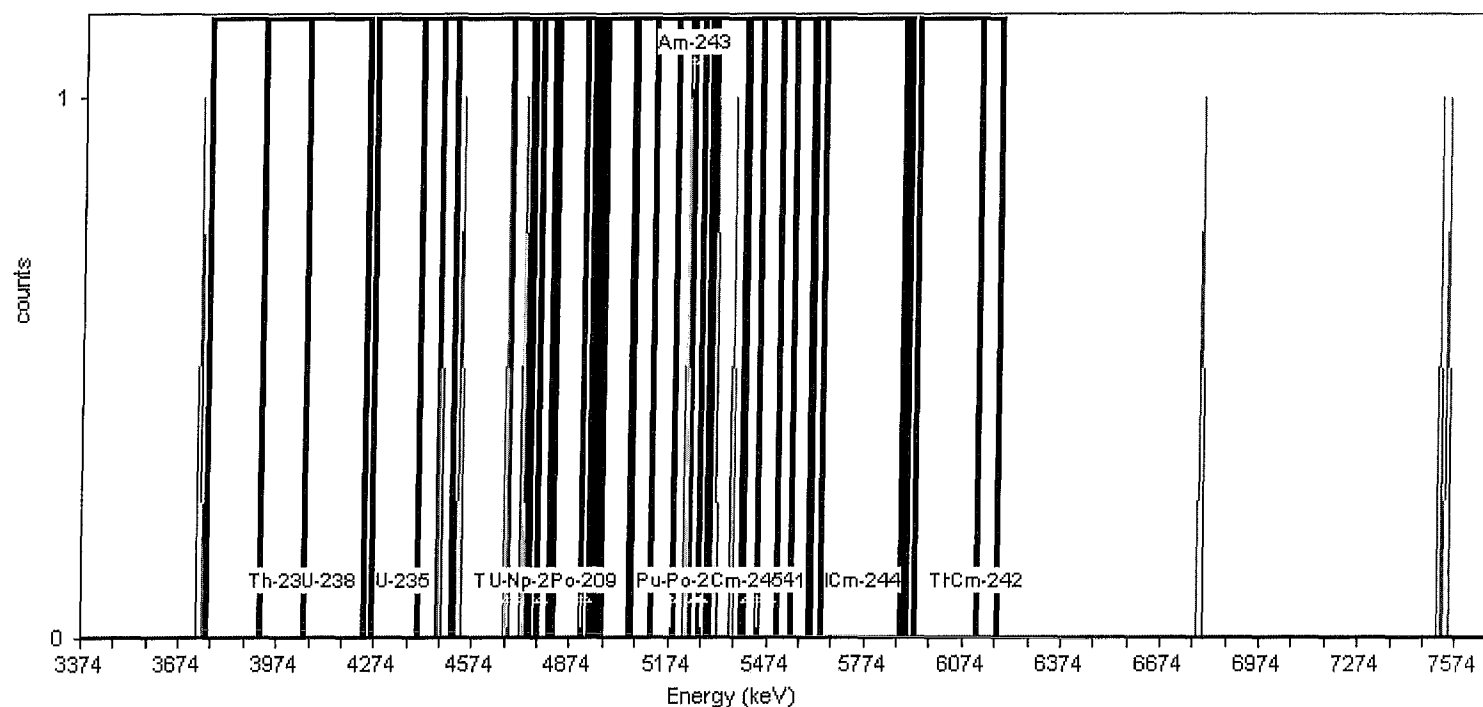
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.28% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 12.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	4.00	4.167E-003	2.329E-003
U-234	4.71	4.51	4.82	3.00	3.125E-003	2.083E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	2.00	2.083E-003	1.804E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	4.00	4.167E-003	2.329E-003
Th-228	5.45	5.19	5.51	4.00	4.167E-003	2.329E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	2.00	2.083E-003	1.804E-003
Am-241	5.48	5.30	5.60	2.00	2.083E-003	1.804E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:13:48PM 7/25/2012

Sample Name: ICB;AV118

Sample

Spectrum #1 Analysis #1

Comment:

Batch

Batch Name: July2012b

Analyst: 60040

Description:

Acquisition

Detector: AV118, SN: 49-037F4

Acquisition Start Date: 7/24/2012 9:06:28PM

Live Time: 960.00 min.

Real Time: 960.01 min.

Calibration Name: IC-9794;AV118-20120608

Calibration Date: 6/8/2012 8:47:07AM

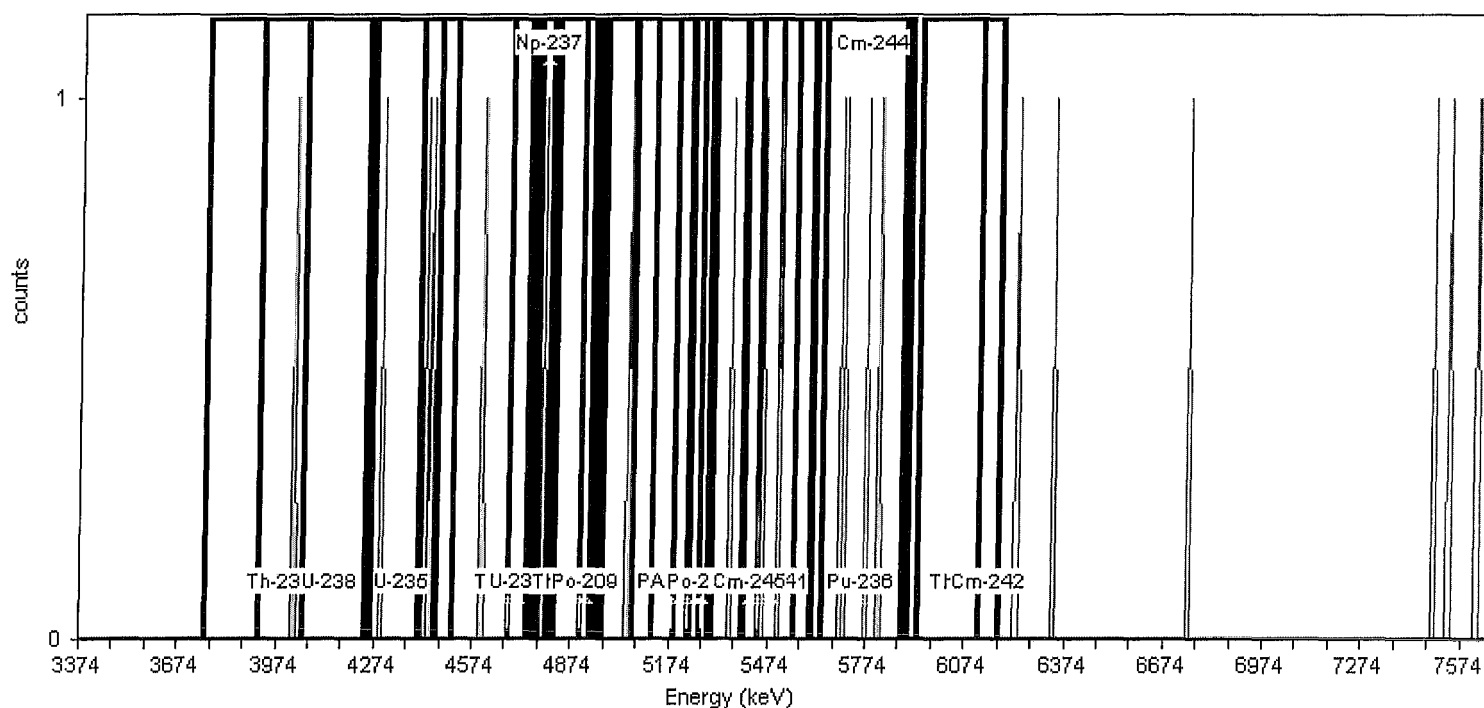
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.28% +/- 0.34% TPU(2 sigma)

**General Analysis**

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 21.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	3.00	3.125E-003	2.083E-003
Th-230	4.68	4.40	4.75	3.00	3.125E-003	2.083E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	3.00	3.125E-003	2.083E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	3.00	3.125E-003	2.083E-003
Am-241	5.48	5.30	5.60	3.00	3.125E-003	2.083E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	4.00	4.167E-003	2.329E-003
Cm-244	5.78	5.64	5.90	4.00	4.167E-003	2.329E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV119

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV119 , SN: 49-037G6
 Acquisition Start Date: 7/24/2012 9:06:29PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-9795;AV119-20120608
 Calibration Date: 6/8/2012 8:47:13AM

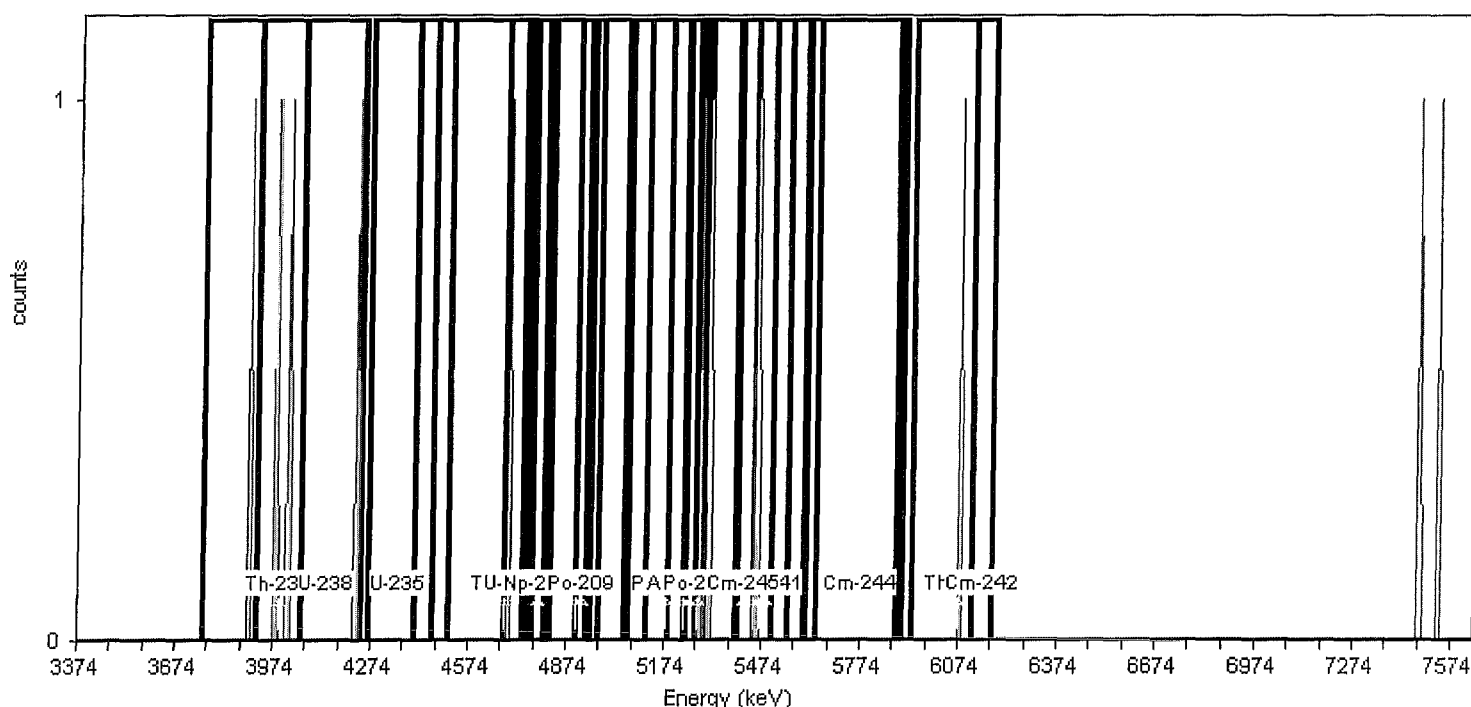
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.55% +/- 0.35% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 13.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	3.00	3.125E-003	2.083E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	2.00	2.083E-003	1.804E-003
U-232	5.25	5.06	5.40	3.00	3.125E-003	2.083E-003
Th-228	5.45	5.19	5.51	5.00	5.208E-003	2.552E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	5.00	5.208E-003	2.552E-003
Am-241	5.48	5.30	5.60	4.00	4.167E-003	2.329E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Monthly CCV
Alpha Vision
July 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)
<i>AV1</i>				
IC-7107;AV1-20120607	6/7/2012 3:02:16 PM	82232-334	0.2756	Pass
CCV-7107;AV1-20120724	7/24/2012 1:37:50 PM	82232-334	0.2749	Pass 99.7401 Pass
<i>AV2</i>				
IC-8874;AV2-20120607	6/7/2012 3:02:23 PM	82233-334	0.2693	Pass
CCV-8874;AV2-20120724	7/24/2012 1:38:06 PM	82233-334	0.2737	Pass 101.617 Pass
<i>AV3</i>				
IC-8875;AV3-20120607	6/7/2012 3:02:28 PM	82234-334	0.2857	Pass
CCV-8875;AV3-20120724	7/24/2012 1:38:18 PM	82234-334	0.2813	Pass 98.4574 Pass
<i>AV4</i>				
IC-8876;AV4-20120607	6/7/2012 3:02:32 PM	82235-334	0.2793	Pass
CCV-8876;AV4-20120724	7/24/2012 1:38:33 PM	82235-334	0.2759	Pass 98.7801 Pass
<i>AV6</i>				
IC-9520;AV6-20120607a	6/7/2012 3:56:30 PM	82237-334	0.2792	Pass
CCV-9520;AV6-20120724	7/24/2012 1:38:57 PM	82237-334	0.2815	Pass 100.837 Pass
<i>AV7</i>				
IC-8879;AV7-20120607	6/7/2012 4:03:51 PM	82238-334	0.2731	Pass
CCV-8879;AV7-20120724	7/24/2012 1:39:10 PM	82238-334	0.2696	Pass 98.7133 Pass
<i>AV8</i>				
IC-9792;AV8-20120607	6/7/2012 4:06:21 PM	82240-334	0.2787	Pass
CCV-9792;AV8-20120724	7/24/2012 1:39:22 PM	82240-334	0.2791	Pass 100.131 Pass
<i>AV9</i>				
IC-9793;AV9-20120607	6/7/2012 4:06:26 PM	82241-334	0.2781	Pass
CCV-9793;AV9-20120724	7/24/2012 1:39:34 PM	82241-334	0.2797	Pass 100.590 Pass
<i>AV10</i>				
IC-9794;AV10-20120621	6/21/2012 2:01:39 PM	82242-334	0.2725	Pass
<i>AV11</i>				
IC-9795;AV11-20120607	6/7/2012 7:50:12 PM	82243-334	0.2751	Pass
CCV-9795;AV11-20120724	7/24/2012 1:40:24 PM	82243-334	0.2762	Pass 100.416 Pass
<i>AV12</i>				
IC-9817;AV12-20120607	6/7/2012 7:50:16 PM	82244-334	0.2699	Pass
CCV-9817;AV12-20120724	7/24/2012 1:40:35 PM	82244-334	0.2659	Pass 98.5073 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 1 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV13</i>						
IC-9884;AV13-20120607	6/7/2012 7:50:19 PM	82245-334	0.2758	Pass		
CCV-9884;AV13-20120724	7/24/2012 1:40:46 PM	82245-334	0.2906	Pass	105.355	Fail
CCV-9884;AV13-20120724a	7/24/2012 5:02:56 PM	82245-334	0.2748	Pass	99.6538	Pass
CCV-9884;AV13-20120725	7/25/2012 11:44:29 AM	82245-334	0.2727	Pass	98.8754	Pass
<i>AV14</i>						
IC-9885;AV14-20120607	6/7/2012 7:50:22 PM	82246-334	0.2724	Pass		
CCV-9885;AV14-20120724	7/24/2012 1:41:00 PM	82246-334	0.2691	Pass	98.7814	Pass
<i>AV15</i>						
IC-9886;AV15-20120607	6/7/2012 7:50:24 PM	82247-334	0.2743	Pass		
CCV-9886;AV15-20120724	7/24/2012 1:41:10 PM	82247-334	0.2744	Pass	100.039	Pass
<i>AV16</i>						
IC-7107;AV16-20120607a	6/8/2012 12:12:55 AM	82232-334	0.2798	Pass		
CCV-7107;AV16-20120724	7/24/2012 5:03:06 PM	82232-334	0.2799	Pass	100.019	Pass
<i>AV17</i>						
IC-8874;AV17-20120607	6/8/2012 12:13:37 AM	82233-334	0.2631	Pass		
CCV-8874;AV17-20120724	7/24/2012 5:03:21 PM	82233-334	0.2669	Pass	101.451	Pass
<i>AV18</i>						
IC-8875;AV18-20120607	6/8/2012 12:13:58 AM	82234-334	0.2748	Pass		
CCV-8875;AV18-20120724	7/24/2012 5:05:40 PM	82234-334	0.2730	Pass	99.3381	Pass
<i>AV19</i>						
IC-8876;AV19-20120607	6/8/2012 12:14:05 AM	82235-334	0.2694	Pass		
CCV-8876;AV19-20120724	7/24/2012 5:03:44 PM	82235-334	0.2681	Pass	99.5055	Pass
<i>AV20</i>						
IC-8877;AV20-20120607	6/7/2012 7:50:28 PM	82236-334	0.2703	Pass		
CCV-8877;AV20-20120724	7/24/2012 1:38:45 PM	82236-334	0.2677	Pass	99.0551	Pass
<i>AV21</i>						
IC-9520;AV21-20120607	6/8/2012 12:14:09 AM	82237-334	0.2708	Pass		
CCV-9520;AV21-20120724	7/24/2012 5:03:53 PM	82237-334	0.2734	Pass	100.966	Pass
<i>AV22</i>						
IC-8879;AV22-20120607	6/8/2012 12:14:14 AM	82238-334	0.2679	Pass		
CCV-8879;AV22-20120724	7/24/2012 5:04:03 PM	82238-334	0.2639	Pass	98.5154	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 2 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV23</i>						
IC-9792;AV23-20120607	6/8/2012 12:14:18 AM	82240-334	0.2673	Pass		
CCV-9792;AV23-20120724	7/24/2012 5:04:14 PM	82240-334	0.2688	Pass	100.552	Pass
<i>AV24</i>						
IC-9793;AV24-20120607	6/8/2012 12:14:21 AM	82241-334	0.2734	Pass		
CCV-9793;AV24-20120724	7/24/2012 5:04:24 PM	82241-334	0.2766	Pass	101.156	Pass
<i>AV43</i>						
IC-9794;AV43-20120607	6/7/2012 7:50:31 PM	82242-334	0.2699	Pass		
CCV-9794;AV43-20120725	7/25/2012 10:28:07 PM	82242-334	0.2686	Pass	99.5158	Pass
<i>AV44</i>						
IC-9795;AV44-20120610	6/11/2012 3:27:57 PM	82243-334	0.2664	Pass		
CCV-9795;AV44-20120725	7/25/2012 10:28:12 PM	82243-334	0.2682	Pass	100.672	Pass
<i>AV45</i>						
IC-9817;AV45-20120610	6/11/2012 3:28:22 PM	82244-334	0.2704	Pass		
CCV-9817;AV45-20120725	7/25/2012 10:28:16 PM	82244-334	0.0001	Eval	5.53444	Fail
<i>AV46</i>						
IC-9884;AV46-20120610	6/11/2012 3:28:47 PM	82245-334	0.2849	Pass		
CCV-9884;AV46-20120725	7/25/2012 10:28:19 PM	82245-334	0.2804	Pass	98.4164	Pass
<i>AV47</i>						
IC-9885;AV47-20120611a	6/12/2012 1:04:12 AM	82246-334	0.2678	Pass		
<i>AV48</i>						
IC-9886;AV48-20120610	6/11/2012 3:29:40 PM	82247-334	0.2764	Pass		
CCV-9886;AV48-20120725	7/25/2012 10:28:31 PM	82247-334	0.0004	Eval	0.13021	Fail
<i>AV49</i>						
IC-7107;AV49-20120610	6/10/2012 8:17:41 PM	82232-334	0.2927	Pass		
CCV-7107;AV49-20120725	7/25/2012 10:28:34 PM	82232-334	0.2909	Pass	99.3834	Pass
<i>AV50</i>						
IC-8874;AV50-20120610	6/10/2012 8:17:58 PM	82233-334	0.2754	Pass		
CCV-8874;AV50-20120726	7/26/2012 1:58:10 PM	82233-334	0.2729	Pass	99.0921	Pass
<i>AV51</i>						
IC-8875;AV51-20120610	6/10/2012 8:18:12 PM	82234-334	0.2819	Pass		
CCV-8875;AV51-20120725	7/25/2012 10:28:38 PM	82234-334	0.2814	Pass	99.8447	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 3 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV52</i>						
IC-8876;AV52-20120610	6/10/2012 8:18:26 PM	82235-334	0.2911	Pass		
CCV-8876;AV52-20120726	7/26/2012 1:58:30 PM	82235-334	0.2925	Pass	100.496	Pass
<i>AV53</i>						
IC-8877;AV53-20120610	6/10/2012 8:18:38 PM	82236-334	0.2773	Pass		
CCV-8877;AV53-20120725	7/25/2012 10:28:41 PM	82236-334	0.2775	Pass	100.055	Pass
<i>AV54</i>						
IC-9520;AV54-20120610	6/10/2012 8:18:52 PM	82237-334	0.2798	Pass		
CCV-9520;AV54-20120726	7/26/2012 1:58:49 PM	82237-334	0.2760	Pass	98.6444	Pass
<i>AV55</i>						
IC-8879;AV55-20120610	6/10/2012 8:19:03 PM	82238-334	0.2720	Pass		
CCV-8879;AV55-20120725	7/25/2012 10:28:45 PM	82238-334	0.2697	Pass	99.1518	Pass
<i>AV56</i>						
IC-9792;AV56-20120610	6/10/2012 8:19:16 PM	82240-334	0.2709	Pass		
CCV-9792;AV56-20120725	7/25/2012 10:28:48 PM	82240-334	0.0003	Eval	0.11605	Fail
<i>AV57</i>						
IC-9793;AV57-20120610	6/10/2012 8:19:29 PM	82241-334	0.2764	Pass		
CCV-9793;AV57-20120725	7/25/2012 10:28:52 PM	82241-334	0.2763	Pass	99.9520	Pass
<i>AV58</i>						
IC-9794;AV58-20120610	6/10/2012 8:19:36 PM	82242-334	0.2550	Pass		
<i>AV59</i>						
IC-9795;AV59-20120610	6/10/2012 8:19:39 PM	82243-334	0.2753	Pass		
<i>AV60</i>						
IC-9817;AV60-20120610	6/10/2012 8:19:43 PM	82244-334	0.2682	Pass		
CCV-9817;AV60-20120725a	7/26/2012 12:42:30 AM	82244-334	0.2705	Pass	100.836	Pass
<i>AV61</i>						
IC-9884;AV61-20120610	6/10/2012 8:19:46 PM	82245-334	0.2792	Pass		
CCV-9884;AV61-20120725	7/26/2012 12:42:24 AM	82245-334	0.2785	Pass	99.7356	Pass
<i>AV62</i>						
IC-9885;AV62-20120610	6/10/2012 8:19:49 PM	82246-334	0.2742	Pass		
CCV-9885;AV62-20120725	7/26/2012 12:42:33 AM	82246-334	0.2738	Pass	99.8594	Pass
<i>AV63</i>						
IC-9886;AV63-20120610	6/10/2012 8:19:57 PM	82247-334	0.2707	Pass		
CCV-9886;AV63-20120725	7/26/2012 12:42:36 AM	82247-334	0.2716	Pass	100.323	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 4 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV64</i>						
IC-7107;AV64-20120610	6/11/2012 3:30:09 PM	82232-334	0.2935	Pass		
CCV-7107;AV64-20120726	7/26/2012 1:58:00 PM	82232-334	0.2935	Pass	99.9978	Pass
<i>AV65</i>						
IC-8874;AV65-20120610	6/11/2012 3:30:33 PM	82233-334	0.2759	Pass		
CCV-8874;AV65-20120725	7/25/2012 10:28:56 PM	82233-334	0.2745	Pass	99.4624	Pass
<i>AV66</i>						
IC-8875;AV66-20120610	6/11/2012 3:30:58 PM	82234-334	0.2846	Pass		
CCV-8875;AV66-20120725	7/26/2012 12:42:39 AM	82234-334	0.2809	Pass	98.6783	Pass
<i>AV67</i>						
IC-8876;AV67-20120610	6/11/2012 3:31:27 PM	82235-334	0.2953	Pass		
CCV-8876;AV67-20120726	7/26/2012 5:34:37 PM	82235-334	0.2975	Pass	100.722	Pass
<i>AV68</i>						
IC-8877;AV68-20120610	6/11/2012 3:31:53 PM	82236-334	0.2740	Pass		
CCV-8877;AV68-20120725	7/26/2012 12:42:42 AM	82236-334	0.2748	Pass	100.313	Pass
<i>AV69</i>						
IC-9520;AV69-20120610	6/11/2012 3:32:14 PM	82237-334	0.2763	Pass		
CCV-9520;AV69-20120725	7/25/2012 10:29:25 PM	82237-334	0.2730	Pass	98.8075	Pass
<i>AV70</i>						
IC-8879;AV70-20120610	6/11/2012 3:32:41 PM	82238-334	0.2732	Pass		
CCV-8879;AV70-20120725	7/26/2012 12:42:45 AM	82238-334	0.2708	Pass	99.1119	Pass
<i>AV71</i>						
IC-9792;AV71-20120610	6/11/2012 3:33:08 PM	82240-334	0.2763	Pass		
CCV-9792;AV71-20120725	7/26/2012 12:42:50 AM	82240-334	0.2755	Pass	99.7117	Pass
<i>AV72</i>						
IC-9793;AV72-20120610	6/11/2012 3:33:25 PM	82241-334	0.2910	Pass		
CCV-9793;AV72-20120725	7/26/2012 12:42:53 AM	82241-334	0.2858	Pass	98.2175	Pass
<i>AV73</i>						
IC-9794;AV73-20120610	6/11/2012 3:33:47 PM	82242-334	0.2766	Pass		
CCV-9794;AV73-20120725	7/26/2012 12:42:56 AM	82242-334	0.2759	Pass	99.7532	Pass
<i>AV74</i>						
IC-9795;AV74-20120611a	6/12/2012 1:04:18 AM	82243-334	0.2701	Pass		
CCV-9795;AV74-20120726	7/26/2012 8:37:17 AM	82243-334	0.2731	Pass	101.096	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 5 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV75</i>				
IC-9817;AV75-20120611a	6/12/2012 1:04:21 AM	82244-334	0.2656	Pass
CCV-9817;AV75-20120724	7/24/2012 8:51:29 PM	82244-334	0.2666	Pass 100.388 Pass
<i>AV76</i>				
IC-9884;AV76-20120611a	6/12/2012 1:04:24 AM	82245-334	0.2723	Pass
CCV-9884;AV76-20120724a	7/24/2012 10:38:47 PM	82245-334	0.2757	Pass 101.240 Pass
<i>AV77</i>				
IC-9885;AV77-20120612	6/12/2012 10:16:22 PM	82246-334	0.2674	Pass
CCV-9885;AV77-20120724	7/24/2012 8:51:53 PM	82246-334	0.2687	Pass 100.497 Pass
<i>AV78</i>				
IC-9886;AV78-20120611a	6/12/2012 1:04:27 AM	82247-334	0.2751	Pass
CCV-9886;AV78-20120724	7/24/2012 8:51:41 PM	82247-334	0.2748	Pass 99.8636 Pass
<i>AV79</i>				
IC-7107;AV79-20120611a	6/12/2012 1:04:30 AM	82232-334	0.2824	Pass
CCV-7107;AV79-20120724	7/24/2012 8:51:57 PM	82232-334	0.2837	Pass 100.462 Pass
<i>AV80</i>				
IC-8874;AV80-20120611a	6/12/2012 1:04:34 AM	82233-334	0.2692	Pass
CCV-8874;AV80-20120724	7/24/2012 8:51:46 PM	82233-334	0.2697	Pass 100.177 Pass
<i>AV81</i>				
IC-8875;AV81-20120611a	6/12/2012 1:04:37 AM	82234-334	0.2858	Pass
CCV-8875;AV81-20120724	7/24/2012 8:51:49 PM	82234-334	0.2899	Pass 101.429 Pass
<i>AV82</i>				
IC-8876;AV82-20120611a	6/12/2012 1:04:40 AM	82235-334	0.2768	Pass
CCV-8876;AV82-20120724	7/24/2012 8:52:00 PM	82235-334	0.2737	Pass 98.8822 Pass
<i>AV83</i>				
IC-8877;AV83-20120611a	6/12/2012 1:04:44 AM	82236-334	0.2727	Pass
CCV-8877;AV83-20120724	7/24/2012 8:52:04 PM	82236-334	0.2757	Pass 101.099 Pass
<i>AV84</i>				
IC-9520;AV84-20120611a	6/12/2012 1:04:47 AM	82237-334	0.2790	Pass
CCV-9520;AV84-20120724	7/24/2012 8:52:07 PM	82237-334	0.2748	Pass 98.4876 Pass
<i>AV85</i>				
IC-8879;AV85-20120611a	6/12/2012 1:04:50 AM	82238-334	0.2774	Pass
CCV-8879;AV85-20120724	7/24/2012 8:52:11 PM	82238-334	0.2782	Pass 100.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 6 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV86</i>				
IC-9792;AV86-20120611a	6/12/2012 1:04:54 AM	82240-334	0.2769	Pass
CCV-9792;AV86-20120724	7/24/2012 8:52:16 PM	82240-334	0.2771	Pass 100.046 Pass
<i>AV87</i>				
IC-9793;AV87-20120611a	6/12/2012 1:04:56 AM	82241-334	0.2951	Pass
CCV-9793;AV87-20120724	7/24/2012 8:52:20 PM	82241-334	0.2909	Pass 98.5861 Pass
<i>AV88</i>				
IC-9794;AV88-20120611a	6/12/2012 1:04:59 AM	82242-334	0.2744	Pass
CCV-9794;AV88-20120724	7/24/2012 5:04:33 PM	82242-334	0.2741	Pass 99.8889 Pass
<i>AV89</i>				
IC-9795;AV89-20120612	6/12/2012 3:39:24 PM	82243-334	0.2684	Pass
CCV-9795;AV89-20120724	7/24/2012 5:04:44 PM	82243-334	0.2679	Pass 99.8091 Pass
<i>AV90</i>				
IC-9817;AV90-20120612	6/12/2012 3:39:50 PM	82244-334	0.2731	Pass
CCV-9817;AV90	7/24/2012 5:05:02 PM	82244-334	0.2721	Pass 99.6298 Pass
<i>AV91</i>				
IC-9884;AV91-20120612	6/12/2012 3:40:10 PM	82245-334	0.2787	Pass
CCV-9884;AV91-20120724	7/24/2012 11:50:47 PM	82245-334	0.2800	Pass 100.497 Pass
<i>AV92</i>				
IC-9885;AV92-20120613	6/13/2012 10:43:01 AM	82246-334	0.2705	Pass
CCV-9885;AV92-20120724	7/24/2012 5:08:08 PM	82246-334	0.2723	Pass 100.677 Pass
<i>AV93</i>				
IC-9886;AV93-20120612	6/12/2012 3:40:55 PM	82247-334	0.2715	Pass
CCV-9886;AV93-20120724	7/24/2012 5:08:42 PM	82247-334	0.2720	Pass 100.196 Pass
<i>AV94</i>				
IC-7107;AV94-20120612a	6/12/2012 3:41:17 PM	82232-334	0.2797	Pass
CCV-7107;AV94-20120724	7/24/2012 10:38:52 PM	82232-334	0.2772	Pass 99.0992 Pass
<i>AV95</i>				
IC-8874;AV95-20120608	6/8/2012 8:45:55 AM	82233-334	0.2719	Pass
CCV-8874;AV95-20120724	7/24/2012 10:38:55 PM	82233-334	0.2708	Pass 99.6240 Pass
<i>AV96</i>				
IC-8875;AV96-20120612	6/12/2012 3:41:40 PM	82234-334	0.2831	Pass
CCV-8875;AV96-20120724	7/24/2012 10:39:01 PM	82234-334	0.0004	Eval 0.14859 Fail

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 7 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV97</i>						
IC-8876;AV97-20120612a	6/12/2012 10:16:26 PM	82235-334	0.2765	Pass		
CCV-8876;;AV97-20120724	7/24/2012 10:39:04 PM	82235-334	0.2779	Pass	100.508	Pass
<i>AV98</i>						
IC-8877;AV98-20120608	6/8/2012 8:46:02 AM	82236-334	0.2818	Pass		
CCV-8877;AV98-20120724	7/24/2012 5:06:05 PM	82236-334	0.2793	Pass	99.1155	Pass
<i>AV99</i>						
IC-9520;AV99-20120608	6/8/2012 8:46:10 AM	82237-334	0.2703	Pass		
<i>AV100</i>						
IC-8879;AV100-20120608	6/8/2012 8:46:24 AM	82238-334	0.2719	Pass		
CCV-8879;AV100-20120726	7/26/2012 1:58:58 PM	82238-334	0.2703	Pass	99.4168	Pass
<i>AV101</i>						
IC-9792;AV101-20120608	6/8/2012 8:46:34 AM	82240-334	0.2802	Pass		
CCV-9792;AV101-20120726	7/26/2012 8:37:09 AM	82240-334	0.2787	Pass	99.4560	Pass
<i>AV102</i>						
IC-9793;AV102-20120608	6/8/2012 8:46:41 AM	82241-334	0.2826	Pass		
CCV-9793;AV102-20120726	7/26/2012 8:37:21 AM	82241-334	0.2794	Pass	98.8711	Pass
<i>AV103</i>						
IC-9794;AV103-20120607	6/8/2012 12:14:29 AM	82242-334	0.2709	Pass		
CCV-9794;AV103-20120726	7/26/2012 1:59:26 PM	82242-334	0.2718	Pass	100.319	Pass
<i>AV104</i>						
IC-9795;AV104-20120607	6/8/2012 12:14:40 AM	82243-334	0.2646	Pass		
CCV-9795;AV104-20120726	7/26/2012 1:59:37 PM	82243-334	0.0056	Eval	2.11169	Fail
<i>AV105</i>						
IC-9817;AV105-20120607	6/8/2012 12:14:48 AM	82244-334	0.2474	Pass		
CCV-9817;AV10520120726	7/26/2012 1:59:46 PM	82244-334	0.2451	Pass	99.0547	Pass
<i>AV106</i>						
IC-9884;AV106-20120607	6/8/2012 12:15:09 AM	82245-334	0.2797	Pass		
CCV-9884;AV106-20120726	7/26/2012 1:59:55 PM	82245-334	0.2758	Pass	98.5711	Pass
<i>AV107</i>						
IC-9885;AV107-20120607	6/8/2012 12:14:52 AM	82246-334	0.2711	Pass		
CCV-9885;AV107-20120726	7/26/2012 2:00:04 PM	82246-334	0.2733	Pass	100.841	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 8 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV108</i>							
IC-9886;AV108-20120607	6/8/2012 12:14:56 AM	82247-334	0.2812	Pass			
CCV-9886;AV108-20120726	7/26/2012 2:00:19 PM	82247-334	0.2814	Pass	100.046		Pass
<i>AV109</i>							
IC-7107;AV109-20120608	6/8/2012 8:46:47 AM	82232-334	0.2782	Pass			
CCV-7107;AV109-20120725	7/26/2012 12:42:58 AM	82232-334	0.2245	Pass	80.7030		Fail
CCV-7107;AV109-20120726	7/26/2012 5:32:41 PM	82232-334	0.2819	Pass	101.326		Pass
CCV-7107;AV109-20120726a	7/26/2012 7:44:53 PM	82232-334	0.2763	Pass	99.3002		Pass
<i>AV111</i>							
IC-8875;AV111-20120608	6/8/2012 8:46:55 AM	82234-334	0.2800	Pass			
CCV-8875;AV111-20120726	7/26/2012 8:37:25 AM	82234-334	0.2787	Pass	99.5396		Pass
<i>AV112</i>							
IC-8876;AV112-20120608	6/8/2012 8:47:01 AM	82235-334	0.2750	Pass			
CCV-8876;AV112-20120725	7/25/2012 10:31:58 PM	82235-334	0.2735	Pass	99.4658		Pass
<i>AV113</i>							
IC-8877;AV113-20120607	6/8/2012 12:15:02 AM	82236-334	0.2765	Pass			
CCV-8877;AV113-20120726	7/26/2012 8:37:29 AM	82236-334	0.2772	Pass	100.255		Pass
<i>AV114</i>							
IC-9520;AV114-20120612	6/12/2012 3:42:22 PM	82237-334	0.2746	Pass			
CCV-9520;AV114-20120726	7/26/2012 5:34:48 PM	82237-334	0.2758	Pass	100.401		Pass
<i>AV115</i>							
IC-8879;AV115-20120612	6/12/2012 3:42:43 PM	82238-334	0.2756	Pass			
CCV-8879;AV115-20120726	7/26/2012 5:34:59 PM	82238-334	0.2762	Pass	100.213		Pass
<i>AV116</i>							
IC-9792;AV116-20120612	6/12/2012 3:43:02 PM	82240-334	0.2914	Pass			
CCV-9792;AV116-20120726	7/26/2012 1:59:07 PM	82240-334	0.2773	Pass	95.1508		Pass
<i>AV117</i>							
IC-9793;AV117-20120612	6/12/2012 3:43:27 PM	82241-334	0.2628	Pass			
CCV-9793;AV117-20120726	7/26/2012 1:59:16 PM	82241-334	0.2683	Pass	102.098		Pass
<i>AV118</i>							
IC-9794;AV118-20120608	6/8/2012 8:47:07 AM	82242-334	0.2728	Pass			
CCV-9794;AV118-20120726	7/26/2012 8:37:33 AM	82242-334	0.2689	Pass	98.5708		Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 9 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV119</i>							
IC-9795;AV119-20120608	6/8/2012 8:47:13 AM	82243-334	0.2655	Pass			
CCV-9795;AV119-20120726	7/26/2012 10:05:57 PM	82243-334	0.2655	Pass	99.9791	Pass	
<i>AV120</i>							
IC-9817;AV120-20120608	6/8/2012 8:47:18 AM	82244-334	0.2668	Pass			
CCV-9817;AV120-20120726	7/26/2012 8:37:37 AM	82244-334	0.2689	Pass	100.796	Pass	
<i>AV121</i>							
IC-9884;AV121-20120608	6/8/2012 8:54:38 AM	82245-334	0.2825	Pass			
CCV-9884;AV121-20120726	7/26/2012 8:37:41 AM	82245-334	0.2811	Pass	99.4897	Pass	
<i>AV122</i>							
IC-9885;AV122-20120608	6/8/2012 8:54:44 AM	82246-334	0.2678	Pass			
CCV-9885;AV122-20120726	7/26/2012 8:37:46 AM	82246-334	0.2712	Pass	101.254	Pass	
<i>AV123</i>							
IC-9886;AV123-20120614	6/15/2012 11:45:44 AM	82247-334	0.2691	Pass			
CCV-9886;AV123-20120726	7/26/2012 8:37:50 AM	82247-334	0.2654	Pass	98.6278	Pass	
<i>AV124</i>							
IC-7107;AV124-20120614	6/15/2012 11:46:08 AM	82232-334	0.2653	Pass			
CCV-7107;AV124-20120726	7/26/2012 10:16:23 PM	82232-334	0.2661	Pass	100.282	Pass	
<i>AV125</i>							
IC-8874;AV125-20120614	6/15/2012 11:46:45 AM	82233-334	0.2675	Pass			
CCV-8874;AV125-20120725	7/26/2012 12:43:01 AM	82233-334	0.2694	Pass	100.701	Pass	
<i>AV126</i>							
IC-8875;AV126-20120614	6/15/2012 11:47:26 AM	82234-334	0.2760	Pass			
CCV-8875;AV126-20120726	7/26/2012 1:58:20 PM	82234-334	0.2746	Pass	99.5062	Pass	
<i>AV127</i>							
IC-8876;AV127-20120614	6/15/2012 11:48:11 AM	82235-334	0.2775	Pass			
CCV-8876;AV127-20120725	7/26/2012 12:43:05 AM	82235-334	0.0003	Eval	0.11569	Fail	
<i>AV128</i>							
IC-8877;AV128-20120614	6/15/2012 11:48:54 AM	82236-334	0.2685	Pass			
CCV-8877;AV128-20120726	7/26/2012 1:58:40 PM	82236-334	0.0003	Eval	0.11553	Fail	
<i>AV129</i>							
IC-9520;AV129-20120614	6/15/2012 11:49:36 AM	82237-334	0.2710	Pass			
CCV-9520;AV129-20120725	7/26/2012 12:43:08 AM	82237-334	0.2730	Pass	100.742	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 10 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV130</i>				
IC-8879;AV130-20120614	6/15/2012 11:50:34 AM	82238-334	0.2707	Pass
CCV-8879;AV130-20120726	7/26/2012 8:37:58 AM	82238-334	0.2711	Pass 100.151 Pass
<i>AV131</i>				
IC-9792;AV131-20120612	6/12/2012 10:16:29 PM	82240-334	0.2777	Pass
CCV-9792;AV131-20120726	7/26/2012 7:43:47 PM	82240-334	0.2754	Pass 99.1770 Pass
<i>AV132</i>				
IC-9793;AV132-20120612	6/12/2012 10:16:32 PM	82241-334	0.2711	Pass
CCV-9793;AV132-20120726	7/26/2012 5:35:09 PM	82241-334	0.2728	Pass 100.644 Pass
<i>AV133</i>				
IC-9794;AV133-20120612	6/12/2012 3:43:51 PM	82242-334	0.2627	Pass
CCV-9794;AV133-20120726	7/26/2012 7:43:55 PM	82242-334	0.2629	Pass 100.084 Pass
<i>AV134</i>				
IC-9795;AV134-20120612	6/12/2012 10:16:35 PM	82243-334	0.2665	Pass
CCV-9795;AV134-20120726	7/26/2012 7:44:04 PM	82243-334	0.2637	Pass 98.9425 Pass
<i>AV135</i>				
IC-9817;AV135-20120612	6/12/2012 10:16:38 PM	82244-334	0.2610	Pass
CCV-9817;AV135-20120726	7/26/2012 7:44:16 PM	82244-334	0.2622	Pass 100.442 Pass
<i>AV136</i>				
IC-9884;AV136-20120612	6/12/2012 10:16:41 PM	82245-334	0.2745	Pass
CCV-9884;AV13620120726	7/26/2012 7:44:27 PM	82245-334	0.2725	Pass 99.2766 Pass
<i>AV137</i>				
IC-9885;AV137-20120621	6/21/2012 2:01:56 PM	82246-334	0.2674	Pass
CCV-9885;AV137-20120726	7/26/2012 7:44:35 PM	82246-334	0.2648	Pass 99.0375 Pass
<i>AV138</i>				
IC-9886;AV138-20120608	6/8/2012 8:55:45 AM	82247-334	0.2683	Pass
CCV-9886;AV138-20120726	7/26/2012 7:44:43 PM	82247-334	0.2672	Pass 99.5864 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 11 of 11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Monthly Backgrounds
Alpha Vision
July 2012
AV1-146

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV120

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV120 , SN: 49-037W3
 Acquisition Start Date: 7/24/2012 9:06:31PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-9817;AV120-20120608
 Calibration Date: 6/8/2012 8:47:18AM

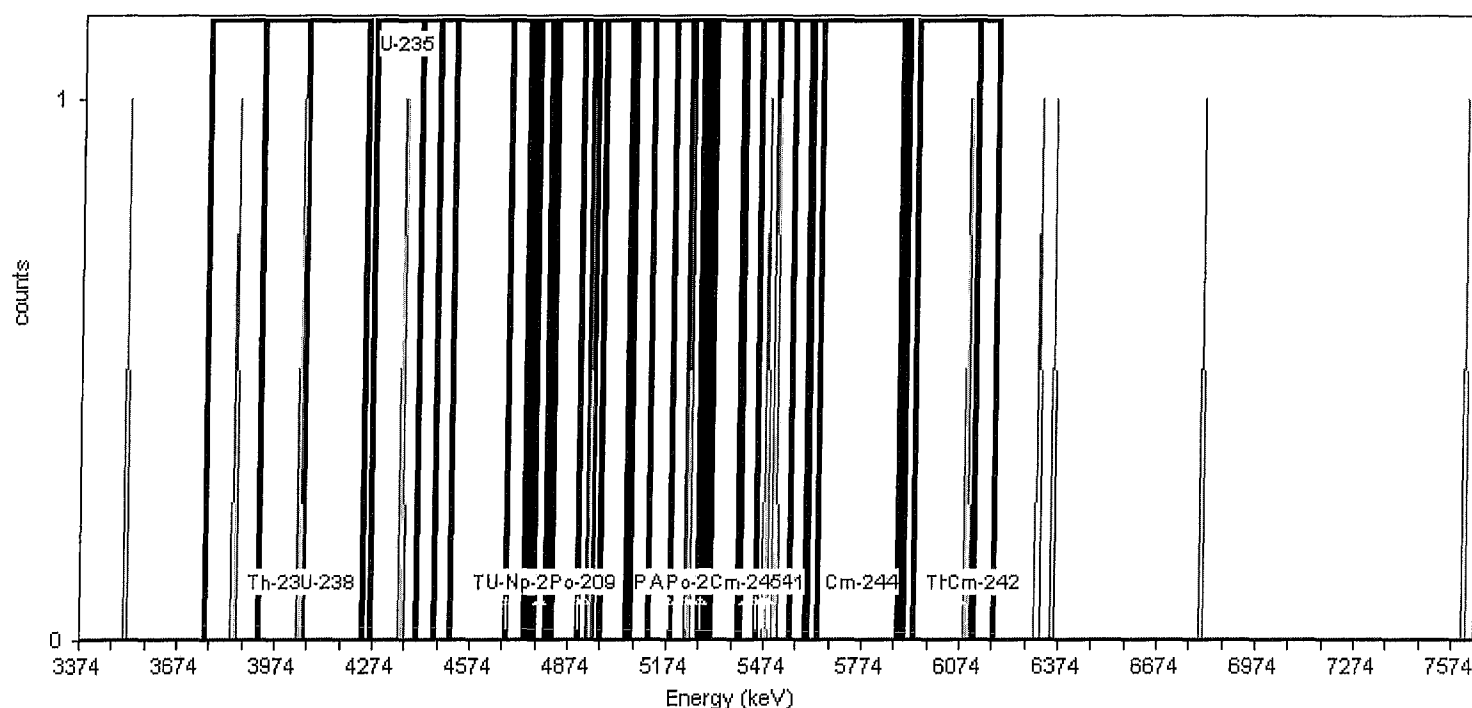
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.68% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 13.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	2.00	2.083E-003	1.804E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	1.00	1.042E-003	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	3.00	3.125E-003	2.083E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	2.00	2.083E-003	1.804E-003
Am-241	5.48	5.30	5.60	2.00	2.083E-003	1.804E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:14:07PM 7/25/2012

Sample Name: ICB;AV121

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV121, SN: 49-037W2
Acquisition Start Date: 7/24/2012 9:06:32PM
Live Time: 960.00 min.
Real Time: 960.01 min.
Calibration Name: IC-9884;AV121-20120608
Calibration Date: 6/8/2012 8:54:38AM

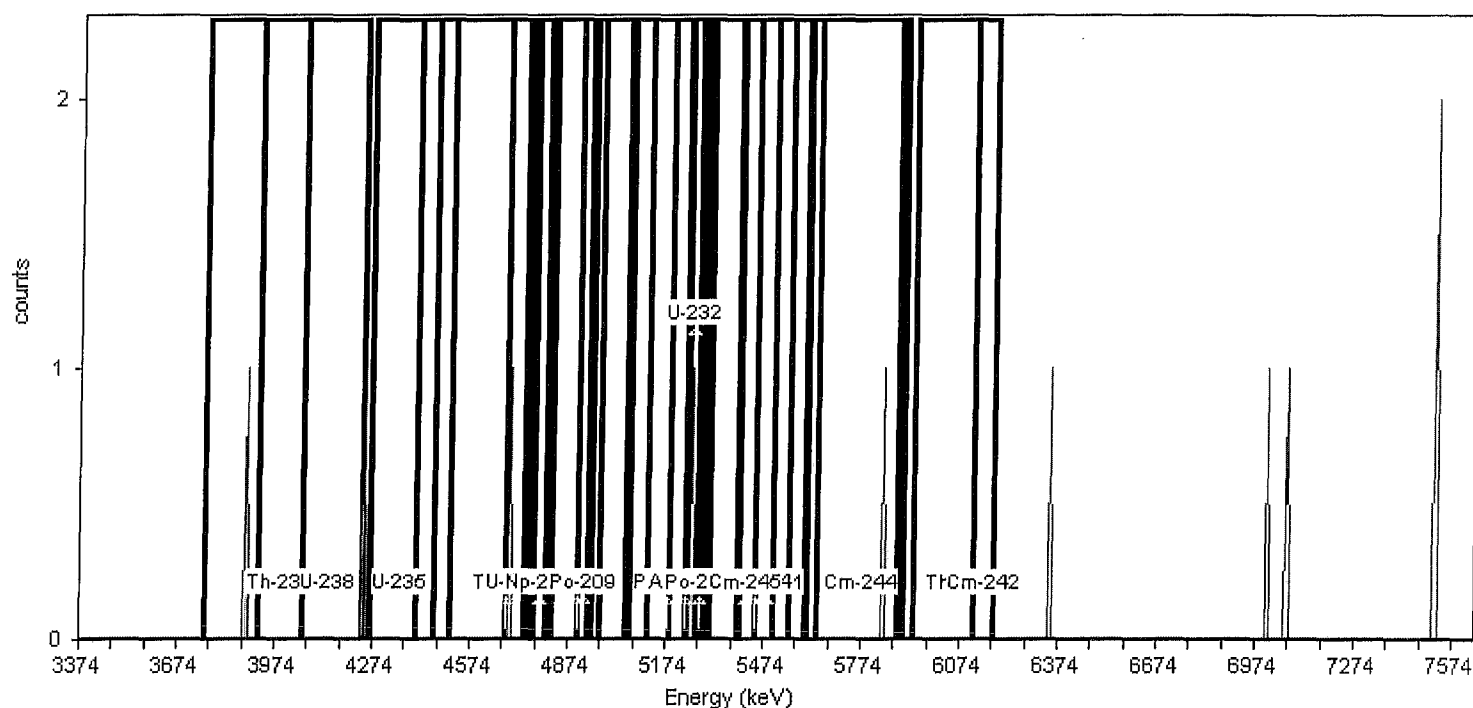
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 28.25% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 10.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	1.00	1.042E-003	1.473E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	1.00	1.042E-003	1.473E-003
Po-210	5.28	5.23	5.29	1.00	1.042E-003	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	1.00	1.042E-003	1.473E-003
Cm-244	5.78	5.64	5.90	1.00	1.042E-003	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV122

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV122, SN: 49-037G4
 Acquisition Start Date: 7/24/2012 9:06:33PM
 Live Time: 960.00 min.
 Real Time: 960.01 min.
 Calibration Name: IC-9885;AV122-20120608
 Calibration Date: 6/8/2012 8:54:44AM

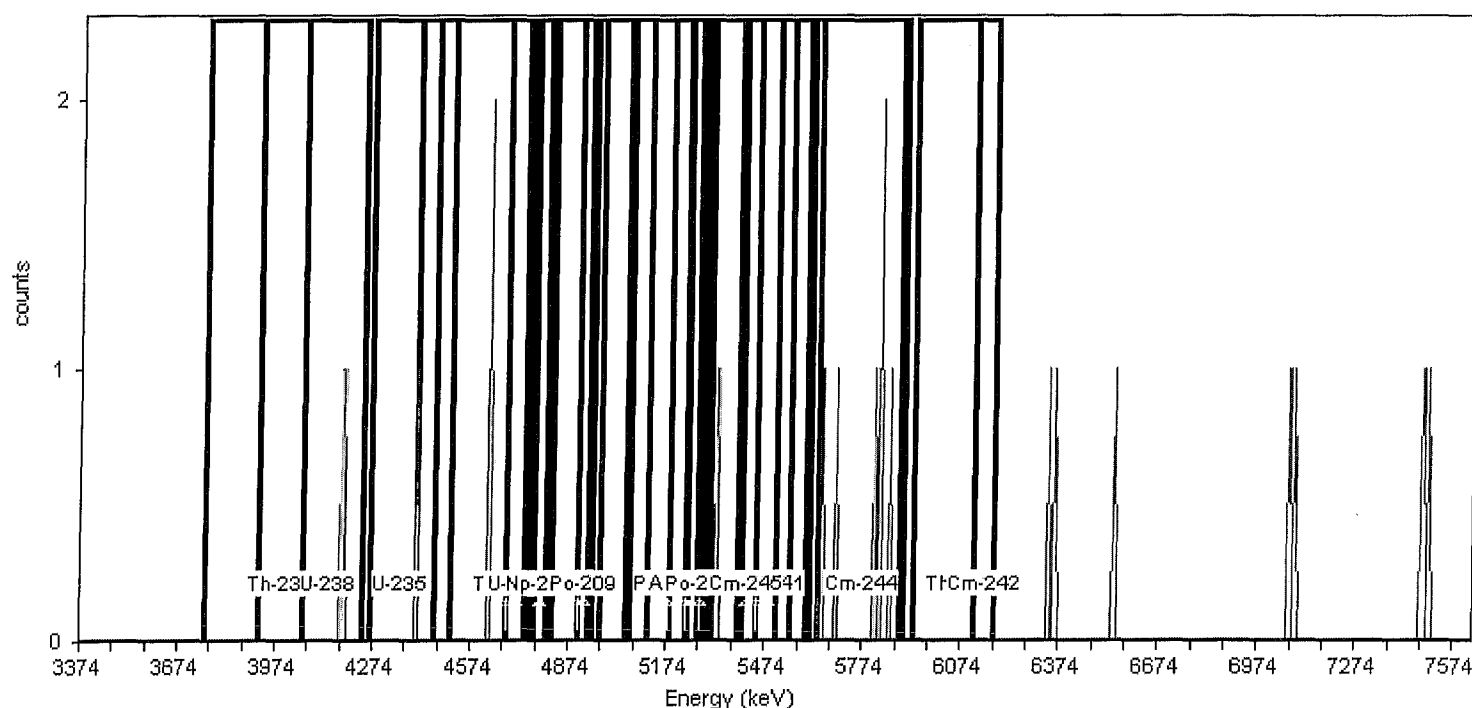
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.78% +/- 0.39% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 21.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	2.00	2.083E-003	1.804E-003
U-235	4.36	4.26	4.46	1.00	1.042E-003	1.473E-003
Th-230	4.68	4.40	4.75	3.00	3.125E-003	2.083E-003
U-234	4.71	4.51	4.82	2.00	2.083E-003	1.804E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	1.00	1.042E-003	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	1.00	1.042E-003	1.473E-003
Am-241	5.48	5.30	5.60	1.00	1.042E-003	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	6.00	6.250E-003	2.756E-003
Cm-244	5.78	5.64	5.90	6.00	6.250E-003	2.756E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:14:18PM 7/25/2012

Sample Name: ICB;AV123

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV123 , SN: 49-179C1
Acquisition Start Date: 7/24/2012 9:06:35PM
Live Time: 960.00 min.
Real Time: 960.10 min.
Calibration Name: IC-9886;AV123-20120614
Calibration Date: 6/15/2012 11:45:44AM

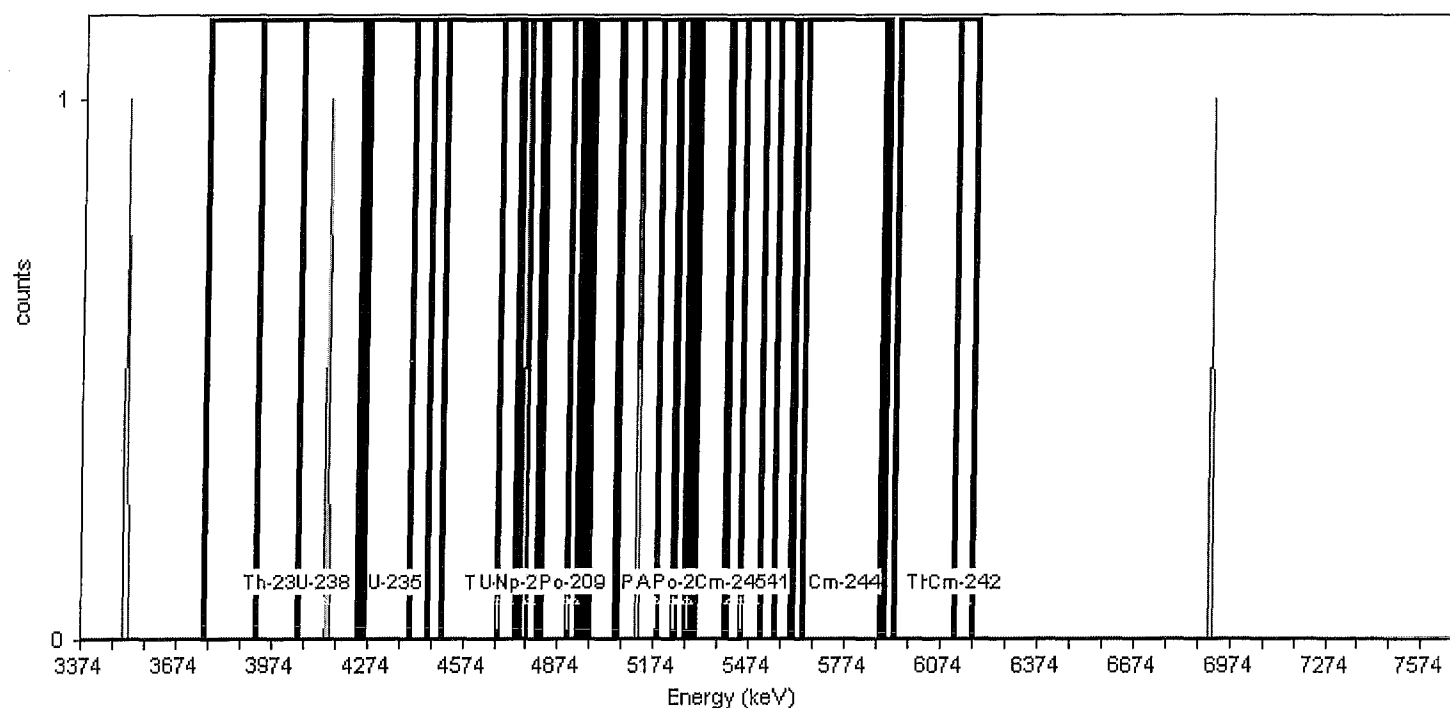
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.91% +/- 0.36% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 5.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:14:24PM 7/25/2012

Sample Name: ICB;AV124

Comment:

Sample

Spectrum #1 Analysis #1

Batch

Batch Name: July2012b

Description:

Analyst: 60040

Acquisition

Detector: AV124 , SN: 49-179C2
Acquisition Start Date: 7/24/2012 9:06:37PM
Live Time: 960.00 min.
Real Time: 960.10 min.
Calibration Name: IC-7107;AV124-20120614
Calibration Date: 6/15/2012 11:46:08AM

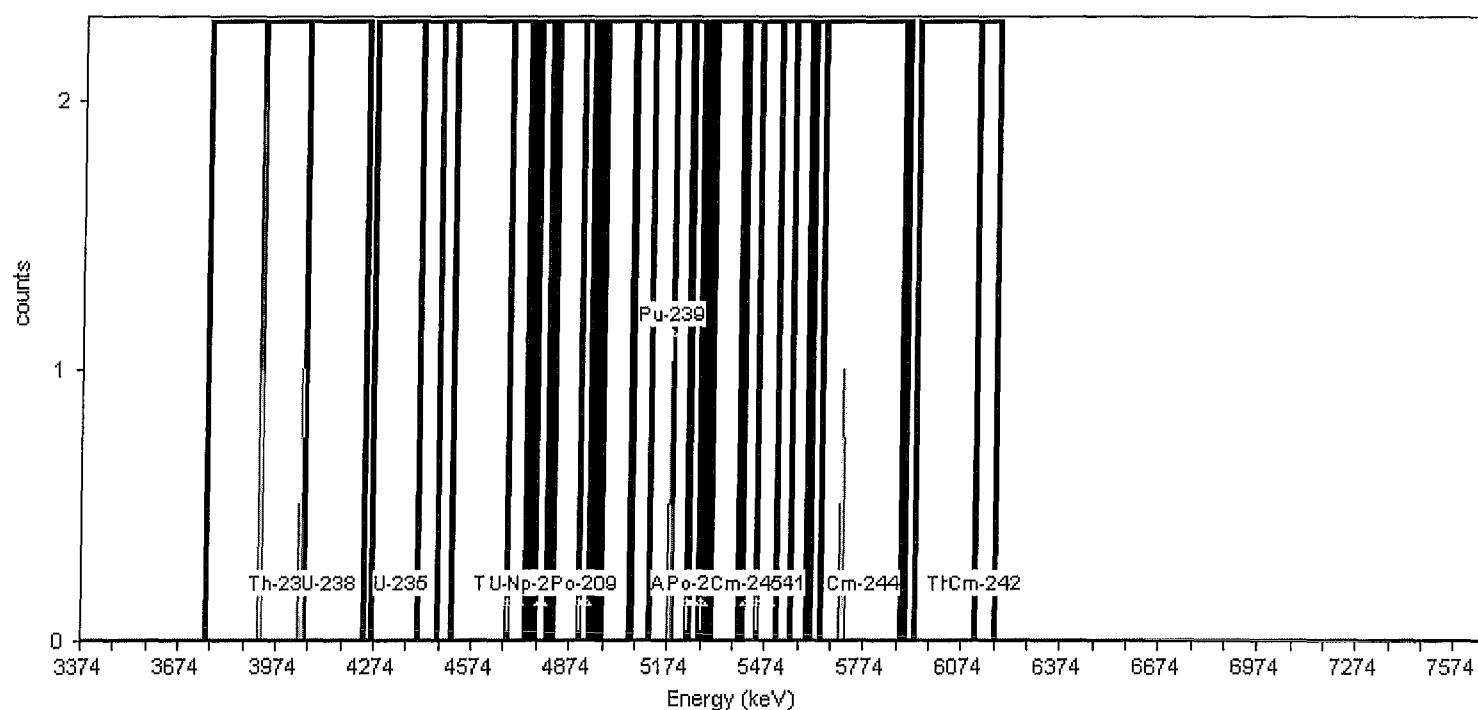
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.53% +/- 0.30% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 5.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	3.00	3.125E-003	2.083E-003
U-238	4.14	3.92	4.24	3.00	3.125E-003	2.083E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	1.00	1.042E-003	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	1.00	1.042E-003	1.473E-003
Cm-244	5.78	5.64	5.90	1.00	1.042E-003	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:14:30PM 7/25/2012

Sample Name: ICB;AV125

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV125 , SN: 49-179C3
Acquisition Start Date: 7/24/2012 9:06:39PM
Live Time: 960.00 min.
Real Time: 960.10 min.
Calibration Name: IC-8874;AV125-20120614
Calibration Date: 6/15/2012 11:46:45AM

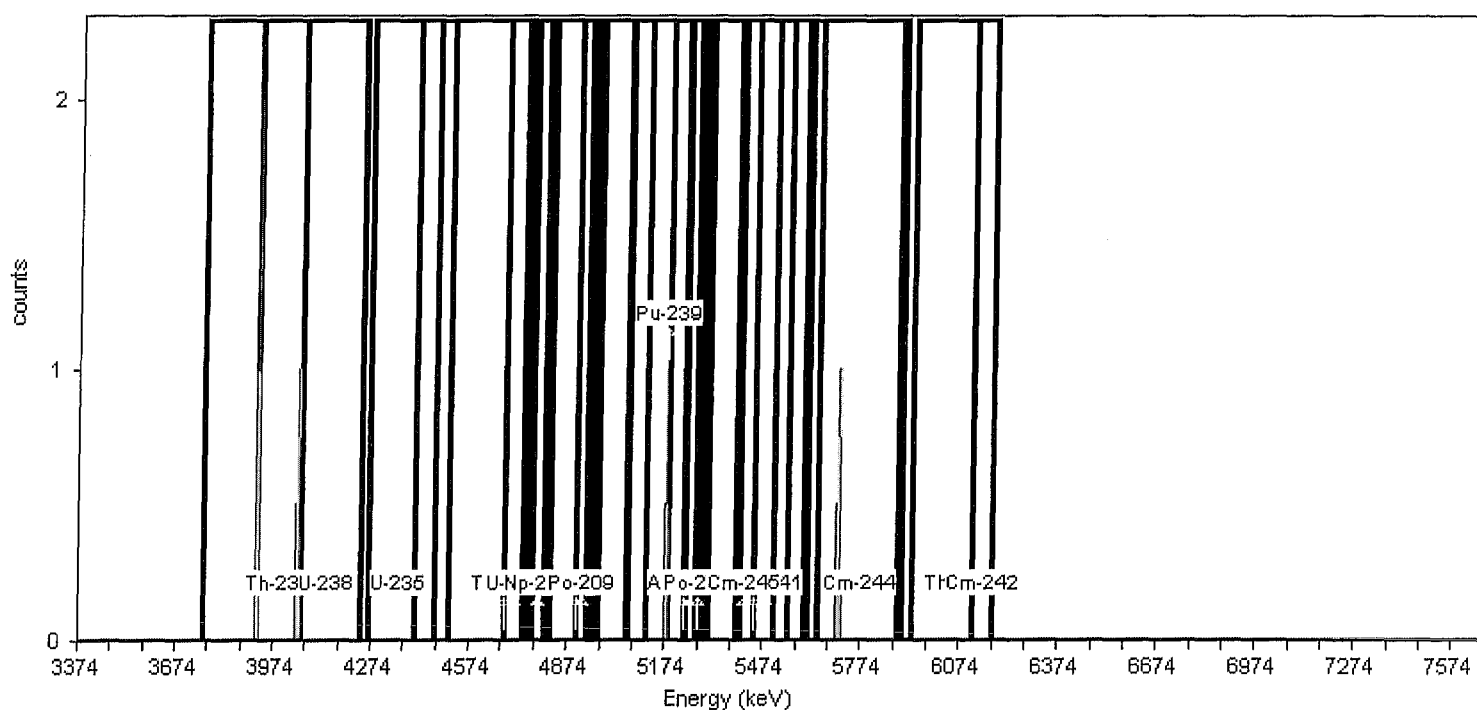
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.75% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 6.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:16:45PM 7/25/2012

Sample Name: ICB;AV126

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012c

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV126 , SN: 49-179C4
Acquisition Start Date: 7/24/2012 9:08:24PM
Live Time: 960.00 min.
Real Time: 960.10 min.
Calibration Name: IC-8875;AV126-20120614
Calibration Date: 6/15/2012 11:47:26AM

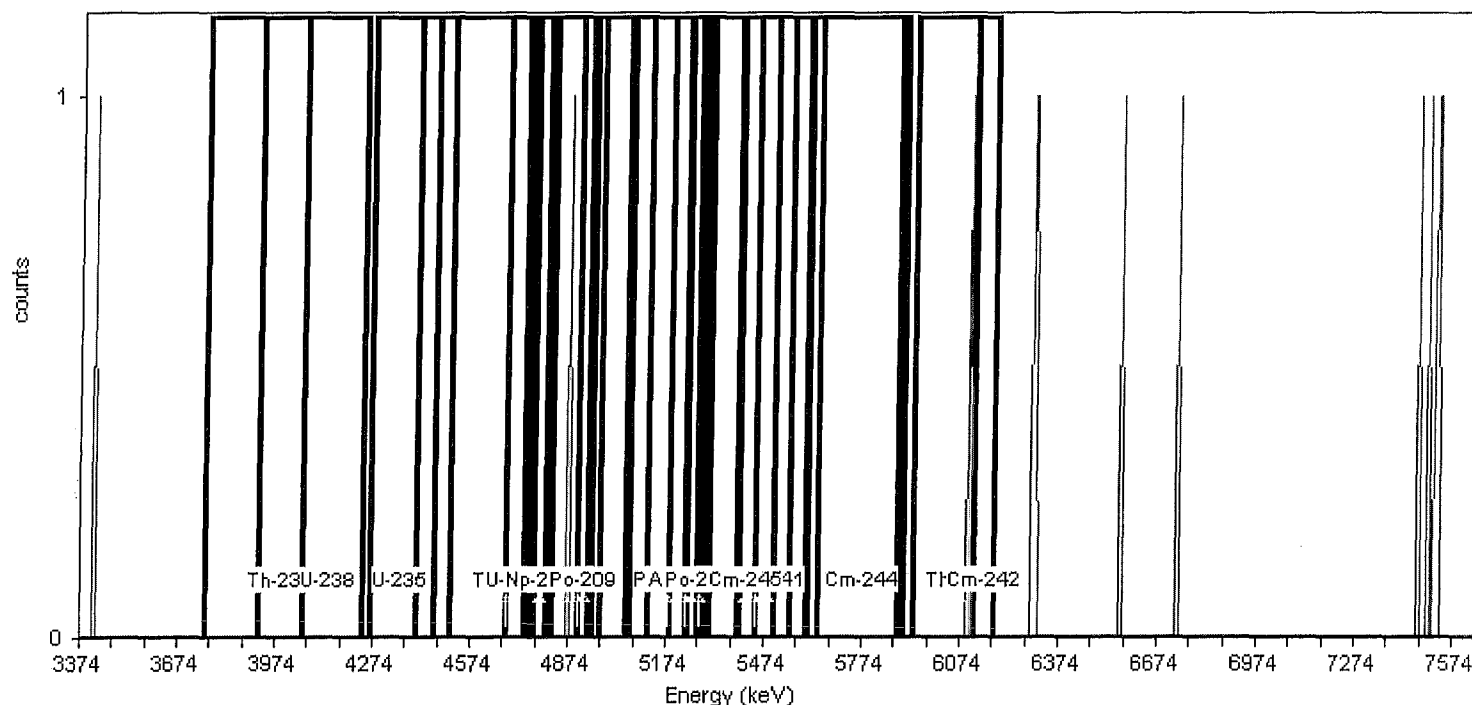
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.60% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 11.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	1.00	1.042E-003	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV127

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV127 , SN: 49-179C5
 Acquisition Start Date: 7/24/2012 9:06:40PM
 Live Time: 960.00 min.
 Real Time: 960.10 min.
 Calibration Name: IC-8876;AV127-20120614
 Calibration Date: 6/15/2012 11:48:11AM

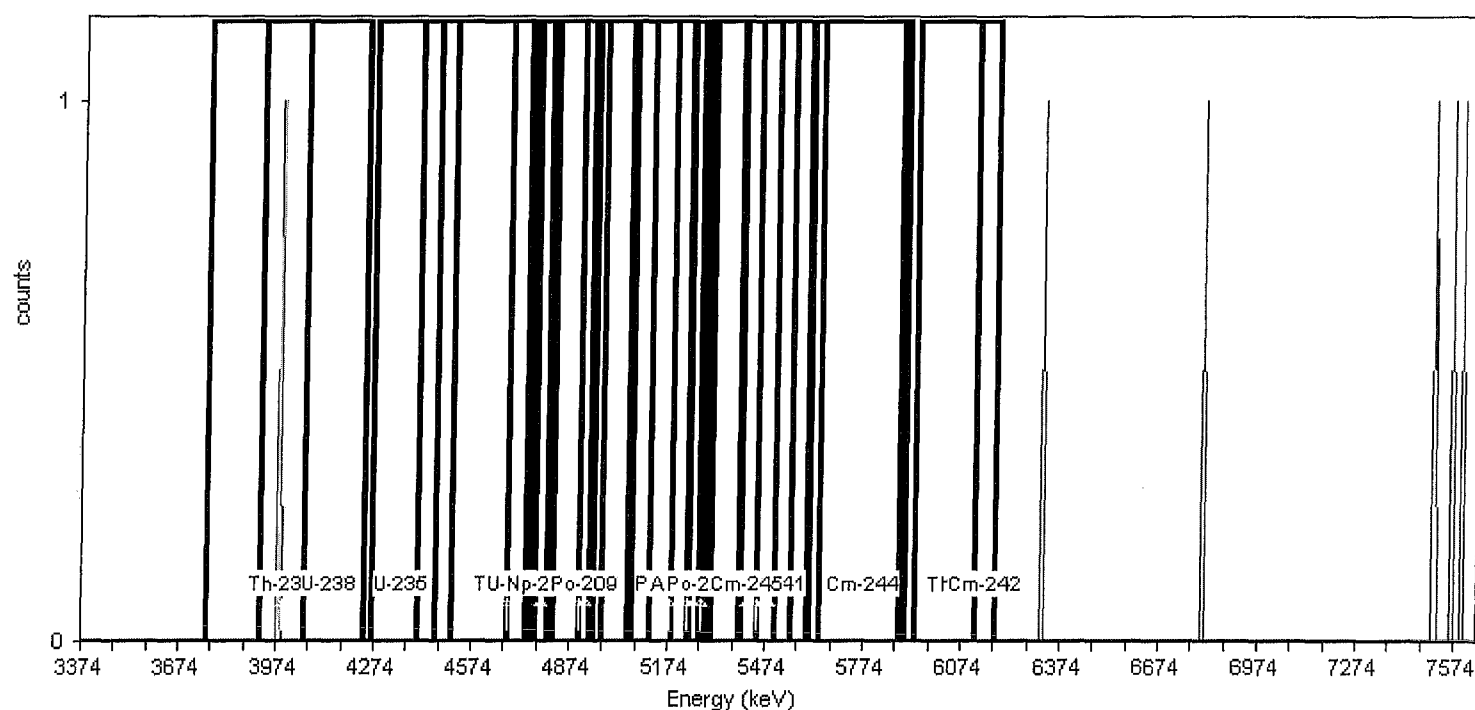
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.75% +/- 0.38% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 6.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

Alpha-Spectroscopy Background Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
1:14:42PM 7/25/2012

Sample Name: ICB;AV128

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV128, SN: 49-179C6
Acquisition Start Date: 7/24/2012 9:06:45PM
Live Time: 960.00 min.
Real Time: 960.10 min.
Calibration Name: IC-8877;AV128-20120614
Calibration Date: 6/15/2012 11:48:54AM

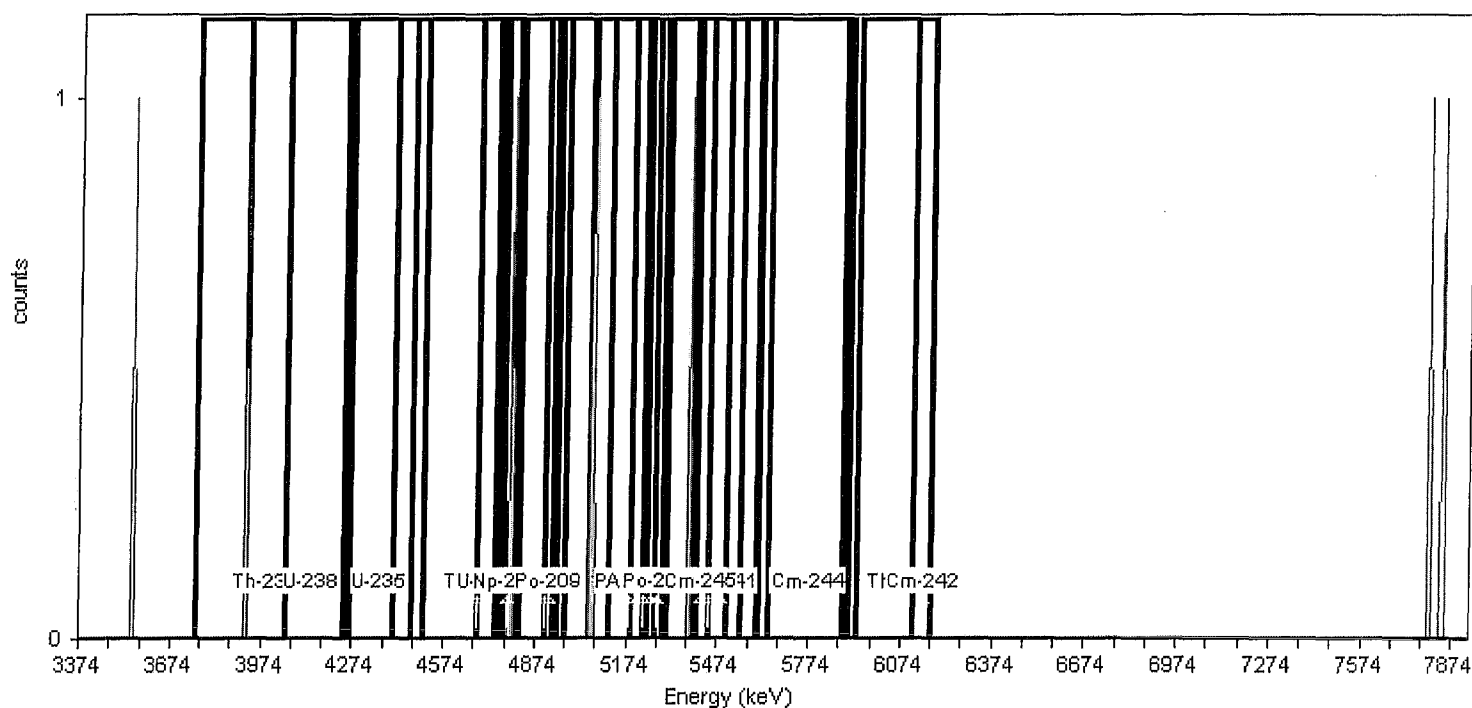
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 26.85% +/- 0.32% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 7.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	1.00	1.042E-003	1.473E-003
U-238	4.14	3.92	4.24	1.00	1.042E-003	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	1.00	1.042E-003	1.473E-003
Pu-242	4.90	4.68	4.95	1.00	1.042E-003	1.473E-003
Th-229	4.86	4.74	5.12	2.00	2.083E-003	1.804E-003
Np-237	4.78	4.77	4.81	1.00	1.042E-003	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	1.00	1.042E-003	1.473E-003
Am-243	5.23	5.05	5.31	1.00	1.042E-003	1.473E-003
U-232	5.25	5.06	5.40	2.00	2.083E-003	1.804E-003
Th-228	5.45	5.19	5.51	1.00	1.042E-003	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	1.00	1.042E-003	1.473E-003
Am-241	5.48	5.30	5.60	1.00	1.042E-003	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	0.00	0.000E+000	1.473E-003
Cm-244	5.78	5.64	5.90	0.00	0.000E+000	1.473E-003
Th-227	6.07	5.93	6.18	0.00	0.000E+000	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

THE LEADER IN ENVIRONMENTAL TESTING

Sample Name: ICB;AV129

Comment:

Sample

Spectrum #1 Analysis #1

Batch Name: July2012b

Description:

Batch

Analyst: 60040

Acquisition

Detector: AV129 , SN: 44-179C7
Acquisition Start Date: 7/24/2012 9:06:45PM
Live Time: 960.00 min.
Real Time: 960.10 min.
Calibration Name: IC-9520;AV12920120614
Calibration Date: 6/15/2012 11:49:36AM

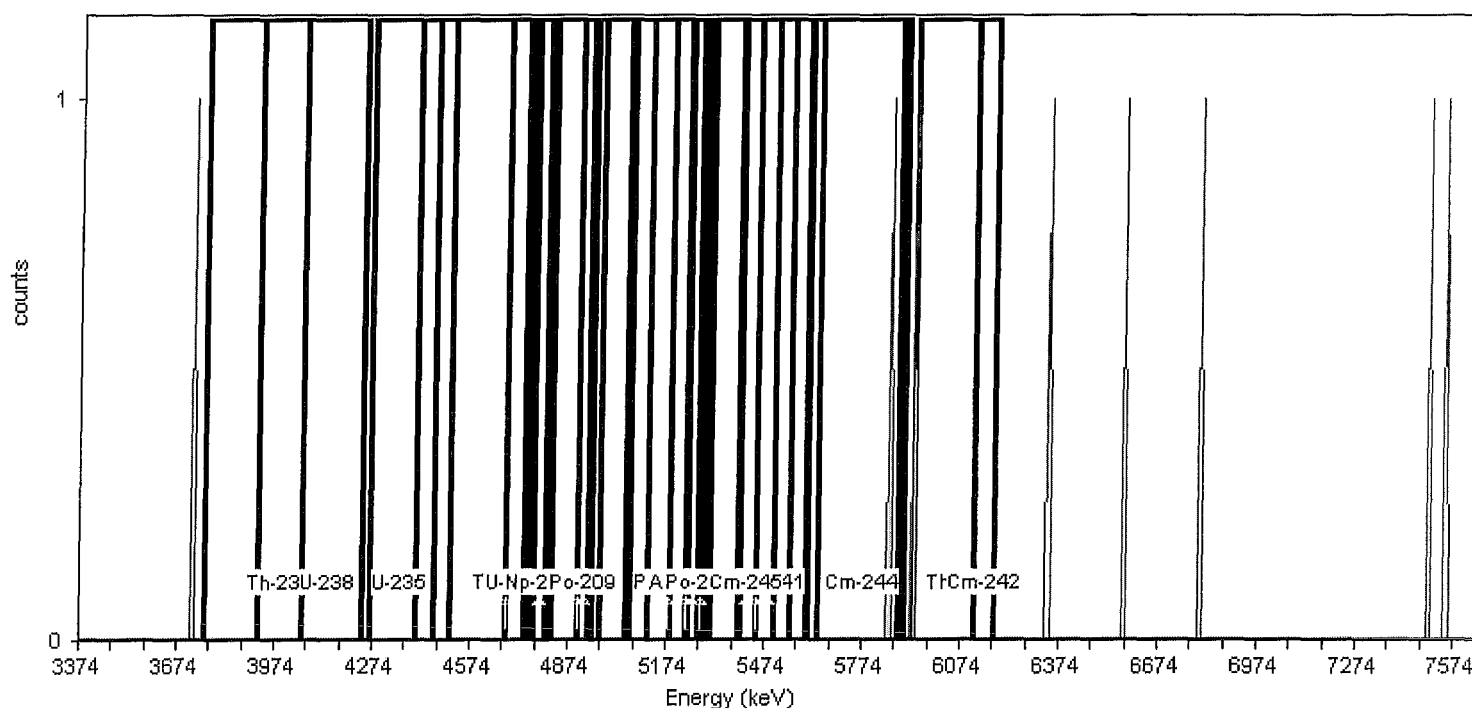
Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²

Efficiency: 27.10% +/- 0.37% TPU(2 sigma)



General Analysis

Analysis Method: Absolute ROI Analysis, Set Name = 11/05_BackgroundROI, Nuclide Library: Background ROI Library

Total Background Counts: 8.00

Nuclide Summary (ROI)

<u>RegionName</u>	<u>Peak Energy</u>	<u>Start Energy</u>	<u>End Energy</u>	<u>GrossCounts</u>	<u>Count Rate</u>	<u>CR Uncertainty</u>
	(MeV)	(MeV)	(MeV)		(CPM)	(CPM)
Th-232	3.99	3.75	4.05	0.00	0.000E+000	1.473E-003
U-238	4.14	3.92	4.24	0.00	0.000E+000	1.473E-003
U-235	4.36	4.26	4.46	0.00	0.000E+000	1.473E-003
Th-230	4.68	4.40	4.75	0.00	0.000E+000	1.473E-003
U-234	4.71	4.51	4.82	0.00	0.000E+000	1.473E-003
Pu-242	4.90	4.68	4.95	0.00	0.000E+000	1.473E-003
Th-229	4.86	4.74	5.12	0.00	0.000E+000	1.473E-003
Np-237	4.78	4.77	4.81	0.00	0.000E+000	1.473E-003
Po-209	4.92	4.90	4.93	0.00	0.000E+000	1.473E-003
Pu-239	5.18	4.97	5.24	0.00	0.000E+000	1.473E-003
Am-243	5.23	5.05	5.31	0.00	0.000E+000	1.473E-003
U-232	5.25	5.06	5.40	0.00	0.000E+000	1.473E-003
Th-228	5.45	5.19	5.51	0.00	0.000E+000	1.473E-003
Po-210	5.28	5.23	5.29	0.00	0.000E+000	1.473E-003
Pu-238	5.47	5.27	5.55	0.00	0.000E+000	1.473E-003
Am-241	5.48	5.30	5.60	0.00	0.000E+000	1.473E-003
Cm-245	5.42	5.40	5.45	0.00	0.000E+000	1.473E-003
Pu-236	5.76	5.61	5.89	1.00	1.042E-003	1.473E-003
Cm-244	5.78	5.64	5.90	1.00	1.042E-003	1.473E-003
Th-227	6.07	5.93	6.18	1.00	1.042E-003	1.473E-003
Cm-242	6.15	6.12	6.18	0.00	0.000E+000	1.473E-003

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Monthly CCV
Alpha Vision
July 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)
<i>AV1</i>				
IC-7107;AV1-20120607	6/7/2012 3:02:16 PM	82232-334	0.2756	Pass
CCV-7107;AV1-20120724	7/24/2012 1:37:50 PM	82232-334	0.2749	Pass 99.7401 Pass
<i>AV2</i>				
IC-8874;AV2-20120607	6/7/2012 3:02:23 PM	82233-334	0.2693	Pass
CCV-8874;AV2-20120724	7/24/2012 1:38:06 PM	82233-334	0.2737	Pass 101.617 Pass
<i>AV3</i>				
IC-8875;AV3-20120607	6/7/2012 3:02:28 PM	82234-334	0.2857	Pass
CCV-8875;AV3-20120724	7/24/2012 1:38:18 PM	82234-334	0.2813	Pass 98.4574 Pass
<i>AV4</i>				
IC-8876;AV4-20120607	6/7/2012 3:02:32 PM	82235-334	0.2793	Pass
CCV-8876;AV4-20120724	7/24/2012 1:38:33 PM	82235-334	0.2759	Pass 98.7801 Pass
<i>AV6</i>				
IC-9520;AV6-20120607a	6/7/2012 3:56:30 PM	82237-334	0.2792	Pass
CCV-9520;AV6-20120724	7/24/2012 1:38:57 PM	82237-334	0.2815	Pass 100.837 Pass
<i>AV7</i>				
IC-8879;AV7-20120607	6/7/2012 4:03:51 PM	82238-334	0.2731	Pass
CCV-8879;AV7-20120724	7/24/2012 1:39:10 PM	82238-334	0.2696	Pass 98.7133 Pass
<i>AV8</i>				
IC-9792;AV8-20120607	6/7/2012 4:06:21 PM	82240-334	0.2787	Pass
CCV-9792;AV8-20120724	7/24/2012 1:39:22 PM	82240-334	0.2791	Pass 100.131 Pass
<i>AV9</i>				
IC-9793;AV9-20120607	6/7/2012 4:06:26 PM	82241-334	0.2781	Pass
CCV-9793;AV9-20120724	7/24/2012 1:39:34 PM	82241-334	0.2797	Pass 100.590 Pass
<i>AV10</i>				
IC-9794;AV10-20120621	6/21/2012 2:01:39 PM	82242-334	0.2725	Pass
<i>AV11</i>				
IC-9795;AV11-20120607	6/7/2012 7:50:12 PM	82243-334	0.2751	Pass
CCV-9795;AV11-20120724	7/24/2012 1:40:24 PM	82243-334	0.2762	Pass 100.416 Pass
<i>AV12</i>				
IC-9817;AV12-20120607	6/7/2012 7:50:16 PM	82244-334	0.2699	Pass
CCV-9817;AV12-20120724	7/24/2012 1:40:35 PM	82244-334	0.2659	Pass 98.5073 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 1 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV13</i>						
IC-9884;AV13-20120607	6/7/2012 7:50:19 PM	82245-334	0.2758	Pass		
CCV-9884;AV13-20120724	7/24/2012 1:40:46 PM	82245-334	0.2906	Pass	105.355	Fail
CCV-9884;AV13-20120724a	7/24/2012 5:02:56 PM	82245-334	0.2748	Pass	99.6538	Pass
CCV-9884;AV13-20120725	7/25/2012 11:44:29 AM	82245-334	0.2727	Pass	98.8754	Pass
<i>AV14</i>						
IC-9885;AV14-20120607	6/7/2012 7:50:22 PM	82246-334	0.2724	Pass		
CCV-9885;AV14-20120724	7/24/2012 1:41:00 PM	82246-334	0.2691	Pass	98.7814	Pass
<i>AV15</i>						
IC-9886;AV15-20120607	6/7/2012 7:50:24 PM	82247-334	0.2743	Pass		
CCV-9886;AV15-20120724	7/24/2012 1:41:10 PM	82247-334	0.2744	Pass	100.039	Pass
<i>AV16</i>						
IC-7107;AV16-20120607a	6/8/2012 12:12:55 AM	82232-334	0.2798	Pass		
CCV-7107;AV16-20120724	7/24/2012 5:03:06 PM	82232-334	0.2799	Pass	100.019	Pass
<i>AV17</i>						
IC-8874;AV17-20120607	6/8/2012 12:13:37 AM	82233-334	0.2631	Pass		
CCV-8874;AV17-20120724	7/24/2012 5:03:21 PM	82233-334	0.2669	Pass	101.451	Pass
<i>AV18</i>						
IC-8875;AV18-20120607	6/8/2012 12:13:58 AM	82234-334	0.2748	Pass		
CCV-8875;AV18-20120724	7/24/2012 5:05:40 PM	82234-334	0.2730	Pass	99.3381	Pass
<i>AV19</i>						
IC-8876;AV19-20120607	6/8/2012 12:14:05 AM	82235-334	0.2694	Pass		
CCV-8876;AV19-20120724	7/24/2012 5:03:44 PM	82235-334	0.2681	Pass	99.5055	Pass
<i>AV20</i>						
IC-8877;AV20-20120607	6/7/2012 7:50:28 PM	82236-334	0.2703	Pass		
CCV-8877;AV20-20120724	7/24/2012 1:38:45 PM	82236-334	0.2677	Pass	99.0551	Pass
<i>AV21</i>						
IC-9520;AV21-20120607	6/8/2012 12:14:09 AM	82237-334	0.2708	Pass		
CCV-9520;AV21-20120724	7/24/2012 5:03:53 PM	82237-334	0.2734	Pass	100.966	Pass
<i>AV22</i>						
IC-8879;AV22-20120607	6/8/2012 12:14:14 AM	82238-334	0.2679	Pass		
CCV-8879;AV22-20120724	7/24/2012 5:04:03 PM	82238-334	0.2639	Pass	98.5154	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 2 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV23</i>						
IC-9792;AV23-20120607	6/8/2012 12:14:18 AM	82240-334	0.2673	Pass		
CCV-9792;AV23-20120724	7/24/2012 5:04:14 PM	82240-334	0.2688	Pass	100.552	Pass
<i>AV24</i>						
IC-9793;AV24-20120607	6/8/2012 12:14:21 AM	82241-334	0.2734	Pass		
CCV-9793;AV24-20120724	7/24/2012 5:04:24 PM	82241-334	0.2766	Pass	101.156	Pass
<i>AV43</i>						
IC-9794;AV43-20120607	6/7/2012 7:50:31 PM	82242-334	0.2699	Pass		
CCV-9794;AV43-20120725	7/25/2012 10:28:07 PM	82242-334	0.2686	Pass	99.5158	Pass
<i>AV44</i>						
IC-9795;AV44-20120610	6/11/2012 3:27:57 PM	82243-334	0.2664	Pass		
CCV-9795;AV44-20120725	7/25/2012 10:28:12 PM	82243-334	0.2682	Pass	100.672	Pass
<i>AV45</i>						
IC-9817;AV45-20120610	6/11/2012 3:28:22 PM	82244-334	0.2704	Pass		
CCV-9817;AV45-20120725	7/25/2012 10:28:16 PM	82244-334	0.0001	Eval	5.53444	Fail
<i>AV46</i>						
IC-9884;AV46-20120610	6/11/2012 3:28:47 PM	82245-334	0.2849	Pass		
CCV-9884;AV46-20120725	7/25/2012 10:28:19 PM	82245-334	0.2804	Pass	98.4164	Pass
<i>AV47</i>						
IC-9885;AV47-20120611a	6/12/2012 1:04:12 AM	82246-334	0.2678	Pass		
<i>AV48</i>						
IC-9886;AV48-20120610	6/11/2012 3:29:40 PM	82247-334	0.2764	Pass		
CCV-9886;AV48-20120725	7/25/2012 10:28:31 PM	82247-334	0.0004	Eval	0.13021	Fail
<i>AV49</i>						
IC-7107;AV49-20120610	6/10/2012 8:17:41 PM	82232-334	0.2927	Pass		
CCV-7107;AV49-20120725	7/25/2012 10:28:34 PM	82232-334	0.2909	Pass	99.3834	Pass
<i>AV50</i>						
IC-8874;AV50-20120610	6/10/2012 8:17:58 PM	82233-334	0.2754	Pass		
CCV-8874;AV50-20120726	7/26/2012 1:58:10 PM	82233-334	0.2729	Pass	99.0921	Pass
<i>AV51</i>						
IC-8875;AV51-20120610	6/10/2012 8:18:12 PM	82234-334	0.2819	Pass		
CCV-8875;AV51-20120725	7/25/2012 10:28:38 PM	82234-334	0.2814	Pass	99.8447	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 3 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV52</i>						
IC-8876;AV52-20120610	6/10/2012 8:18:26 PM	82235-334	0.2911	Pass		
CCV-8876;AV52-20120726	7/26/2012 1:58:30 PM	82235-334	0.2925	Pass	100.496	Pass
<i>AV53</i>						
IC-8877;AV53-20120610	6/10/2012 8:18:38 PM	82236-334	0.2773	Pass		
CCV-8877;AV53-20120725	7/25/2012 10:28:41 PM	82236-334	0.2775	Pass	100.055	Pass
<i>AV54</i>						
IC-9520;AV54-20120610	6/10/2012 8:18:52 PM	82237-334	0.2798	Pass		
CCV-9520;AV54-20120726	7/26/2012 1:58:49 PM	82237-334	0.2760	Pass	98.6444	Pass
<i>AV55</i>						
IC-8879;AV55-20120610	6/10/2012 8:19:03 PM	82238-334	0.2720	Pass		
CCV-8879;AV55-20120725	7/25/2012 10:28:45 PM	82238-334	0.2697	Pass	99.1518	Pass
<i>AV56</i>						
IC-9792;AV56-20120610	6/10/2012 8:19:16 PM	82240-334	0.2709	Pass		
CCV-9792;AV56-20120725	7/25/2012 10:28:48 PM	82240-334	0.0003	Eval	0.11605	Fail
<i>AV57</i>						
IC-9793;AV57-20120610	6/10/2012 8:19:29 PM	82241-334	0.2764	Pass		
CCV-9793;AV57-20120725	7/25/2012 10:28:52 PM	82241-334	0.2763	Pass	99.9520	Pass
<i>AV58</i>						
IC-9794;AV58-20120610	6/10/2012 8:19:36 PM	82242-334	0.2550	Pass		
<i>AV59</i>						
IC-9795;AV59-20120610	6/10/2012 8:19:39 PM	82243-334	0.2753	Pass		
<i>AV60</i>						
IC-9817;AV60-20120610	6/10/2012 8:19:43 PM	82244-334	0.2682	Pass		
CCV-9817;AV60-20120725a	7/26/2012 12:42:30 AM	82244-334	0.2705	Pass	100.836	Pass
<i>AV61</i>						
IC-9884;AV61-20120610	6/10/2012 8:19:46 PM	82245-334	0.2792	Pass		
CCV-9884;AV61-20120725	7/26/2012 12:42:24 AM	82245-334	0.2785	Pass	99.7356	Pass
<i>AV62</i>						
IC-9885;AV62-20120610	6/10/2012 8:19:49 PM	82246-334	0.2742	Pass		
CCV-9885;AV62-20120725	7/26/2012 12:42:33 AM	82246-334	0.2738	Pass	99.8594	Pass
<i>AV63</i>						
IC-9886;AV63-20120610	6/10/2012 8:19:57 PM	82247-334	0.2707	Pass		
CCV-9886;AV63-20120725	7/26/2012 12:42:36 AM	82247-334	0.2716	Pass	100.323	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 4 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV64</i>						
IC-7107;AV64-20120610	6/11/2012 3:30:09 PM	82232-334	0.2935	Pass		
CCV-7107;AV64-20120726	7/26/2012 1:58:00 PM	82232-334	0.2935	Pass	99.9978	Pass
<i>AV65</i>						
IC-8874;AV65-20120610	6/11/2012 3:30:33 PM	82233-334	0.2759	Pass		
CCV-8874;AV65-20120725	7/25/2012 10:28:56 PM	82233-334	0.2745	Pass	99.4624	Pass
<i>AV66</i>						
IC-8875;AV66-20120610	6/11/2012 3:30:58 PM	82234-334	0.2846	Pass		
CCV-8875;AV66-20120725	7/26/2012 12:42:39 AM	82234-334	0.2809	Pass	98.6783	Pass
<i>AV67</i>						
IC-8876;AV67-20120610	6/11/2012 3:31:27 PM	82235-334	0.2953	Pass		
CCV-8876;AV67-20120726	7/26/2012 5:34:37 PM	82235-334	0.2975	Pass	100.722	Pass
<i>AV68</i>						
IC-8877;AV68-20120610	6/11/2012 3:31:53 PM	82236-334	0.2740	Pass		
CCV-8877;AV68-20120725	7/26/2012 12:42:42 AM	82236-334	0.2748	Pass	100.313	Pass
<i>AV69</i>						
IC-9520;AV69-20120610	6/11/2012 3:32:14 PM	82237-334	0.2763	Pass		
CCV-9520;AV69-20120725	7/25/2012 10:29:25 PM	82237-334	0.2730	Pass	98.8075	Pass
<i>AV70</i>						
IC-8879;AV70-20120610	6/11/2012 3:32:41 PM	82238-334	0.2732	Pass		
CCV-8879;AV70-20120725	7/26/2012 12:42:45 AM	82238-334	0.2708	Pass	99.1119	Pass
<i>AV71</i>						
IC-9792;AV71-20120610	6/11/2012 3:33:08 PM	82240-334	0.2763	Pass		
CCV-9792;AV71-20120725	7/26/2012 12:42:50 AM	82240-334	0.2755	Pass	99.7117	Pass
<i>AV72</i>						
IC-9793;AV72-20120610	6/11/2012 3:33:25 PM	82241-334	0.2910	Pass		
CCV-9793;AV72-20120725	7/26/2012 12:42:53 AM	82241-334	0.2858	Pass	98.2175	Pass
<i>AV73</i>						
IC-9794;AV73-20120610	6/11/2012 3:33:47 PM	82242-334	0.2766	Pass		
CCV-9794;AV73-20120725	7/26/2012 12:42:56 AM	82242-334	0.2759	Pass	99.7532	Pass
<i>AV74</i>						
IC-9795;AV74-20120611a	6/12/2012 1:04:18 AM	82243-334	0.2701	Pass		
CCV-9795;AV74-20120726	7/26/2012 8:37:17 AM	82243-334	0.2731	Pass	101.096	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 5 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV75</i>				
IC-9817;AV75-20120611a	6/12/2012 1:04:21 AM	82244-334	0.2656	Pass
CCV-9817;AV75-20120724	7/24/2012 8:51:29 PM	82244-334	0.2666	Pass 100.388 Pass
<i>AV76</i>				
IC-9884;AV76-20120611a	6/12/2012 1:04:24 AM	82245-334	0.2723	Pass
CCV-9884;AV76-20120724a	7/24/2012 10:38:47 PM	82245-334	0.2757	Pass 101.240 Pass
<i>AV77</i>				
IC-9885;AV77-20120612	6/12/2012 10:16:22 PM	82246-334	0.2674	Pass
CCV-9885;AV77-20120724	7/24/2012 8:51:53 PM	82246-334	0.2687	Pass 100.497 Pass
<i>AV78</i>				
IC-9886;AV78-20120611a	6/12/2012 1:04:27 AM	82247-334	0.2751	Pass
CCV-9886;AV78-20120724	7/24/2012 8:51:41 PM	82247-334	0.2748	Pass 99.8636 Pass
<i>AV79</i>				
IC-7107;AV79-20120611a	6/12/2012 1:04:30 AM	82232-334	0.2824	Pass
CCV-7107;AV79-20120724	7/24/2012 8:51:57 PM	82232-334	0.2837	Pass 100.462 Pass
<i>AV80</i>				
IC-8874;AV80-20120611a	6/12/2012 1:04:34 AM	82233-334	0.2692	Pass
CCV-8874;AV80-20120724	7/24/2012 8:51:46 PM	82233-334	0.2697	Pass 100.177 Pass
<i>AV81</i>				
IC-8875;AV81-20120611a	6/12/2012 1:04:37 AM	82234-334	0.2858	Pass
CCV-8875;AV81-20120724	7/24/2012 8:51:49 PM	82234-334	0.2899	Pass 101.429 Pass
<i>AV82</i>				
IC-8876;AV82-20120611a	6/12/2012 1:04:40 AM	82235-334	0.2768	Pass
CCV-8876;AV82-20120724	7/24/2012 8:52:00 PM	82235-334	0.2737	Pass 98.8822 Pass
<i>AV83</i>				
IC-8877;AV83-20120611a	6/12/2012 1:04:44 AM	82236-334	0.2727	Pass
CCV-8877;AV83-20120724	7/24/2012 8:52:04 PM	82236-334	0.2757	Pass 101.099 Pass
<i>AV84</i>				
IC-9520;AV84-20120611a	6/12/2012 1:04:47 AM	82237-334	0.2790	Pass
CCV-9520;AV84-20120724	7/24/2012 8:52:07 PM	82237-334	0.2748	Pass 98.4876 Pass
<i>AV85</i>				
IC-8879;AV85-20120611a	6/12/2012 1:04:50 AM	82238-334	0.2774	Pass
CCV-8879;AV85-20120724	7/24/2012 8:52:11 PM	82238-334	0.2782	Pass 100.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 6 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV86</i>				
IC-9792;AV86-20120611a	6/12/2012 1:04:54 AM	82240-334	0.2769	Pass
CCV-9792;AV86-20120724	7/24/2012 8:52:16 PM	82240-334	0.2771	Pass 100.046 Pass
<i>AV87</i>				
IC-9793;AV87-20120611a	6/12/2012 1:04:56 AM	82241-334	0.2951	Pass
CCV-9793;AV87-20120724	7/24/2012 8:52:20 PM	82241-334	0.2909	Pass 98.5861 Pass
<i>AV88</i>				
IC-9794;AV88-20120611a	6/12/2012 1:04:59 AM	82242-334	0.2744	Pass
CCV-9794;AV88-20120724	7/24/2012 5:04:33 PM	82242-334	0.2741	Pass 99.8889 Pass
<i>AV89</i>				
IC-9795;AV89-20120612	6/12/2012 3:39:24 PM	82243-334	0.2684	Pass
CCV-9795;AV89-20120724	7/24/2012 5:04:44 PM	82243-334	0.2679	Pass 99.8091 Pass
<i>AV90</i>				
IC-9817;AV90-20120612	6/12/2012 3:39:50 PM	82244-334	0.2731	Pass
CCV-9817;AV90	7/24/2012 5:05:02 PM	82244-334	0.2721	Pass 99.6298 Pass
<i>AV91</i>				
IC-9884;AV91-20120612	6/12/2012 3:40:10 PM	82245-334	0.2787	Pass
CCV-9884;AV91-20120724	7/24/2012 11:50:47 PM	82245-334	0.2800	Pass 100.497 Pass
<i>AV92</i>				
IC-9885;AV92-20120613	6/13/2012 10:43:01 AM	82246-334	0.2705	Pass
CCV-9885;AV92-20120724	7/24/2012 5:08:08 PM	82246-334	0.2723	Pass 100.677 Pass
<i>AV93</i>				
IC-9886;AV93-20120612	6/12/2012 3:40:55 PM	82247-334	0.2715	Pass
CCV-9886;AV93-20120724	7/24/2012 5:08:42 PM	82247-334	0.2720	Pass 100.196 Pass
<i>AV94</i>				
IC-7107;AV94-20120612a	6/12/2012 3:41:17 PM	82232-334	0.2797	Pass
CCV-7107;AV94-20120724	7/24/2012 10:38:52 PM	82232-334	0.2772	Pass 99.0992 Pass
<i>AV95</i>				
IC-8874;AV95-20120608	6/8/2012 8:45:55 AM	82233-334	0.2719	Pass
CCV-8874;AV95-20120724	7/24/2012 10:38:55 PM	82233-334	0.2708	Pass 99.6240 Pass
<i>AV96</i>				
IC-8875;AV96-20120612	6/12/2012 3:41:40 PM	82234-334	0.2831	Pass
CCV-8875;AV96-20120724	7/24/2012 10:39:01 PM	82234-334	0.0004	Eval 0.14859 Fail

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 7 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV97</i>						
IC-8876;AV97-20120612a	6/12/2012 10:16:26 PM	82235-334	0.2765	Pass		
CCV-8876;;AV97-20120724	7/24/2012 10:39:04 PM	82235-334	0.2779	Pass	100.508	Pass
<i>AV98</i>						
IC-8877;AV98-20120608	6/8/2012 8:46:02 AM	82236-334	0.2818	Pass		
CCV-8877;AV98-20120724	7/24/2012 5:06:05 PM	82236-334	0.2793	Pass	99.1155	Pass
<i>AV99</i>						
IC-9520;AV99-20120608	6/8/2012 8:46:10 AM	82237-334	0.2703	Pass		
<i>AV100</i>						
IC-8879;AV100-20120608	6/8/2012 8:46:24 AM	82238-334	0.2719	Pass		
CCV-8879;AV100-20120726	7/26/2012 1:58:58 PM	82238-334	0.2703	Pass	99.4168	Pass
<i>AV101</i>						
IC-9792;AV101-20120608	6/8/2012 8:46:34 AM	82240-334	0.2802	Pass		
CCV-9792;AV101-20120726	7/26/2012 8:37:09 AM	82240-334	0.2787	Pass	99.4560	Pass
<i>AV102</i>						
IC-9793;AV102-20120608	6/8/2012 8:46:41 AM	82241-334	0.2826	Pass		
CCV-9793;AV102-20120726	7/26/2012 8:37:21 AM	82241-334	0.2794	Pass	98.8711	Pass
<i>AV103</i>						
IC-9794;AV103-20120607	6/8/2012 12:14:29 AM	82242-334	0.2709	Pass		
CCV-9794;AV103-20120726	7/26/2012 1:59:26 PM	82242-334	0.2718	Pass	100.319	Pass
<i>AV104</i>						
IC-9795;AV104-20120607	6/8/2012 12:14:40 AM	82243-334	0.2646	Pass		
CCV-9795;AV104-20120726	7/26/2012 1:59:37 PM	82243-334	0.0056	Eval	2.11169	Fail
<i>AV105</i>						
IC-9817;AV105-20120607	6/8/2012 12:14:48 AM	82244-334	0.2474	Pass		
CCV-9817;AV10520120726	7/26/2012 1:59:46 PM	82244-334	0.2451	Pass	99.0547	Pass
<i>AV106</i>						
IC-9884;AV106-20120607	6/8/2012 12:15:09 AM	82245-334	0.2797	Pass		
CCV-9884;AV106-20120726	7/26/2012 1:59:55 PM	82245-334	0.2758	Pass	98.5711	Pass
<i>AV107</i>						
IC-9885;AV107-20120607	6/8/2012 12:14:52 AM	82246-334	0.2711	Pass		
CCV-9885;AV107-20120726	7/26/2012 2:00:04 PM	82246-334	0.2733	Pass	100.841	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 8 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV108</i>						
IC-9886;AV108-20120607	6/8/2012 12:14:56 AM	82247-334	0.2812	Pass		
CCV-9886;AV108-20120726	7/26/2012 2:00:19 PM	82247-334	0.2814	Pass	100.046	Pass
<i>AV109</i>						
IC-7107;AV109-20120608	6/8/2012 8:46:47 AM	82232-334	0.2782	Pass		
CCV-7107;AV109-20120725	7/26/2012 12:42:58 AM	82232-334	0.2245	Pass	80.7030	Fail
CCV-7107;AV109-20120726	7/26/2012 5:32:41 PM	82232-334	0.2819	Pass	101.326	Pass
CCV-7107;AV109-20120726a	7/26/2012 7:44:53 PM	82232-334	0.2763	Pass	99.3002	Pass
<i>AV111</i>						
IC-8875;AV111-20120608	6/8/2012 8:46:55 AM	82234-334	0.2800	Pass		
CCV-8875;AV111-20120726	7/26/2012 8:37:25 AM	82234-334	0.2787	Pass	99.5396	Pass
<i>AV112</i>						
IC-8876;AV112-20120608	6/8/2012 8:47:01 AM	82235-334	0.2750	Pass		
CCV-8876;AV112-20120725	7/25/2012 10:31:58 PM	82235-334	0.2735	Pass	99.4658	Pass
<i>AV113</i>						
IC-8877;AV113-20120607	6/8/2012 12:15:02 AM	82236-334	0.2765	Pass		
CCV-8877;AV113-20120726	7/26/2012 8:37:29 AM	82236-334	0.2772	Pass	100.255	Pass
<i>AV114</i>						
IC-9520;AV114-20120612	6/12/2012 3:42:22 PM	82237-334	0.2746	Pass		
CCV-9520;AV114-20120726	7/26/2012 5:34:48 PM	82237-334	0.2758	Pass	100.401	Pass
<i>AV115</i>						
IC-8879;AV115-20120612	6/12/2012 3:42:43 PM	82238-334	0.2756	Pass		
CCV-8879;AV115-20120726	7/26/2012 5:34:59 PM	82238-334	0.2762	Pass	100.213	Pass
<i>AV116</i>						
IC-9792;AV116-20120612	6/12/2012 3:43:02 PM	82240-334	0.2914	Pass		
CCV-9792;AV116-20120726	7/26/2012 1:59:07 PM	82240-334	0.2773	Pass	95.1508	Pass
<i>AV117</i>						
IC-9793;AV117-20120612	6/12/2012 3:43:27 PM	82241-334	0.2628	Pass		
CCV-9793;AV117-20120726	7/26/2012 1:59:16 PM	82241-334	0.2683	Pass	102.098	Pass
<i>AV118</i>						
IC-9794;AV118-20120608	6/8/2012 8:47:07 AM	82242-334	0.2728	Pass		
CCV-9794;AV118-20120726	7/26/2012 8:37:33 AM	82242-334	0.2689	Pass	98.5708	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 9 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>			
<i>AV119</i>							
IC-9795;AV119-20120608	6/8/2012 8:47:13 AM	82243-334	0.2655	Pass			
CCV-9795;AV119-20120726	7/26/2012 10:05:57 PM	82243-334	0.2655	Pass	99.9791	Pass	
<i>AV120</i>							
IC-9817;AV120-20120608	6/8/2012 8:47:18 AM	82244-334	0.2668	Pass			
CCV-9817;AV120-20120726	7/26/2012 8:37:37 AM	82244-334	0.2689	Pass	100.796	Pass	
<i>AV121</i>							
IC-9884;AV121-20120608	6/8/2012 8:54:38 AM	82245-334	0.2825	Pass			
CCV-9884;AV121-20120726	7/26/2012 8:37:41 AM	82245-334	0.2811	Pass	99.4897	Pass	
<i>AV122</i>							
IC-9885;AV122-20120608	6/8/2012 8:54:44 AM	82246-334	0.2678	Pass			
CCV-9885;AV122-20120726	7/26/2012 8:37:46 AM	82246-334	0.2712	Pass	101.254	Pass	
<i>AV123</i>							
IC-9886;AV123-20120614	6/15/2012 11:45:44 AM	82247-334	0.2691	Pass			
CCV-9886;AV123-20120726	7/26/2012 8:37:50 AM	82247-334	0.2654	Pass	98.6278	Pass	
<i>AV124</i>							
IC-7107;AV124-20120614	6/15/2012 11:46:08 AM	82232-334	0.2653	Pass			
CCV-7107;AV124-20120726	7/26/2012 10:16:23 PM	82232-334	0.2661	Pass	100.282	Pass	
<i>AV125</i>							
IC-8874;AV125-20120614	6/15/2012 11:46:45 AM	82233-334	0.2675	Pass			
CCV-8874;AV125-20120725	7/26/2012 12:43:01 AM	82233-334	0.2694	Pass	100.701	Pass	
<i>AV126</i>							
IC-8875;AV126-20120614	6/15/2012 11:47:26 AM	82234-334	0.2760	Pass			
CCV-8875;AV126-20120726	7/26/2012 1:58:20 PM	82234-334	0.2746	Pass	99.5062	Pass	
<i>AV127</i>							
IC-8876;AV127-20120614	6/15/2012 11:48:11 AM	82235-334	0.2775	Pass			
CCV-8876;AV127-20120725	7/26/2012 12:43:05 AM	82235-334	0.0003	Eval	0.11569	Fail	
<i>AV128</i>							
IC-8877;AV128-20120614	6/15/2012 11:48:54 AM	82236-334	0.2685	Pass			
CCV-8877;AV128-20120726	7/26/2012 1:58:40 PM	82236-334	0.0003	Eval	0.11553	Fail	
<i>AV129</i>							
IC-9520;AV129-20120614	6/15/2012 11:49:36 AM	82237-334	0.2710	Pass			
CCV-9520;AV129-20120725	7/26/2012 12:43:08 AM	82237-334	0.2730	Pass	100.742	Pass	

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 10 of 11

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV130</i>				
IC-8879;AV130-20120614	6/15/2012 11:50:34 AM	82238-334	0.2707	Pass
CCV-8879;AV130-20120726	7/26/2012 8:37:58 AM	82238-334	0.2711	Pass 100.151 Pass
<i>AV131</i>				
IC-9792;AV131-20120612	6/12/2012 10:16:29 PM	82240-334	0.2777	Pass
CCV-9792;AV131-20120726	7/26/2012 7:43:47 PM	82240-334	0.2754	Pass 99.1770 Pass
<i>AV132</i>				
IC-9793;AV132-20120612	6/12/2012 10:16:32 PM	82241-334	0.2711	Pass
CCV-9793;AV132-20120726	7/26/2012 5:35:09 PM	82241-334	0.2728	Pass 100.644 Pass
<i>AV133</i>				
IC-9794;AV133-20120612	6/12/2012 3:43:51 PM	82242-334	0.2627	Pass
CCV-9794;AV133-20120726	7/26/2012 7:43:55 PM	82242-334	0.2629	Pass 100.084 Pass
<i>AV134</i>				
IC-9795;AV134-20120612	6/12/2012 10:16:35 PM	82243-334	0.2665	Pass
CCV-9795;AV134-20120726	7/26/2012 7:44:04 PM	82243-334	0.2637	Pass 98.9425 Pass
<i>AV135</i>				
IC-9817;AV135-20120612	6/12/2012 10:16:38 PM	82244-334	0.2610	Pass
CCV-9817;AV135-20120726	7/26/2012 7:44:16 PM	82244-334	0.2622	Pass 100.442 Pass
<i>AV136</i>				
IC-9884;AV136-20120612	6/12/2012 10:16:41 PM	82245-334	0.2745	Pass
CCV-9884;AV13620120726	7/26/2012 7:44:27 PM	82245-334	0.2725	Pass 99.2766 Pass
<i>AV137</i>				
IC-9885;AV137-20120621	6/21/2012 2:01:56 PM	82246-334	0.2674	Pass
CCV-9885;AV137-20120726	7/26/2012 7:44:35 PM	82246-334	0.2648	Pass 99.0375 Pass
<i>AV138</i>				
IC-9886;AV138-20120608	6/8/2012 8:55:45 AM	82247-334	0.2683	Pass
CCV-9886;AV138-20120726	7/26/2012 7:44:43 PM	82247-334	0.2672	Pass 99.5864 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, July 27, 2012

Page 11 of 11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibrations
Alpha Vision
February 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)		
AV1 Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass		
AV2 Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass		
AV3 June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
AV4 June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
AV6 June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
AV7 June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
AV8 June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
AV9 Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass		
Feb2012_AV9a_ICV	2/22/2012 8:32:32 PM	82236-334	0.2761	Pass	99.4615	Pass
AV10 Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass		
Feb2012_AV10a_ICV	2/23/2012 11:15:43 AM	82237-334	0.2717	Pass	100.292	Pass
AV11 Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass		
AV12 Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass		
Feb2012_AV12a_ICV	2/22/2012 8:32:35 PM	82238-334	0.2707	Pass	100.940	Pass
AV13 June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
AV14 Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass		
AV15 June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV16</i>				
Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
Feb2012_AV16a_ICV	2/22/2012 8:32:38 PM	82243-334	0.2707	Pass 97.7705 Pass
<i>AV17</i>				
June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass
<i>AV18</i>				
Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
Feb2012_AV18a_ICV	2/22/2012 8:32:42 PM	82247-334	0.2566	Pass 95.0864 Pass
<i>AV19</i>				
Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i>				
June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i>				
June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i>				
June2011_AV23	6/2/2011 8:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i>				
Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i>				
June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i>				
June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i>				
June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i>				
February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
Feb2012_AV46_ICV	2/24/2012 12:25:10 PM	82236-334	0.2768	Pass 101.742 Pass
<i>AV47</i>				
June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i>				
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass		
Feb2012_AV50_ICV	2/24/2012 12:25:26 PM	82240-334	0.2783	Pass	98.6252	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass		
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
<i>AV56</i> Dec2011_AV56	12/15/2011 9:36:08 AM	82238-334	0.2691	Pass		
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass		
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass		
Feb2012_AV58_ICV	2/24/2012 12:25:49 PM	63507-334	0.2851	Pass	93.6999	Fail
Feb2012_AV58a_ICV	2/24/2012 3:16:31 PM	82232-334	0.2863	Pass	101.213	Pass
Feb2012_AV58b_ICV	2/24/2012 4:28:08 PM	82232-334	0.2853	Pass	100.844	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass		
Feb2012_AV59_ICV	2/24/2012 12:26:03 PM	63508A-334	0.2697	Pass	96.5361	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV63</i>						
Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass		
Feb2012_AV63_ICV	2/23/2012 5:15:45 PM	82234-334	0.2798	Pass	104.191	Pass
<i>AV64</i>						
May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass		
<i>AV65</i>						
Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass		
Feb2012_AV65_ICV	2/23/2012 5:15:50 PM	82236-334	0.2714	Pass	95.5197	Pass
<i>AV66</i>						
Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass		
<i>AV67</i>						
May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass		
<i>AV68</i>						
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass		
<i>AV69</i>						
June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass		
<i>AV70</i>						
June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass		
<i>AV71</i>						
May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass		
<i>AV72</i>						
May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass		
<i>AV73</i>						
Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass		
<i>AV74</i>						
Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass		
<i>AV75</i>						
May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass		
<i>AV77</i>						
May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass		
<i>AV78</i>						
May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass		
<i>AV79</i>						
June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
<i>AV120</i> June2011_AV120	6/10/2011 2:58:12 PM	63507-334	0.2673	Pass		
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass		
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass		
Feb2012_AV131_ICV	2/24/2012 12:26:24 PM	82245-334	0.2767	Pass	101.234	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
Feb2012_AV133_ICV	2/24/2012 3:16:36 PM	82247-334	0.2639	Pass 99.4605 Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 8 of 8

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV147</i>	6/14/2011 9:47:31 AM	82236-334	0.2858	Pass		
	6/14/2011 9:48:52 AM	82247-334	0.2876	Pass	100.65	Pass
<i>AV148</i>	6/21/2011 2:32:02 PM	82237-334	0.2655	Pass		
	6/21/2011 2:32:43 PM	82236-334	0.2752	Pass	103.63	Pass
<i>AV149</i>	6/21/2011 2:34:00 PM	82238-334	0.2822	Pass		
	6/21/2011 2:34:33 PM	82237-334	0.2743	Pass	97.212	Pass
<i>AV151</i>	6/21/2011 2:36:24 PM	82240-334	0.2779	Pass		
	6/21/2011 2:36:47 PM	82239-334	0.2757	Pass	99.212	Pass
<i>AV152</i>	6/21/2011 2:37:11 PM	82241-334	0.2700	Pass		
	6/21/2011 2:37:32 PM	82240-334	0.2698	Pass	99.948	Pass
<i>AV153</i>	6/30/2011 9:05:44 AM	63508A-334	0.2610	Pass		
	6/30/2011 10:17:32 AM	63507-334	0.2585	Pass	99.026	Pass
<i>AV154</i>	6/21/2011 2:39:31 PM	82243-334	0.2680	Pass		
	6/21/2011 2:40:03 PM	82242-334	0.2722	Pass	101.56	Pass
<i>AV155</i>	6/27/2011 9:21:16 PM	82244-334	0.2651	Pass		
	6/27/2011 9:22:09 PM	82243-334	0.2628	Pass	99.134	Pass
<i>AV156</i>	6/27/2011 9:22:55 PM	82245-334	0.2721	Pass		
	6/27/2011 9:23:40 PM	82244-334	0.2640	Pass	97.019	Pass
<i>AV157</i>	6/27/2011 9:24:40 PM	82246-334	0.2630	Pass		
	6/27/2011 9:25:17 PM	82245-334	0.2703	Pass	102.74	Pass
<i>AV158</i>	6/30/2011 11:40:49 AM	82235-334	0.2758	Pass		
	6/30/2011 12:51:15 PM	82234-334	0.2756	Pass	99.948	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI59</i>	6/30/2011 9:06:12 AM	82236-334	0.2701	Pass		
	6/30/2011 9:06:45 AM	82235-334	0.2750	Pass	101.83	Pass
<i>AVI60</i>	6/30/2011 9:07:03 AM	82237-334	0.2630	Pass		
	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	100.98	Pass
<i>AVI61</i>	6/27/2011 9:29:26 PM	63508A-334	0.2652	Pass		
	6/27/2011 9:29:59 PM	63507-334	0.2604	Pass	98.212	Pass
<i>AVI62</i>	6/23/2011 11:26:56 AM	63509A-334	0.2637	Pass		
	6/23/2011 1:44:04 PM	63508A-334	0.2643	Pass	100.20	Pass
<i>AVI63</i>	6/15/2011 1:14:12 AM	82232-334	0.2782	Pass		
	6/27/2011 9:30:57 PM	63509A-334	0.2748	Pass	98.774	Pass
<i>AVI64</i>	6/30/2011 9:07:48 AM	82241-334	0.2661	Pass		
	6/30/2011 9:08:11 AM	82240-334	0.2702	Pass	101.52	Pass
<i>AVI65</i>	6/15/2011 1:14:21 AM	82234-334	0.2869	Pass		
	6/27/2011 9:32:32 PM	82233-334	0.2796	Pass	97.467	Pass
<i>AVI66</i>	6/15/2011 1:14:26 AM	82235-334	0.2773	Pass		
	6/27/2011 9:33:19 PM	82234-334	0.2771	Pass	99.922	Pass
<i>AVI67</i>	6/15/2011 1:14:30 AM	82236-334	0.2723	Pass		
	6/27/2011 9:34:00 PM	82235-334	0.2755	Pass	101.17	Pass
<i>AVI68</i>	6/15/2011 1:14:34 AM	82237-334	0.2627	Pass		
	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	102.85	Pass
<i>AVI69</i>	6/15/2011 1:14:37 AM	82238-334	0.2711	Pass		
	6/27/2011 9:35:26 PM	82237-334	0.2674	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV170</i>	6/15/2011 1:14:41 AM	82239-334	0.2783	Pass		
	6/27/2011 9:36:10 PM	82238-334	0.2688	Pass	96.606	Pass
<i>AV171</i>	6/15/2011 1:14:45 AM	82240-334	0.2709	Pass		
	6/27/2011 9:37:06 PM	82239-334	0.2813	Pass	103.84	Pass
<i>AV172</i>	6/15/2011 1:14:49 AM	82241-334	0.2699	Pass		
	6/27/2011 9:37:46 PM	82240-334	0.2705	Pass	100.22	Pass
<i>AV173</i>	6/15/2011 1:14:52 AM	82242-334	0.2830	Pass		
	6/27/2011 9:38:28 PM	82241-334	0.2716	Pass	95.991	Pass
<i>AV174</i>	6/15/2011 1:14:56 AM	82243-334	0.2679	Pass		
	6/27/2011 9:39:06 PM	82242-334	0.2743	Pass	102.42	Pass
<i>AV175</i>	6/15/2011 1:15:00 AM	82244-334	0.2675	Pass		
	6/27/2011 9:39:52 PM	82243-334	0.2720	Pass	101.67	Pass
<i>AV176</i>	6/15/2011 2:15:31 AM	82245-334	0.2726	Pass		
	6/27/2011 9:40:38 PM	82244-334	0.2661	Pass	97.631	Pass
<i>AV177</i>	6/15/2011 1:15:04 AM	82246-334	0.2651	Pass		
	6/15/2011 4:19:56 AM	82245-334	0.2751	Pass	103.75	Pass
<i>AV178</i>	6/15/2011 1:15:07 AM	82247-334	0.2746	Pass		
	6/27/2011 9:41:21 PM	82246-334	0.2711	Pass	98.745	Pass
<i>AV179</i>	6/30/2011 9:08:46 AM	82237-334	0.2742	Pass		
	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	104.51	Pass
<i>AV180</i>	6/15/2011 1:15:15 AM	63507-334	0.2625	Pass		
	6/27/2011 9:43:59 PM	63506-334	0.2532	Pass	96.455	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV181</i>	6/15/2011 1:15:18 AM	63508A-334	0.2611	Pass		
	6/27/2011 9:44:46 PM	63507-334	0.2587	Pass	99.069	Pass
<i>AV182</i>	6/27/2011 9:45:31 PM	63509A-334	0.2629	Pass		
	6/27/2011 9:46:14 PM	63508A-334	0.2625	Pass	99.822	Pass
<i>AV183</i>	6/20/2011 10:52:50 PM	82232-334	0.2795	Pass		
	6/27/2011 9:46:57 PM	63509A-334	0.2671	Pass	95.537	Pass
<i>AV184</i>	6/20/2011 10:52:55 PM	82233-334	0.2772	Pass		
	6/27/2011 9:47:46 PM	82232-334	0.2799	Pass	100.95	Pass
<i>AV185</i>	6/20/2011 10:52:58 PM	82234-334	0.2823	Pass		
	6/27/2011 9:48:33 PM	82233-334	0.2741	Pass	97.113	Pass
<i>AV186</i>	6/20/2011 10:53:06 PM	82235-334	0.2741	Pass		
	6/27/2011 9:49:22 PM	82234-334	0.2744	Pass	100.12	Pass
<i>AV187</i>	6/20/2011 10:53:09 PM	82236-334	0.2672	Pass		
	6/27/2011 9:50:09 PM	82235-334	0.2741	Pass	102.59	Pass
<i>AV188</i>	6/20/2011 10:53:13 PM	82237-334	0.2820	Pass		
	6/27/2011 9:50:56 PM	82236-334	0.2799	Pass	99.240	Pass
<i>AV189</i>	6/20/2011 10:53:16 PM	82238-334	0.2769	Pass		
	6/27/2011 9:51:48 PM	82237-334	0.2684	Pass	96.927	Pass
<i>AV190</i>	6/21/2011 1:27:18 AM	82239-334	0.2710	Pass		
	6/27/2011 9:52:36 PM	82238-334	0.2739	Pass	101.05	Pass
<i>AV191</i>	6/20/2011 10:53:19 PM	82240-334	0.2794	Pass		
	6/21/2011 4:20:11 AM	82239-334	0.2769	Pass	99.115	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV192</i>	6/20/2011 10:53:23 PM	82241-334	0.2797	Pass		
	6/27/2011 9:53:23 PM	82240-334	0.2797	Pass	100.02	Pass
<i>AV193</i>	6/20/2011 10:53:26 PM	82242-334	0.2736	Pass		
	6/27/2011 9:54:02 PM	82241-334	0.2750	Pass	100.50	Pass
<i>AV194</i>	6/20/2011 10:53:29 PM	82243-334	0.2734	Pass		
	6/27/2011 9:54:56 PM	82242-334	0.2776	Pass	101.56	Pass
<i>AV195</i>	6/20/2011 10:53:33 PM	82244-334	0.2644	Pass		
	6/27/2011 9:55:43 PM	82243-334	0.2668	Pass	100.90	Pass
<i>AV196</i>	6/20/2011 10:53:37 PM	82245-334	0.2839	Pass		
	6/27/2011 9:56:30 PM	82244-334	0.2753	Pass	96.985	Pass
<i>AV197</i>	6/24/2011 2:40:07 AM	82246-334	0.2672	Pass		
	6/27/2011 9:57:47 PM	82245-334	0.2763	Pass	103.37	Pass
<i>AV198</i>	6/24/2011 2:22:48 PM	82247-334	0.2725	Pass		
	6/24/2011 3:24:45 PM	82246-334	0.2672	Pass	98.027	Pass
<i>AV199</i>	6/30/2011 9:09:28 AM	82238-334	0.2684	Pass		
	6/30/2011 10:17:40 AM	82237-334	0.2638	Pass	98.291	Pass
<i>AV200</i>	6/20/2011 10:53:47 PM	63507-334	0.2618	Pass		
	6/27/2011 10:00:20 PM	63506-334	0.2543	Pass	97.155	Pass
<i>AV201</i>	6/20/2011 10:53:53 PM	63508A-334	0.2654	Pass		
	6/27/2011 10:01:08 PM	63507-334	0.2735	Pass	103.06	Pass
<i>AV202</i>	6/27/2011 10:01:51 PM	63509A-334	0.2648	Pass		
	6/27/2011 10:02:25 PM	63508A-334	0.2613	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV203</i>	6/21/2011 3:19:59 PM	82232-334	0.2768	Pass		
	6/21/2011 3:21:44 PM	63509A-334	0.2646	Pass	95.582	Pass
<i>AV204</i>	6/27/2011 10:03:31 PM	82233-334	0.2705	Pass		
	6/27/2011 10:04:08 PM	82232-334	0.2736	Pass	101.16	Pass
<i>AV205</i>	6/21/2011 3:29:26 PM	82234-334	0.2783	Pass		
	6/27/2011 10:04:59 PM	82233-334	0.2722	Pass	97.818	Pass
<i>AV206</i>	6/27/2011 10:05:51 PM	82235-334	0.2796	Pass		
	6/27/2011 10:06:38 PM	82234-334	0.2837	Pass	101.48	Pass
<i>AV207</i>	6/27/2011 10:07:21 PM	82236-334	0.2735	Pass		
	6/27/2011 10:08:05 PM	82235-334	0.2759	Pass	100.87	Pass
<i>AV208</i>	6/27/2011 10:08:56 PM	82237-334	0.2765	Pass		
	6/27/2011 10:09:30 PM	82236-334	0.2800	Pass	101.26	Pass
<i>AV209</i>	6/27/2011 10:10:06 PM	82238-334	0.2812	Pass		
	6/27/2011 10:10:39 PM	82237-334	0.2680	Pass	95.309	Pass
<i>AV210</i>	6/21/2011 9:13:09 AM	82239-334	0.2718	Pass		
	6/27/2011 10:11:34 PM	82238-334	0.2722	Pass	100.16	Pass
<i>AV211</i>	6/27/2011 10:12:37 PM	82240-334	0.2684	Pass		
	6/21/2011 10:55:13 AM	82239-334	0.2688	Pass	100.13	Pass
<i>AV212</i>	6/27/2011 10:13:23 PM	82241-334	0.2851	Pass		
	6/27/2011 10:13:58 PM	82240-334	0.2891	Pass	101.41	Pass
<i>AV213</i>	6/23/2011 11:27:18 AM	82242-334	0.2707	Pass		
	6/23/2011 1:44:14 PM	82241-334	0.2712	Pass	100.17	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV214</i>	6/27/2011 10:15:18 PM	82243-334	0.2701	Pass		
	6/27/2011 10:15:54 PM	82242-334	0.2728	Pass	100.98	Pass
<i>AV215</i>	6/27/2011 10:16:46 PM	82244-334	0.2907	Pass		
	6/27/2011 10:17:26 PM	82243-334	0.2768	Pass	95.222	Pass
<i>AV216</i>	6/27/2011 10:18:14 PM	82245-334	0.2815	Pass		
	6/27/2011 10:18:50 PM	82244-334	0.2736	Pass	97.176	Pass
<i>AV217</i>	7/1/2011 10:10:06 AM	82246-334	0.2656	Pass		
	7/1/2011 10:10:22 AM	82245-334	0.2746	Pass	103.39	Pass
<i>AV218</i>	6/24/2011 1:51:29 PM	82247-334	0.2743	Pass		
	6/24/2011 5:16:09 PM	82246-334	0.2696	Pass	98.287	Pass
<i>AV219</i>	6/30/2011 9:09:52 AM	82240-334	0.2749	Pass		
	6/30/2011 9:10:10 AM	82238-334	0.2711	Pass	98.608	Pass
<i>AV220</i>	6/27/2011 10:21:49 PM	63507-334	0.2632	Pass		
	6/27/2011 10:22:24 PM	63506-334	0.2579	Pass	97.981	Pass
<i>AV221</i>	6/27/2011 10:23:08 PM	63508A-334	0.2621	Pass		
	6/27/2011 10:23:43 PM	63507-334	0.2617	Pass	99.836	Pass
<i>AV222</i>	6/27/2011 10:24:23 PM	63509A-334	0.2675	Pass		
	6/27/2011 10:25:09 PM	63508A-334	0.2634	Pass	98.476	Pass
<i>AV223</i>	6/23/2011 11:28:00 AM	82232-334	0.2800	Pass		
	6/23/2011 1:44:18 PM	63509A-334	0.2682	Pass	95.794	Pass
<i>AV224</i>	6/23/2011 11:28:25 AM	82233-334	0.2755	Pass		
	6/23/2011 1:44:22 PM	82232-334	0.2798	Pass	101.55	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV225</i>	6/24/2011 2:40:10 AM	82234-334	0.2791	Pass		
	6/27/2011 10:26:27 PM	82233-334	0.2753	Pass	98.623	Pass
<i>AV226</i>	6/24/2011 2:40:15 AM	82235-334	0.2729	Pass		
	6/27/2011 10:27:06 PM	82234-334	0.2800	Pass	102.61	Pass
<i>AV227</i>	6/25/2011 10:39:33 AM	82236-334	0.2783	Pass		
	6/25/2011 1:18:30 PM	82235-334	0.2773	Pass	99.651	Pass
<i>AV228</i>	6/28/2011 9:07:26 AM	82237-334	0.2755	Pass		
	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	103.94	Pass
<i>AV229</i>	6/25/2011 10:39:43 AM	82238-334	0.2781	Pass		
	6/25/2011 1:18:41 PM	82237-334	0.2735	Pass	98.336	Pass
<i>AV230</i>	6/25/2011 10:39:47 AM	82239-334	0.2844	Pass		
	6/25/2011 1:19:16 PM	82238-334	0.2812	Pass	98.851	Pass
<i>AV231</i>	6/25/2011 10:50:22 AM	82240-334	0.2784	Pass		
	6/25/2011 1:19:42 PM	82239-334	0.2758	Pass	99.090	Pass
<i>AV232</i>	6/25/2011 10:58:31 AM	82241-334	0.2758	Pass		
	6/25/2011 1:19:51 PM	82240-334	0.2812	Pass	101.96	Pass
<i>AV233</i>	6/25/2011 10:58:37 AM	82242-334	0.2668	Pass		
	6/25/2011 1:20:13 PM	82241-334	0.2705	Pass	101.37	Pass
<i>AV234</i>	6/28/2011 9:08:33 AM	82243-334	0.2710	Pass		
	6/28/2011 9:08:49 AM	82242-334	0.2714	Pass	100.13	Pass
<i>AV235</i>	6/25/2011 11:19:40 AM	82244-334	0.2686	Pass		
	6/25/2011 1:21:34 PM	82243-334	0.2694	Pass	100.30	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV236</i>	6/25/2011 11:19:44 AM	82245-334	0.2759	Pass		
	6/25/2011 1:22:02 PM	82244-334	0.2647	Pass	95.960	Pass
<i>AV237</i>	6/25/2011 11:19:48 AM	82246-334	0.2679	Pass		
	6/25/2011 1:22:14 PM	82245-334	0.2783	Pass	103.89	Pass
<i>AV238</i>	6/25/2011 11:19:52 AM	82247-334	0.2740	Pass		
	6/25/2011 1:22:47 PM	82246-334	0.2642	Pass	96.404	Pass
<i>AV239</i>	6/29/2011 4:17:46 PM	82241-334	0.2816	Pass		
	6/29/2011 5:24:20 PM	82239-334	0.2770	Pass	98.355	Pass
<i>AV240</i>	6/28/2011 9:06:33 AM	63507-334	0.2675	Pass		
	6/25/2011 1:23:31 PM	63506-334	0.2636	Pass	98.508	Pass
<i>AV241</i>	6/25/2011 11:47:42 AM	63508A-334	0.2600	Pass		
	6/25/2011 1:23:51 PM	63507-334	0.2602	Pass	100.06	Pass
<i>AV242</i>	6/25/2011 11:47:57 AM	63509A-334	0.2680	Pass		
	6/25/2011 1:24:10 PM	63508A-334	0.2667	Pass	99.534	Pass
<i>AV243</i>	6/25/2011 9:28:07 AM	82232-334	0.2795	Pass		
	6/25/2011 1:24:52 PM	63509A-334	0.2676	Pass	95.760	Pass
<i>AV244</i>	6/25/2011 12:07:09 PM	82233-334	0.2858	Pass		
	6/25/2011 1:25:04 PM	82232-334	0.2904	Pass	101.61	Pass
<i>AV245</i>	6/25/2011 12:07:13 PM	82234-334	0.2856	Pass		
	6/25/2011 1:25:24 PM	82233-334	0.2793	Pass	97.792	Pass
<i>AV246</i>	6/25/2011 12:07:17 PM	82235-334	0.2981	Pass		
	6/25/2011 1:25:53 PM	82234-334	0.2968	Pass	99.576	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV247</i>	6/28/2011 9:04:33 AM	82236-334	0.2721	Pass		
	6/28/2011 9:04:52 AM	82235-334	0.2774	Pass	101.94	Pass
<i>AV248</i>	6/28/2011 9:09:30 AM	82237-334	0.2651	Pass		
	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	101.77	Pass
<i>AV249</i>	6/28/2011 9:10:11 AM	82238-334	0.2852	Pass		
	6/28/2011 9:10:27 AM	82237-334	0.2781	Pass	97.510	Pass
<i>AV250</i>	6/28/2011 9:10:53 AM	82239-334	0.2800	Pass		
	6/28/2011 9:11:12 AM	82238-334	0.2820	Pass	100.71	Pass

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Alpha Vision Yearly Calibrations Updated 2/22/12

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
Dec2011a_AV22_ICV	12/8/2011 2:38:54 PM	82236-334	0.2670	Pass 99.6280 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV48</i>						
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass		
June2011_AV48_ICV	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	98.9875	Pass
<i>AV88</i>						
May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass		
June2011_AV88_ICV	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	101.747	Pass
<i>AV103</i>						
June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass		
June2011_AV103a_ICVb	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	99.8524	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
June2011_AV68_ICV	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass 101.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV128</i>				
June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
June2011_AV128_ICV	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass 101.685 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV160</i>						
June2011A_AV160	2/21/2012 3:02:57 PM	82237-334	0.2708	Pass		
June2011A_AV160_ICV	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	98.0720	Pass
<i>AV168</i>						
June2011_AV168	2/21/2012 3:03:27 PM	82237-334	0.2704	Pass		
June2011_AV168_ICV	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	99.9393	Pass
<i>AV179</i>						
June2011B_AV179	2/21/2012 3:03:50 PM	82237-334	0.2821	Pass		
June2011_AV179b_ICV	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	101.588	Pass
<i>AV228</i>						
June2011A_AV228	2/21/2012 3:04:50 PM	82237-334	0.2834	Pass		
June2011A_AV228_ICV	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	101.035	Pass
<i>AV248</i>						
June2011_AV248	2/21/2012 3:05:18 PM	82237-334	0.2726	Pass		
June2011_AV248_ICV	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	98.9835	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV205</i>				
Dec2011_AV205	2/21/2012 3:04:20 PM	82237-334	0.2688	Pass
Dec2011_AV205_ICV	12/16/2011 3:08:08 AM	82236-334	0.2684	Pass 99.8398 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Calibration

Name: June2011A_AV43
Description:
Detector: AV43

Calibration Date: 6/20/2011 1:52:02AM
Analyst: 60040

Source Info

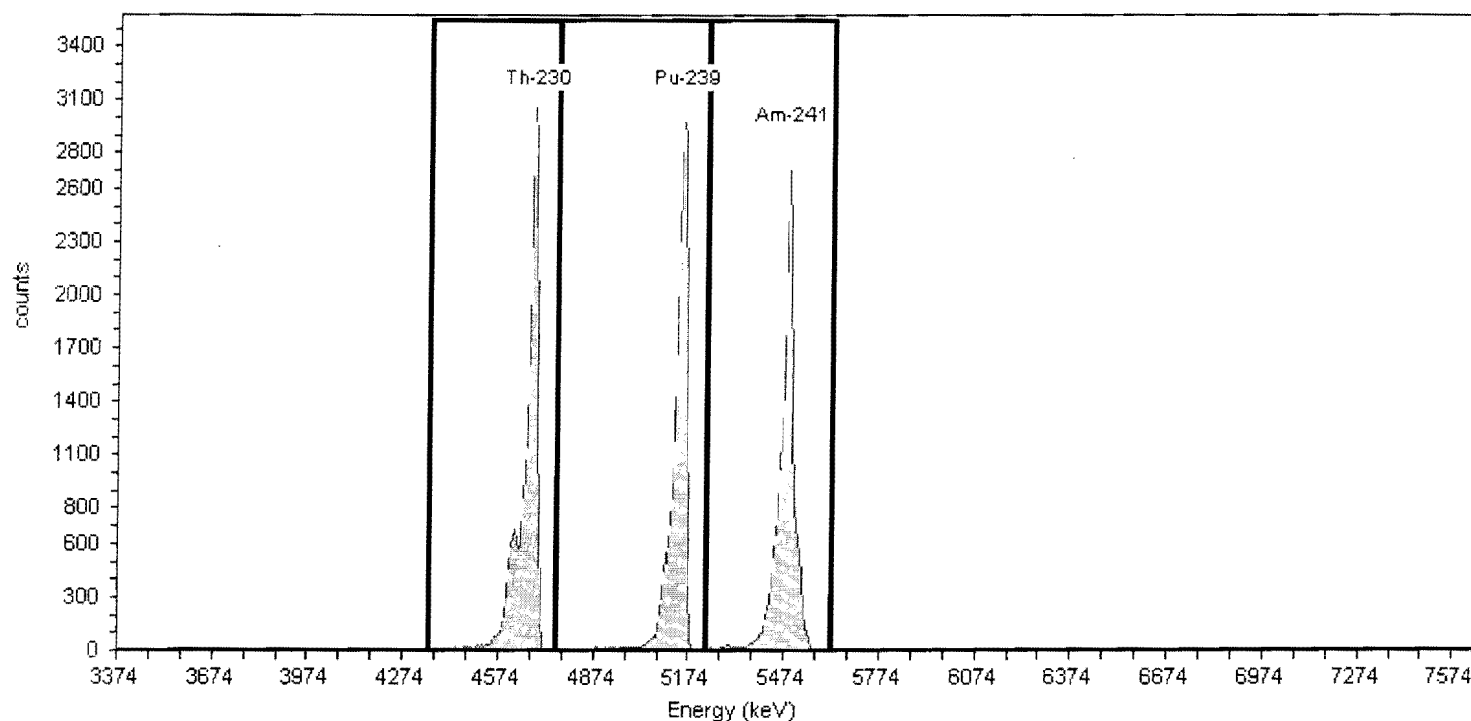
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV43, SN: 50-051c5
Acquisition Start Date: 6/19/2011 11:25:36PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 27.86% +/- 0.31% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	17,908.00	127.91
Pu-239	240	5.16	186	249	16,770.00	119.79
Am-241	284	5.49	249	303	16,909.00	120.78

Calibration

Name: June2011A_AV43_ICV
Description:
Detector: AV43

Calibration Date: 6/20/2011 4:09:28AM
Analyst: 60040

Source Info

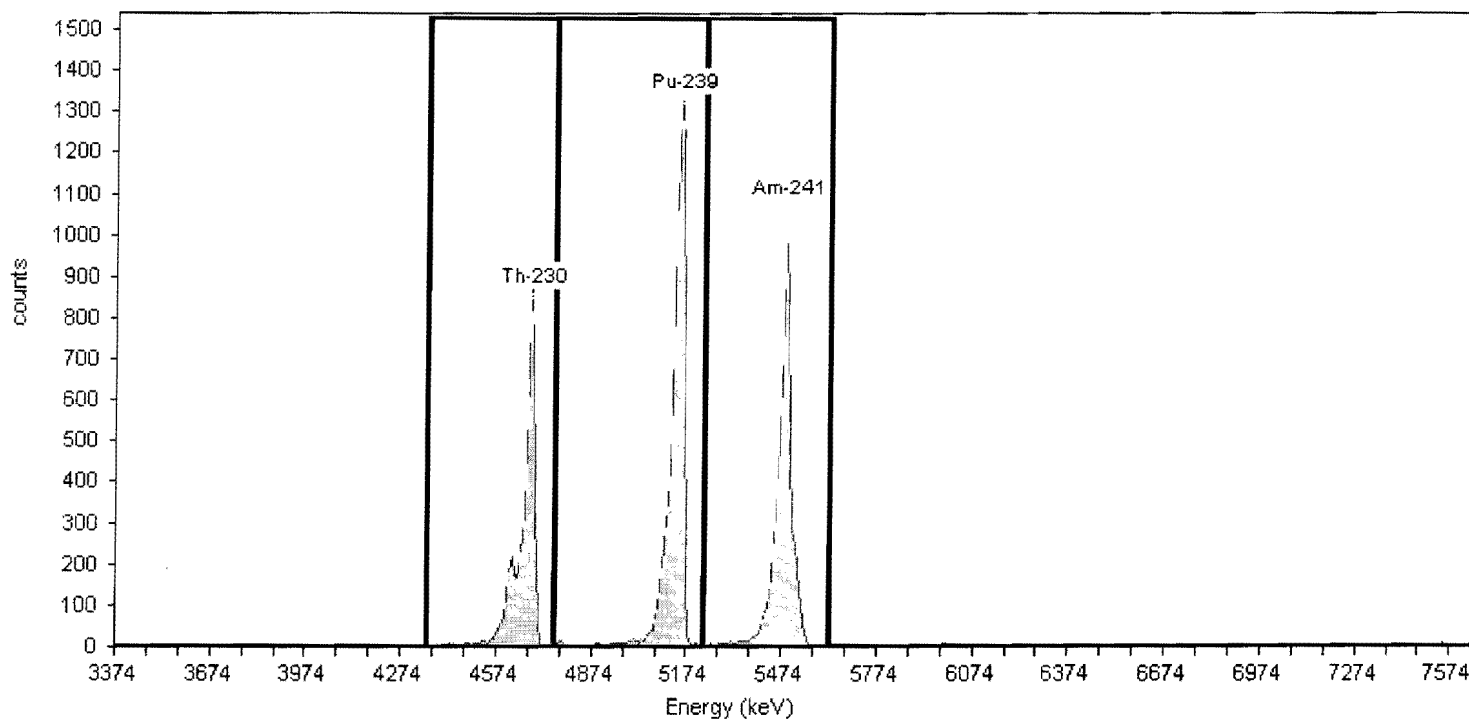
Certificate ID: 63509A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV43 , SN: 50-051c5
Acquisition Start Date: 6/20/2011 3:06:14AM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 26.84% +/- 0.40% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	4,965.00	82.75
Pu-239	240	5.16	186	249	7,611.00	126.85
Am-241	284	5.49	249	303	6,306.00	105.10

Calibration

Name: June2011A_AV44
Description:
Detector: AV44

Calibration Date: 6/20/2011 8:43:44AM
Analyst: 60040

Source Info

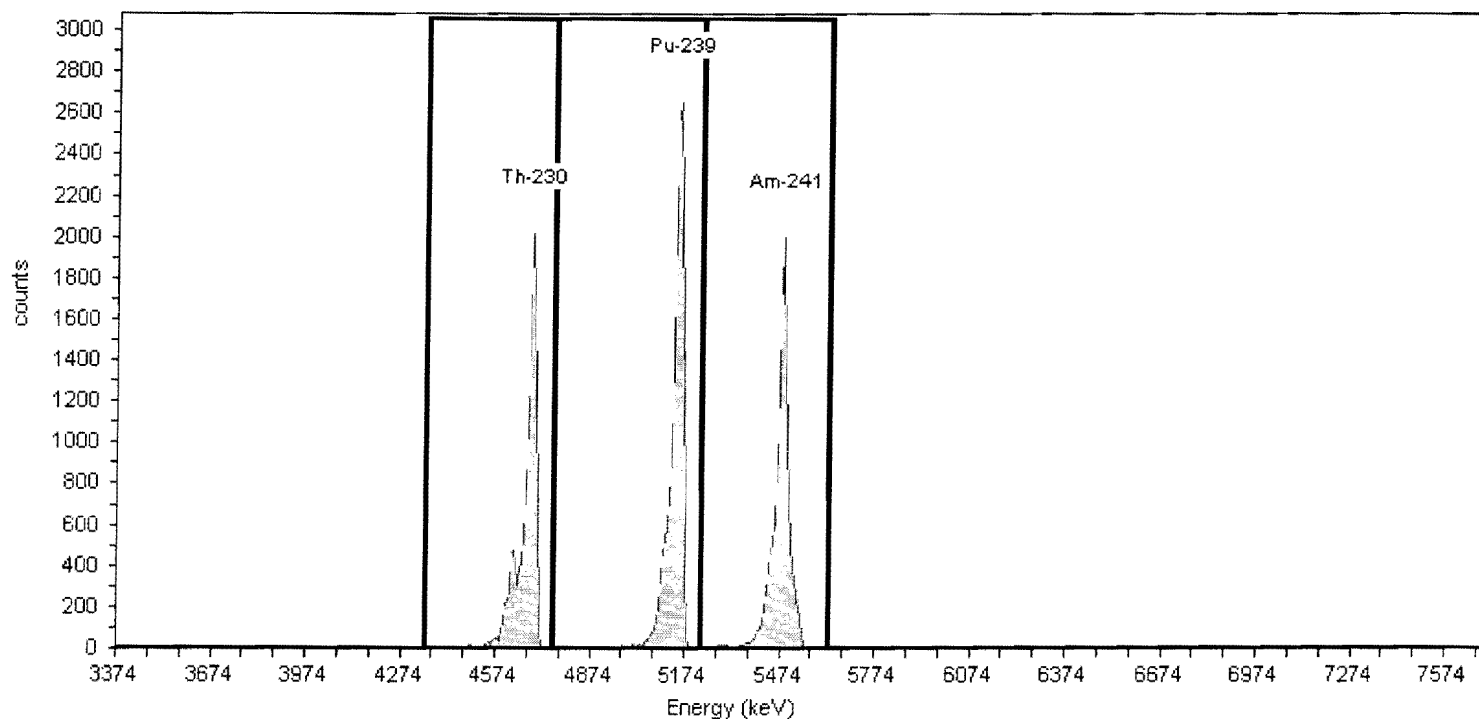
Certificate ID: 82233-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV44 , SN: 50-051JJ1
Acquisition Start Date: 6/20/2011 3:15:32AM
Live Time: 140.00 min.
Real Time: 140.06 min.
Efficiency: 27.08% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	10,992.00	78.51
Pu-239	240	5.16	186	249	13,947.00	99.62
Am-241	284	5.49	249	303	11,735.00	83.82

Calibration

Name: June2011_AV44_ICV
Description:
Detector: AV44

Calibration Date: 6/20/2011 12:55:44PM
Analyst: 60040

Source Info

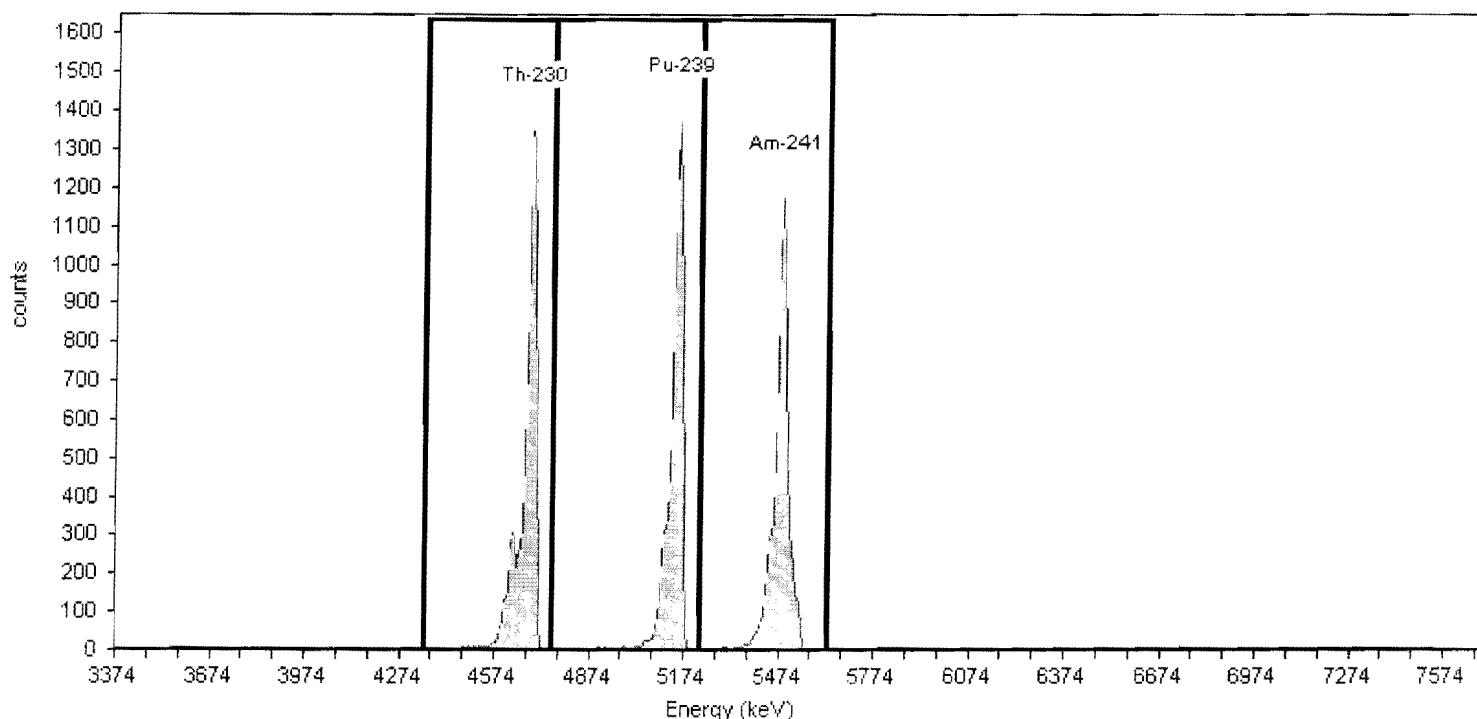
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV44 , SN: 50-051JJ1
Acquisition Start Date: 6/20/2011 11:28:33AM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 27.60% +/- 0.42% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,581.00	126.35
Pu-239	240	5.16	186	249	7,101.00	118.35
Am-241	284	5.49	249	303	7,221.00	120.35

Calibration

Name: June2011_AV45
Description:
Detector: AV45

Calibration Date: 6/2/2011 6:09:33AM
Analyst: 60040

Source Info

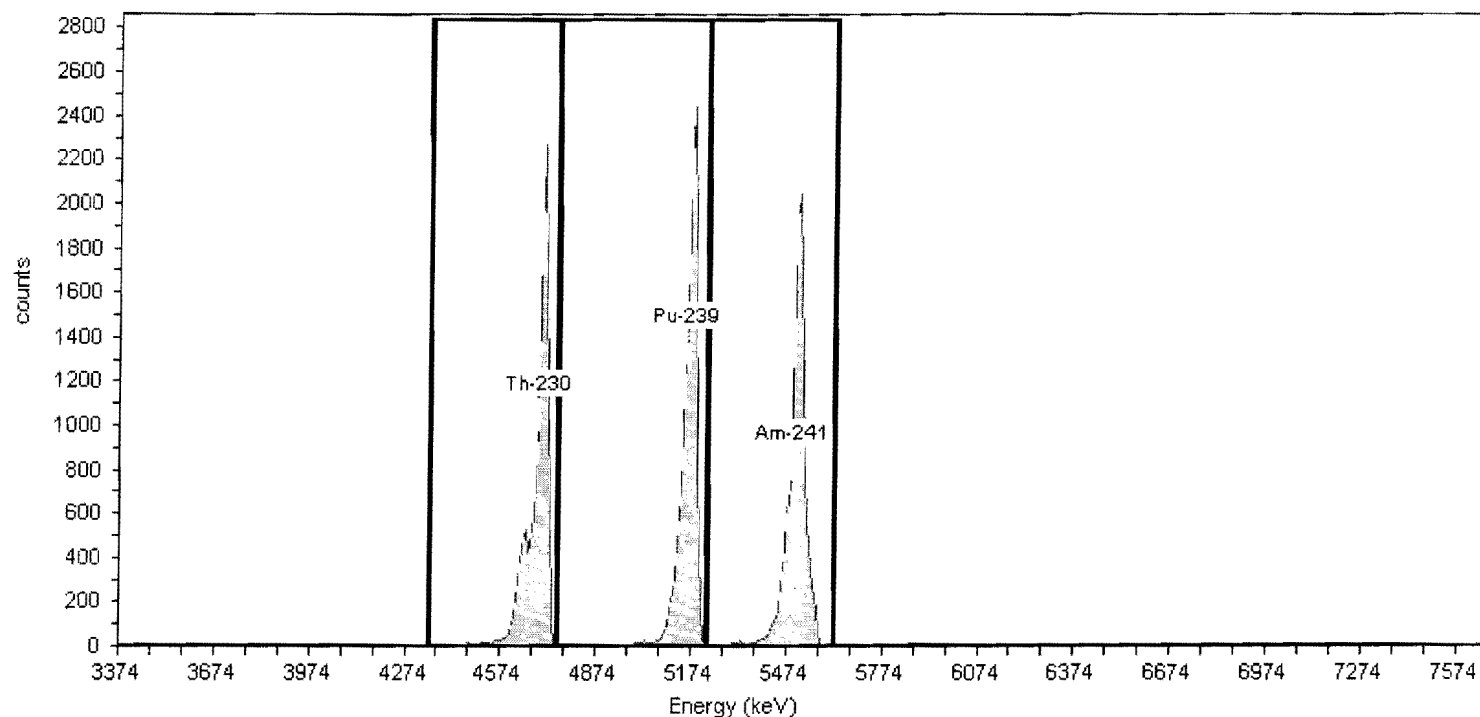
Certificate ID: 82234-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV45, SN: 48-158FF2
Acquisition Start Date: 6/1/2011 5:38:02PM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 28.11% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,296.00	94.97
Pu-239	240	5.16	186	249	14,066.00	100.47
Am-241	284	5.49	249	303	13,424.00	95.89

Calibration

Name: June2011_AV45_ICV
Description:
Detector: AV45

Calibration Date: 7/25/2011 12:12:41PM
Analyst: 60040

Source Info

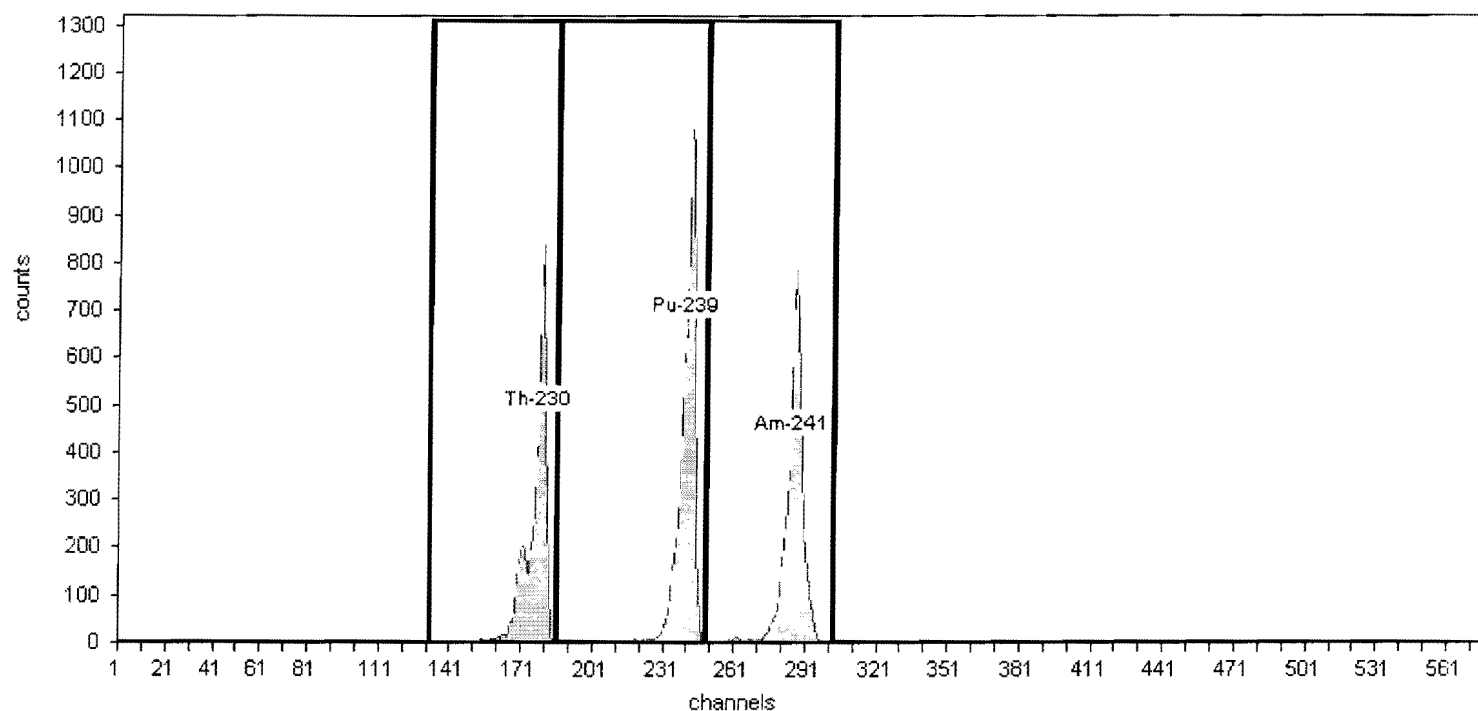
Certificate ID: 82233-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV45 , SN: 48-158FF2
Acquisition Start Date: 6/2/2011 12:15:30PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 27.43% +/- 0.51% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	4,768.00	79.47
Pu-239	240	5.16	186	249	6,047.00	100.78
Am-241	284	5.49	249	303	5,109.00	85.15

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:35:27AM 2/27/2012

Calibration

Name: February2012_AV46
Description:
Detector: AV46

Calibration Date: 2/24/2012 9:01:09AM
Analyst: 60040

Source Info

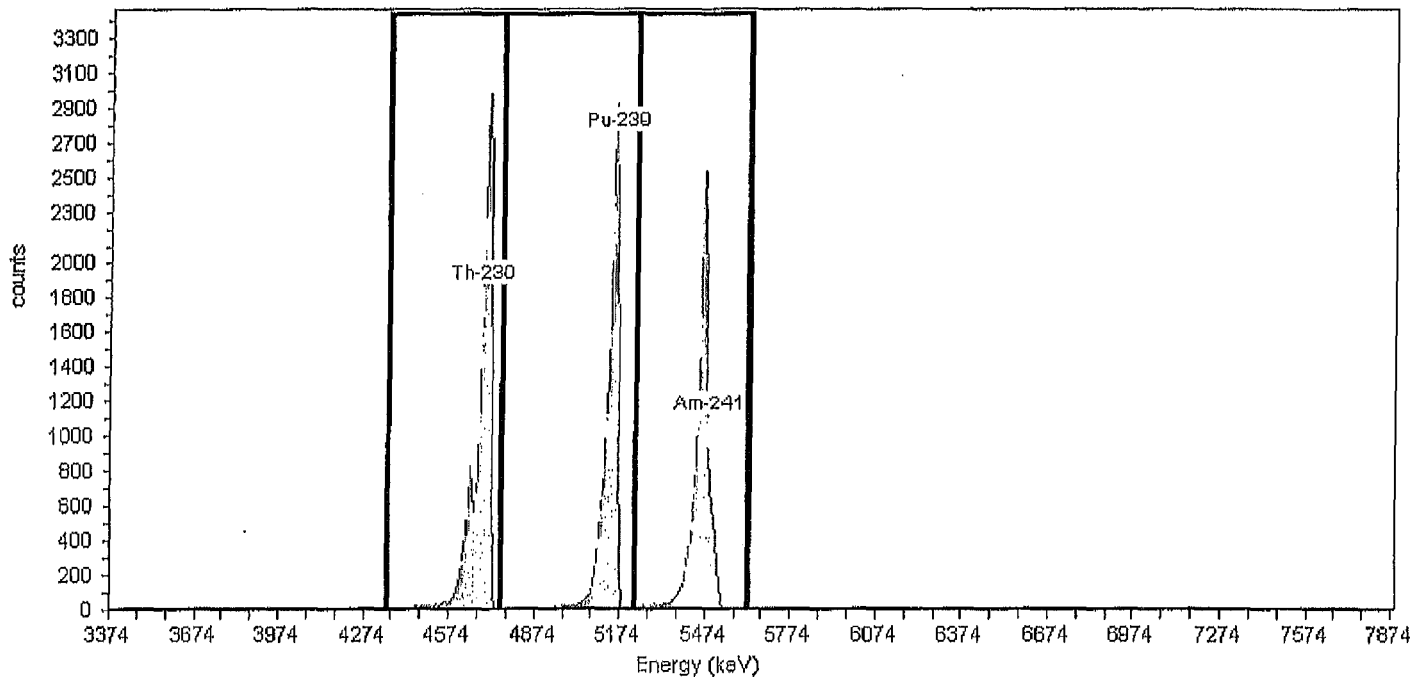
Certificate ID: 82244-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV46, SN: 49-202GG2
Acquisition Start Date: 2/23/2012 11:02:53PM
Live Time: 140.00 min.
Real Time: 140.06 min.
Efficiency: 27.21% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,968.00	121.20
Pu-239	240	5.16	186	249	15,336.00	109.54
Am-241	284	5.49	249	303	15,579.00	111.28

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:35:32AM 2/27/2012

Calibration

Name: Feb2012_AV46_ICV
Description:
Detector: AV46

Calibration Date: 2/24/2012 12:25:10PM
Analyst: 60040

Source Info

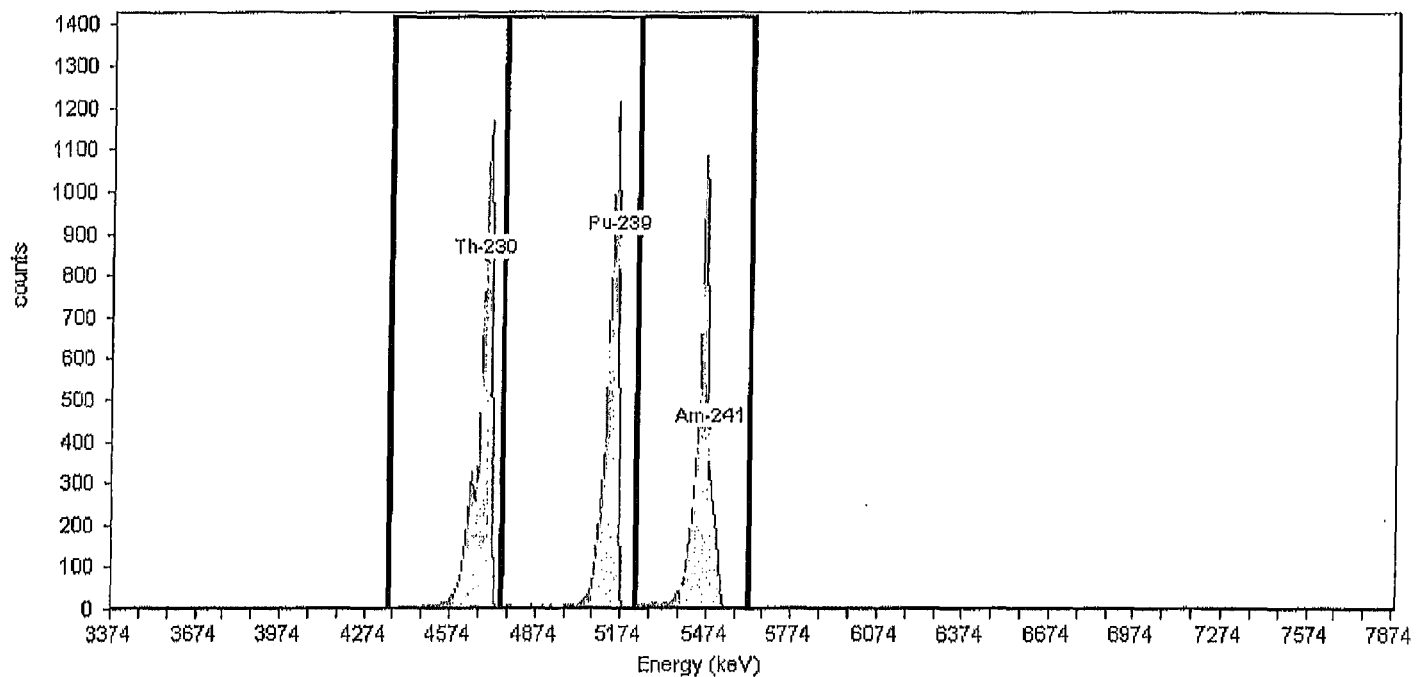
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV46 , SN: 49-202GG2
Acquisition Start Date: 2/24/2012 11:21:49AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.68% +/- 0.44% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,037.00	117.28
Pu-239	240	5.16	186	249	6,767.00	112.78
Am-241	284	5.49	249	303	6,781.00	113.02

Calibration

Name: June2011A_AV47
Description:
Detector: AV47

Calibration Date: 6/20/2011 8:43:55AM
Analyst: 60040

Source Info

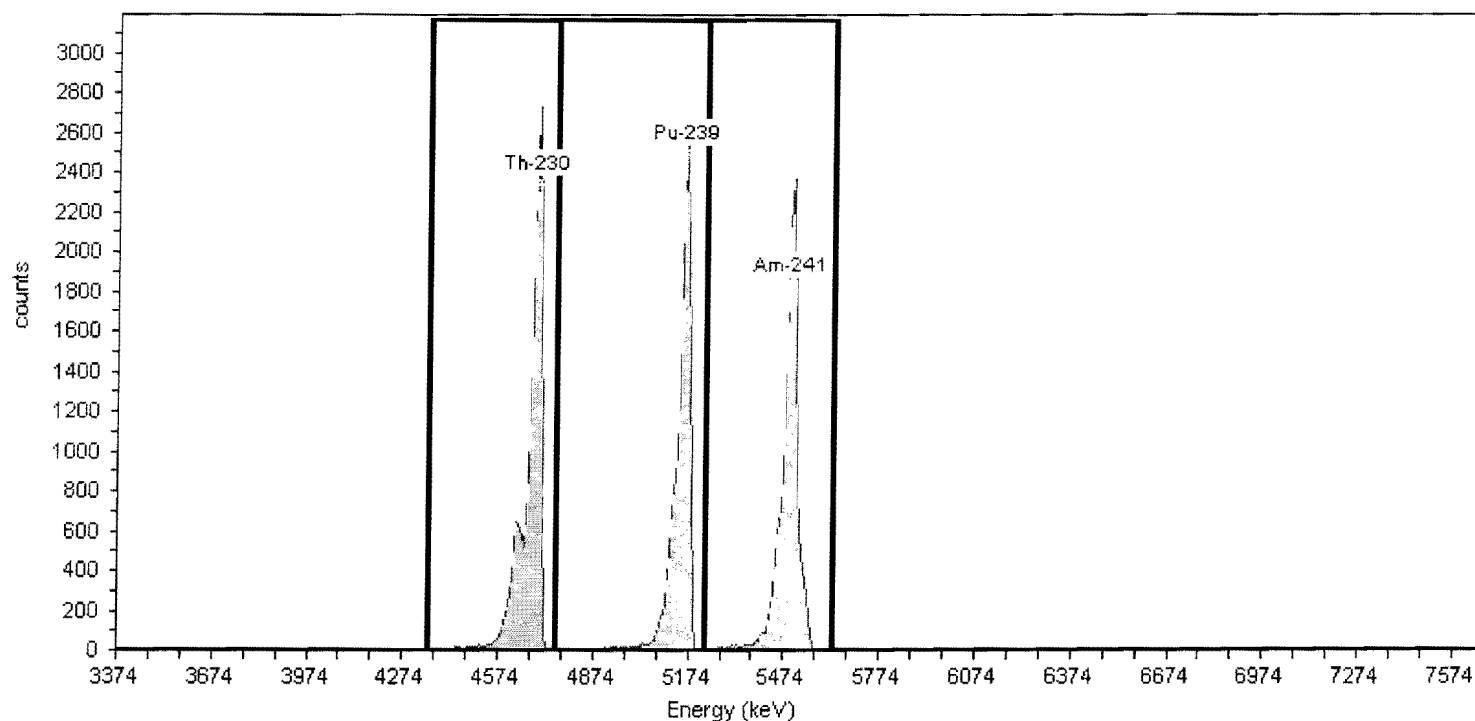
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV47, SN: 50-051C7
Acquisition Start Date: 6/20/2011 3:41:59AM
Live Time: 140.00 min.
Real Time: 140.05 min.
Efficiency: 26.91% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,107.00	115.05
Pu-239	240	5.16	186	249	15,118.00	107.99
Am-241	284	5.49	249	303	15,482.00	110.59

Calibration

Name: June2011_AV47_ICV
Description:
Detector: AV47

Calibration Date: 6/20/2011 12:55:48PM
Analyst: 60040

Source Info

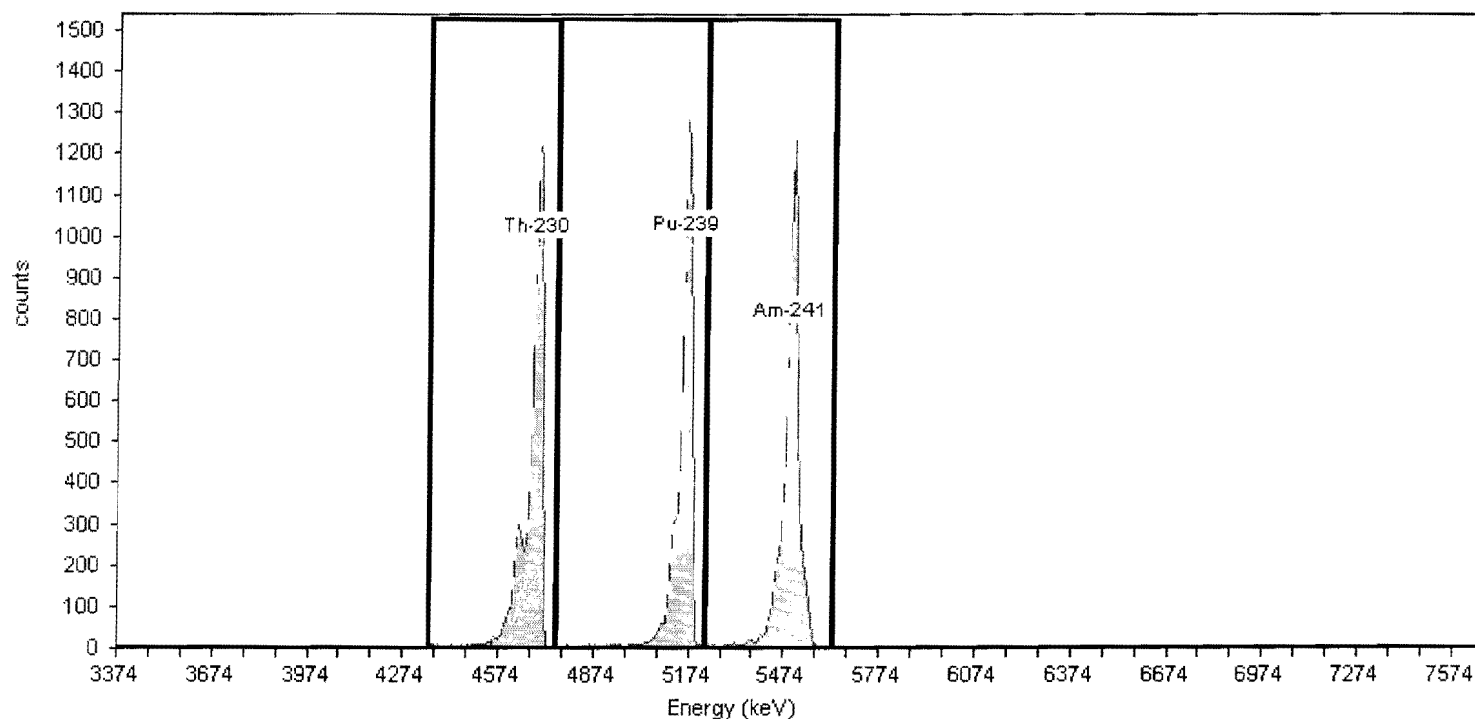
Certificate ID: 82235-334
Prepared by: Analytics

Certification Date: 6/4/2010 12:00:00PM
Description:

Acquisition

Detector: AV47 , SN: 50-051C7
Acquisition Start Date: 6/20/2011 11:29:26AM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 27.85% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,241.00	120.68
Pu-239	240	5.16	186	249	6,887.00	114.78
Am-241	284	5.49	249	303	7,457.00	124.28

Name: June2011A_AV48
Description:
Detector: AV48

Calibration

Calibration Date: 2/21/2012 2:58:50PM
Analyst: 60040

Certificate ID: 82237-334
Prepared by: Analytics

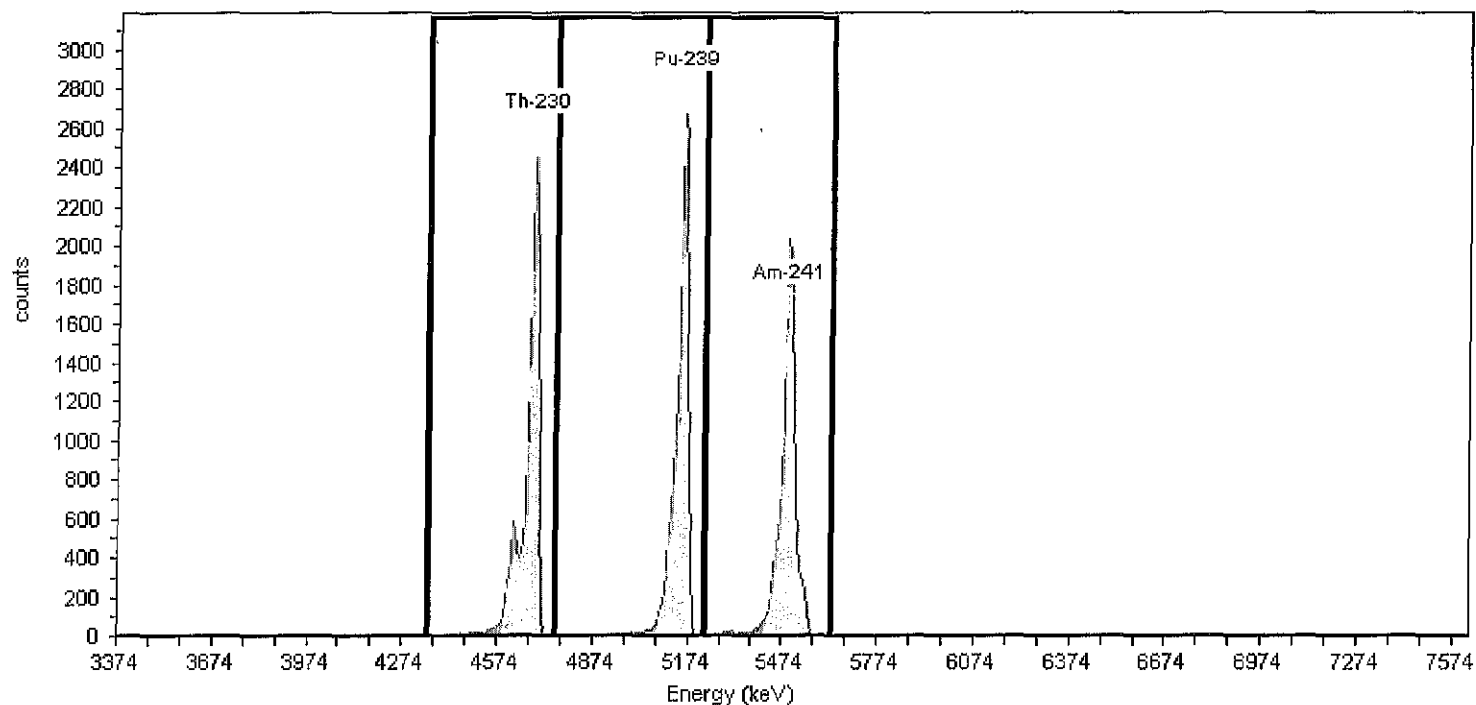
Source Info

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4
Acquisition Start Date: 6/20/2011 3:50:19AM
Live Time: 140.00 min.
Real Time: 140.05 min.
Efficiency: 27.48% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,675.00	97.68
Pu-239	240	5.16	186	249	14,590.00	104.21
Am-241	284	5.49	249	303	13,061.00	93.29

Calibration

Name: June2011_AV48_ICV
Description:
Detector: AV48

Calibration Date: 6/28/2011 9:18:29PM
Analyst: 60040

Source Info

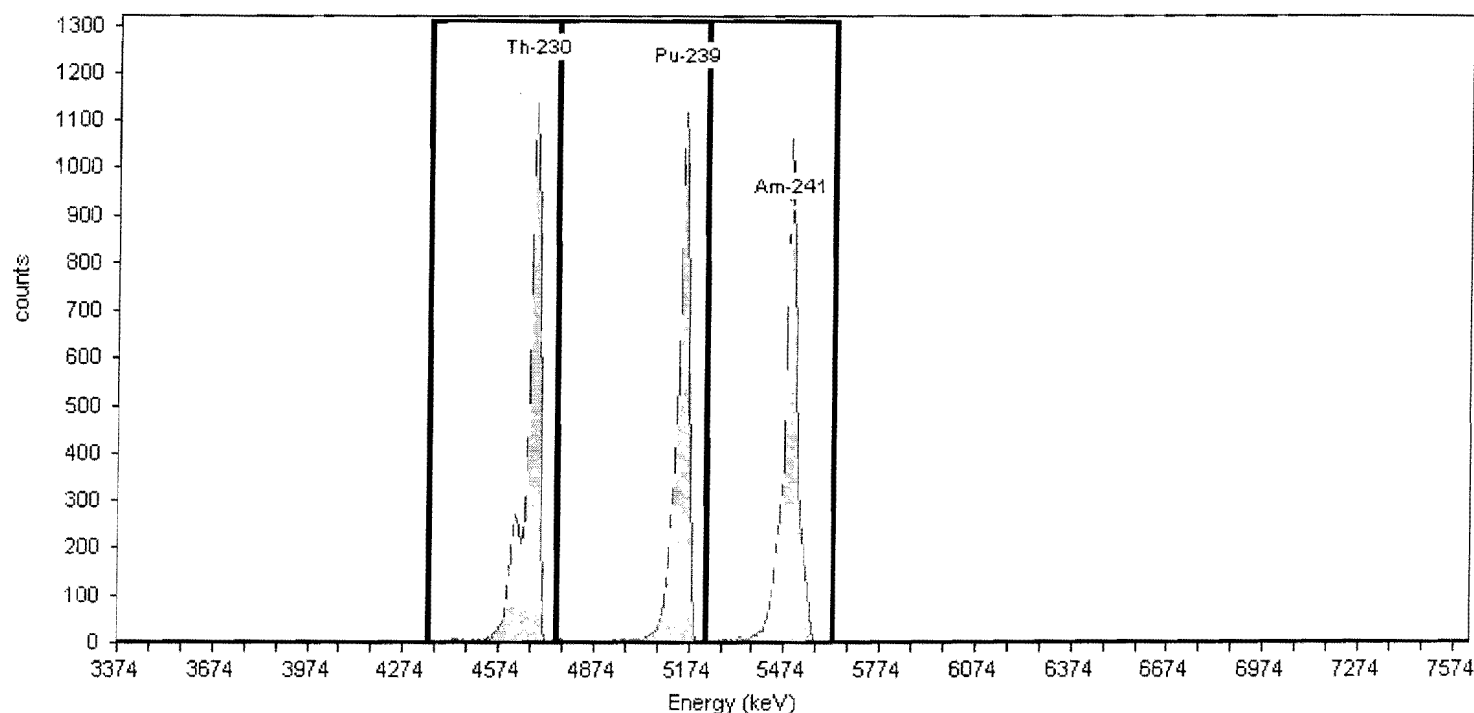
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4
Acquisition Start Date: 6/20/2011 11:29:58AM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 27.20% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,903.00	115.05
Pu-239	240	5.16	186	249	6,455.00	107.58
Am-241	284	5.49	249	303	6,876.00	114.60

Calibration

Name: June2011_AV49
Description:
Detector: AV49

Calibration Date: 6/2/2011 6:09:47AM
Analyst: 60040

Source Info

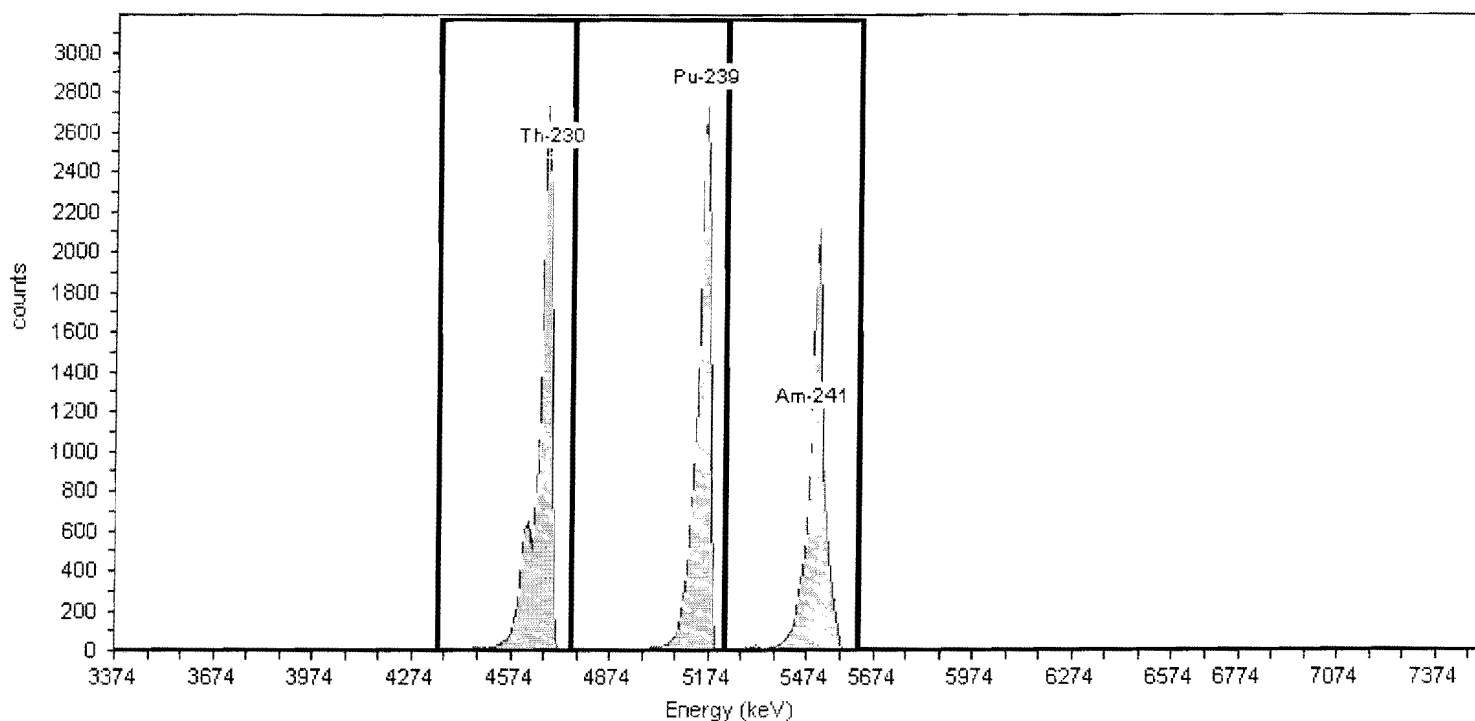
Certificate ID: 82238-334
Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV49, SN: 46-022AA3
Acquisition Start Date: 6/1/2011 5:39:26PM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 28.49% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,767.00	119.76
Pu-239	240	5.16	186	249	16,402.00	117.16
Am-241	284	5.49	249	303	14,205.00	101.46

Calibration

Name: June2011_AV49_ICV
Description:
Detector: AV49

Calibration Date: 6/2/2011 5:27:16PM
Analyst: 60040

Source Info

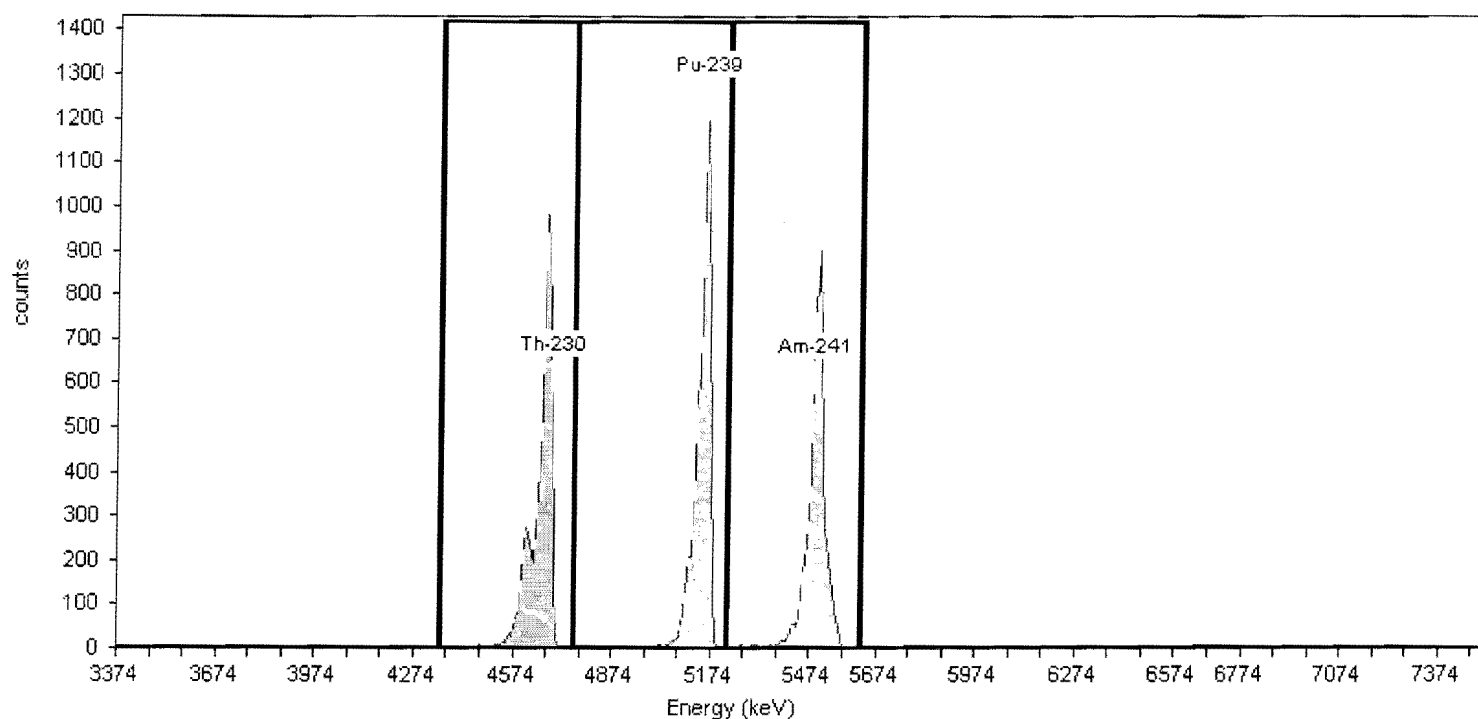
Certificate ID: 82237-334
Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV49 , SN: 46-022AA3
Acquisition Start Date: 6/2/2011 12:20:06PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 27.45% +/- 0.48% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,030.00	100.50
Pu-239	240	5.16	186	249	6,455.00	107.58
Am-241	284	5.49	249	303	5,717.00	95.28

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibration
Alpha Vision
May 2012
AV48 and AV56**

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV1</i> Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass
<i>AV2</i> Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass
<i>AV3</i> June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass
<i>AV4</i> June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass
<i>AV6</i> June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass
<i>AV7</i> June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass
<i>AV8</i> June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass
<i>AV9</i> Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass
<i>AV10</i> Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass
<i>AV11</i> Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass
<i>AV12</i> Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass
<i>AV13</i> June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass
<i>AV14</i> Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass
<i>AV15</i> June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass
<i>AV16</i> Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
<i>AV17</i> June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV18</i> Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
<i>AV19</i> Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i> June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i> June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i> Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i> June2011_AV23	6/2/2011 6:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i> Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i> June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i> June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i> June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i> February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
<i>AV47</i> June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i> May2012_AV48	5/3/2012 9:38:16 AM	82237-334	0.2725	Pass
May2012_AV48_ICV	5/3/2012 9:38:44 AM	82238-334	0.2704	Pass 99.2470 Pass
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass
<i>AV56</i> May2012_AV56	5/3/2012 9:37:34 AM	82238-334	0.2680	Pass
May2012_AV56_ICV	5/3/2012 9:37:51 AM	82246-334	0.2612	Pass 97.4594 Pass
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass
<i>AV63</i> Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass
<i>AV64</i> May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass
<i>AV65</i> Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass
<i>AV66</i> Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass
<i>AV67</i> May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i> May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
<i>AV69</i> June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass
<i>AV70</i> June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass
<i>AV71</i> May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass
<i>AV72</i> May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass
<i>AV73</i> Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass
<i>AV74</i> Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass
<i>AV75</i> May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass
<i>AV77</i> May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass
<i>AV78</i> May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass
<i>AV79</i> June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV91</i> March2012_AV91a	3/30/2012 9:27:41 AM	82235-334	0.2781	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV120</i> June2011_AV120	6/10/2011 2:56:12 PM	63507-334	0.2673	Pass
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 8 of 8

Sample Name: May2012_AV48

Description:

Detector: AV48

Calibration

Calibration Date: 5/3/2012 9:38:16AM

Analyst: 60040

Source Info

Certificate ID: 82237-334

Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM

Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4

Acquisition Start Date: 5/2/2012 11:00:36PM

Live Time: 140.00 min.

Real Time: 140.43 min.

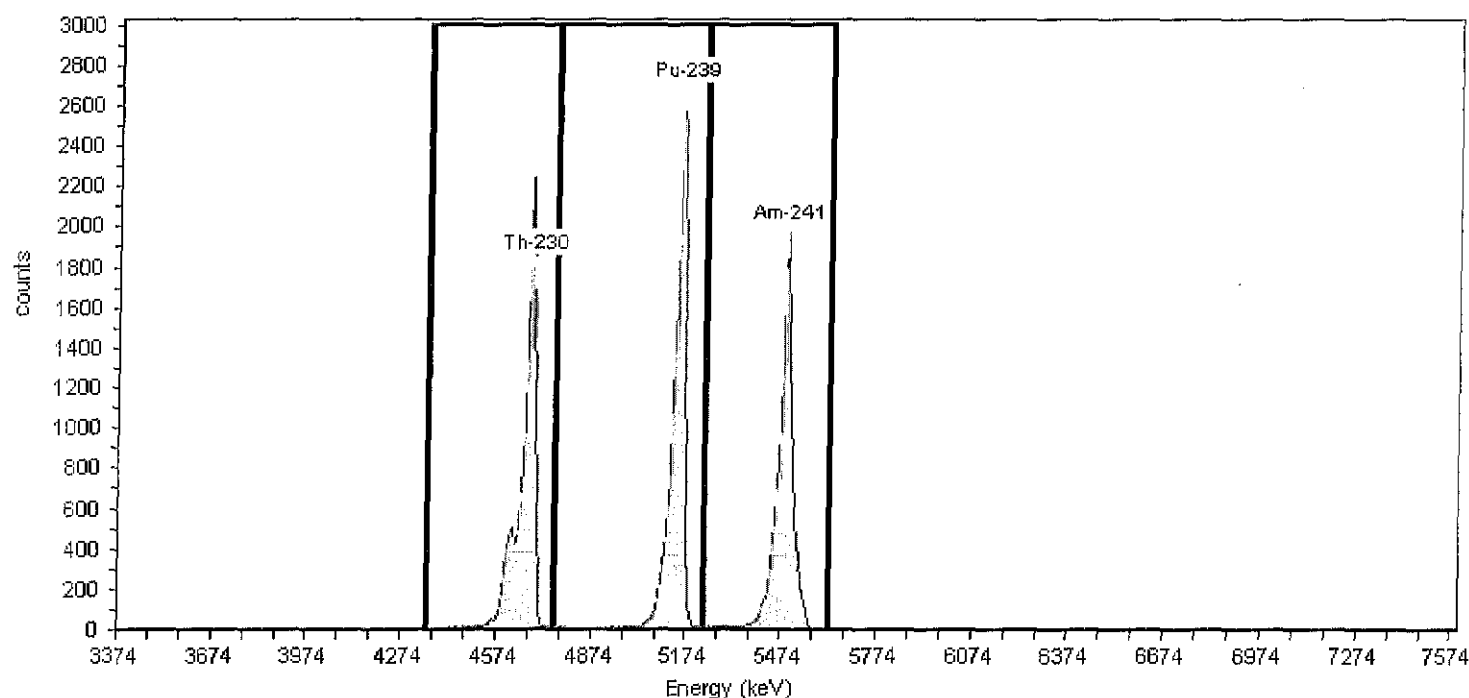
Efficiency: 27.25% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)

Algorithm: Linear

Initial Calibration: No

Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,222.00	94.44
Pu-239	240	5.16	186	249	14,804.00	105.74
Am-241	284	5.49	249	303	12,886.00	92.04

Sample Name: May2012_AV48_ICV
Description:
Detector: AV48

Calibration

Calibration Date: 5/3/2012 9:38:44AM
Analyst: 60040

Certificate ID: 82238-334
Prepared by: Analytics

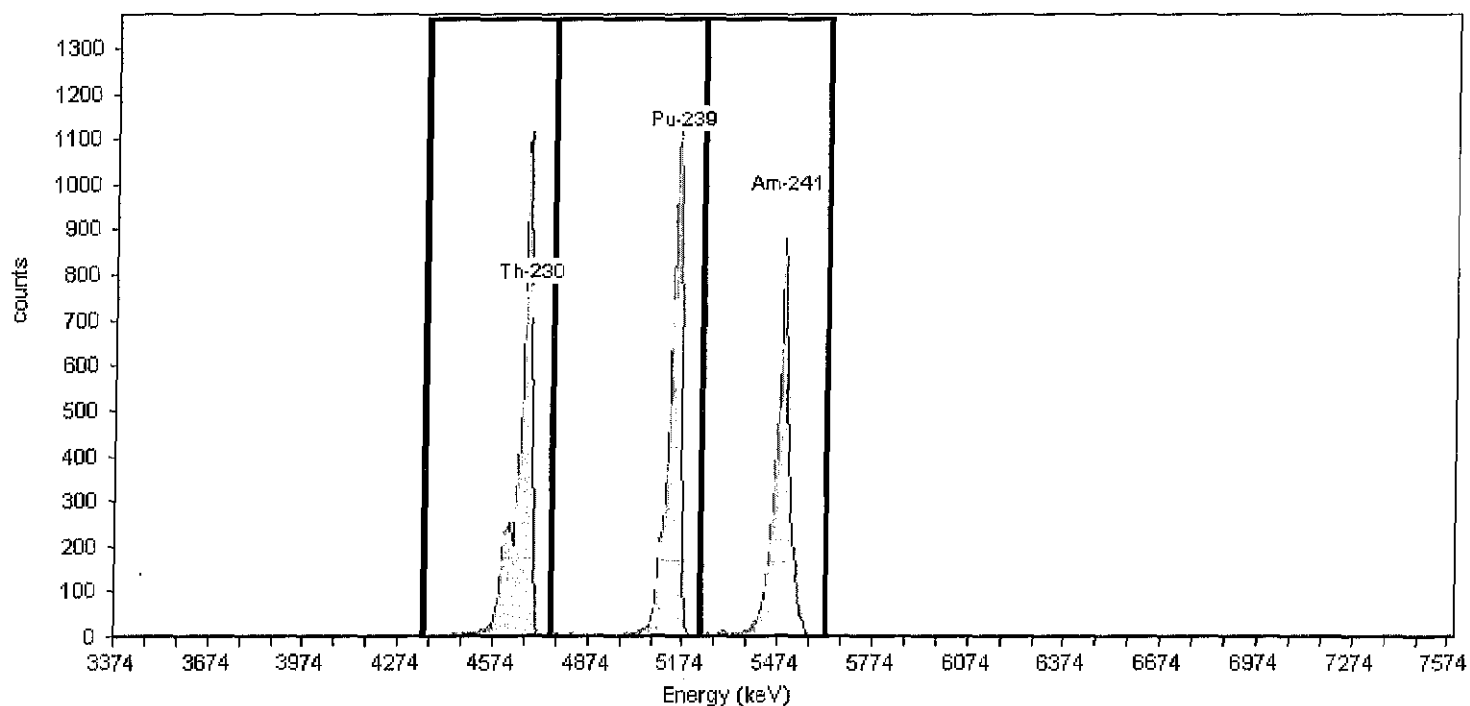
Source Info

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4
Acquisition Start Date: 5/3/2012 1:33:40AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.04% +/- 0.46% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,729.00	112.15
Pu-239	240	5.16	186	249	6,716.00	111.93
Am-241	284	5.49	249	303	5,825.00	97.08

Sample Name: May2012_AV56
Description:
Detector: AV56

Calibration

Calibration Date: 5/3/2012 9:37:34AM
Analyst: 60040

Certificate ID: 82238-334
Prepared by: Analytics

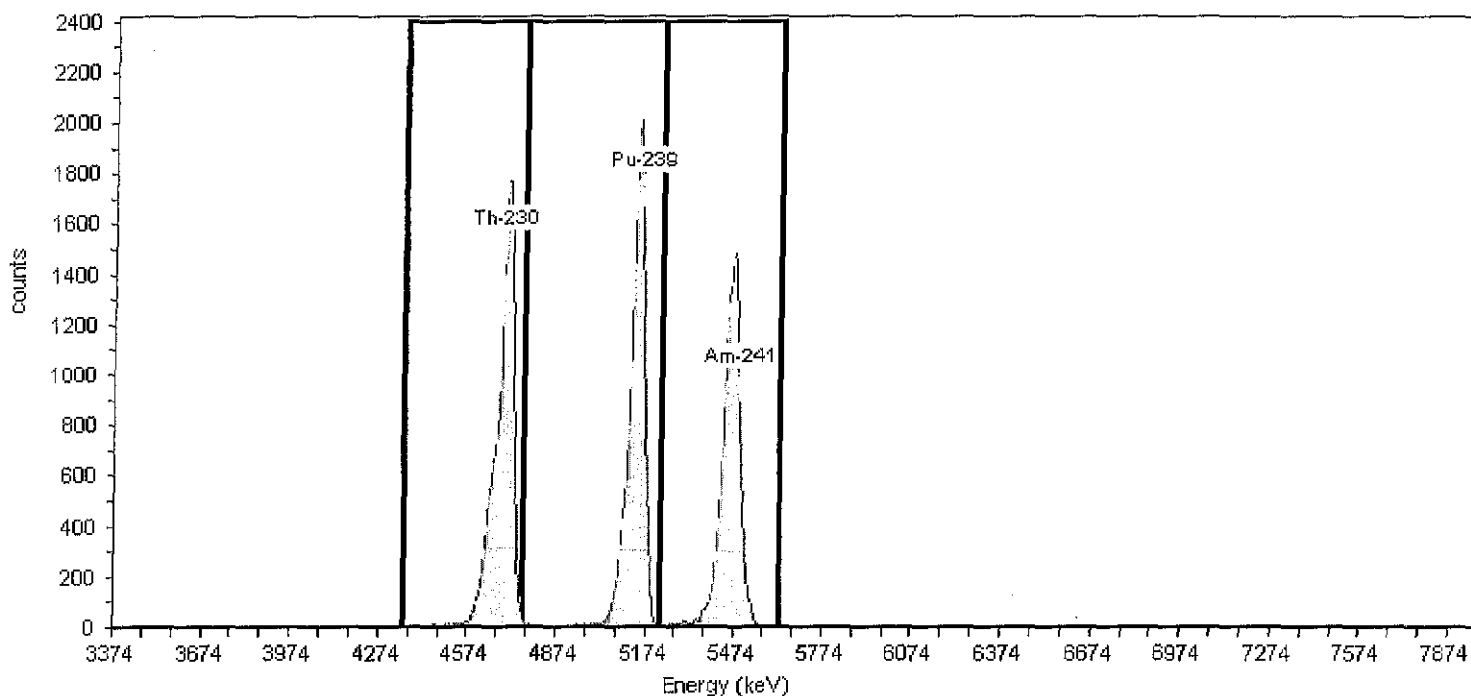
Source Info

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV56, SN:
Acquisition Start Date: 5/2/2012 11:00:52PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 26.80% +/- 0.35% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,862.00	113.30
Pu-239	240	5.16	186	249	15,428.00	110.20
Am-241	284	5.49	249	303	13,237.00	94.55

Sample Name: May2012_AV56_ICV
Description:
Detector: AV56

Calibration

Calibration Date: 5/3/2012 9:37:51AM
Analyst: 60040

Certificate ID: 82246-334
Prepared by: Analytics

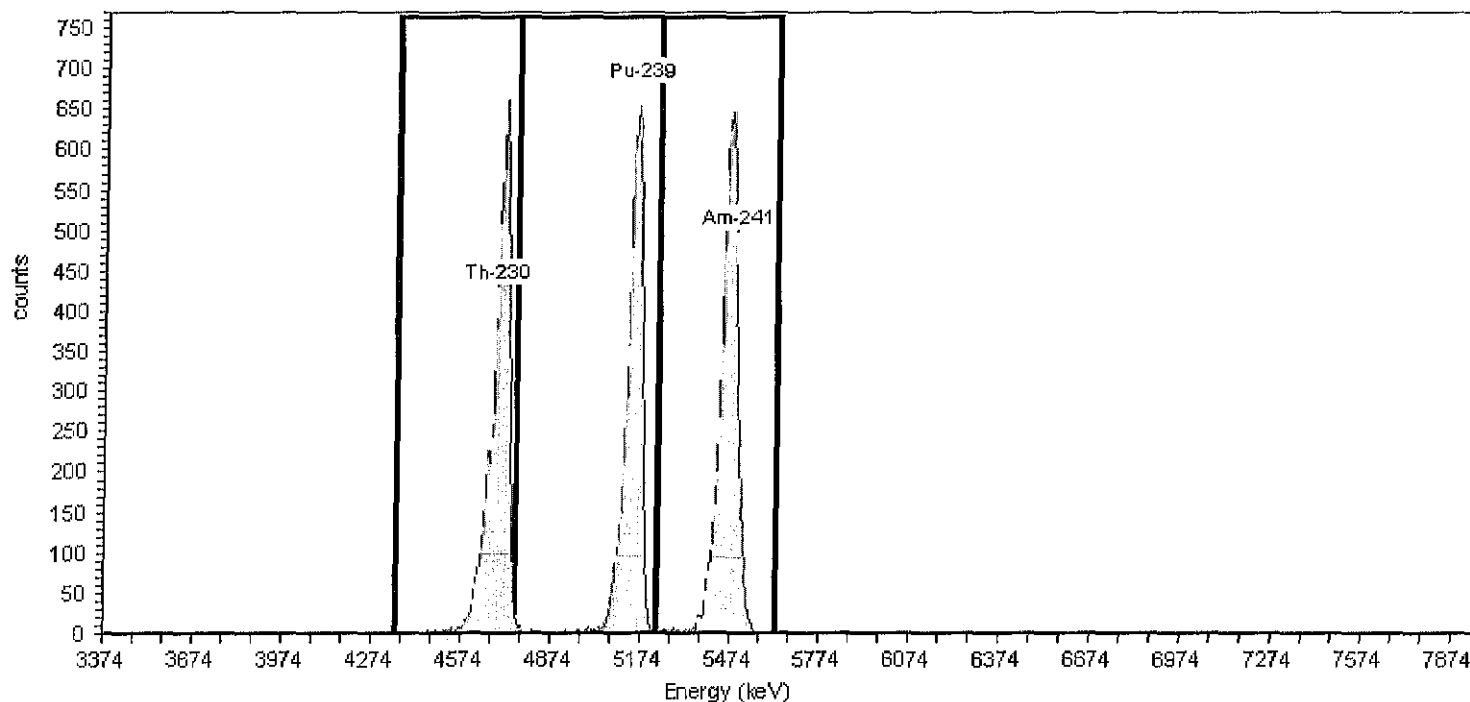
Source Info

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV56 , SN:
Acquisition Start Date: 5/3/2012 1:34:00AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.12% +/- 0.49% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,206.00	86.77
Pu-239	240	5.16	186	249	5,037.00	83.95
Am-241	284	5.49	249	303	5,660.00	94.33

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibrations
Alpha Vision
February 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)		
AV1 Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass		
AV2 Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass		
AV3 June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
AV4 June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
AV6 June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
AV7 June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
AV8 June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
AV9 Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass		
Feb2012_AV9a_ICV	2/22/2012 8:32:32 PM	82236-334	0.2761	Pass	99.4615	Pass
AV10 Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass		
Feb2012_AV10a_ICV	2/23/2012 11:15:43 AM	82237-334	0.2717	Pass	100.292	Pass
AV11 Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass		
AV12 Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass		
Feb2012_AV12a_ICV	2/22/2012 8:32:35 PM	82238-334	0.2707	Pass	100.940	Pass
AV13 June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
AV14 Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass		
AV15 June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV16</i>				
Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
Feb2012_AV16a_ICV	2/22/2012 8:32:38 PM	82243-334	0.2707	Pass 97.7705 Pass
<i>AV17</i>				
June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass
<i>AV18</i>				
Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
Feb2012_AV18a_ICV	2/22/2012 8:32:42 PM	82247-334	0.2566	Pass 95.0864 Pass
<i>AV19</i>				
Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i>				
June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i>				
June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i>				
June2011_AV23	6/2/2011 8:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i>				
Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i>				
June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i>				
June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i>				
June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i>				
February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
Feb2012_AV46_ICV	2/24/2012 12:25:10 PM	82236-334	0.2768	Pass 101.742 Pass
<i>AV47</i>				
June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i>				
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass		
Feb2012_AV50_ICV	2/24/2012 12:25:26 PM	82240-334	0.2783	Pass	98.6252	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass		
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
<i>AV56</i> Dec2011_AV56	12/15/2011 9:36:08 AM	82238-334	0.2691	Pass		
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass		
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass		
Feb2012_AV58_ICV	2/24/2012 12:25:49 PM	63507-334	0.2851	Pass	93.6999	Fail
Feb2012_AV58a_ICV	2/24/2012 3:16:31 PM	82232-334	0.2863	Pass	101.213	Pass
Feb2012_AV58b_ICV	2/24/2012 4:28:08 PM	82232-334	0.2853	Pass	100.844	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass		
Feb2012_AV59_ICV	2/24/2012 12:26:03 PM	63508A-334	0.2697	Pass	96.5361	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV63</i>				
Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass
Feb2012_AV63_ICV	2/23/2012 5:15:45 PM	82234-334	0.2798	Pass 104.191 Pass
<i>AV64</i>				
May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass
<i>AV65</i>				
Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass
Feb2012_AV65_ICV	2/23/2012 5:15:50 PM	82236-334	0.2714	Pass 95.5197 Pass
<i>AV66</i>				
Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass
<i>AV67</i>				
May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
<i>AV69</i>				
June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass
<i>AV70</i>				
June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass
<i>AV71</i>				
May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass
<i>AV72</i>				
May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass
<i>AV73</i>				
Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass
<i>AV74</i>				
Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass
<i>AV75</i>				
May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass
<i>AV77</i>				
May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass
<i>AV78</i>				
May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass
<i>AV79</i>				
June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
<i>AV120</i> June2011_AV120	6/10/2011 2:58:12 PM	63507-334	0.2673	Pass		
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass		
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass		
Feb2012_AV131_ICV	2/24/2012 12:26:24 PM	82245-334	0.2767	Pass	101.234	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
Feb2012_AV133_ICV	2/24/2012 3:16:36 PM	82247-334	0.2639	Pass 99.4605 Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 8 of 8

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV147</i>	6/14/2011 9:47:31 AM	82236-334	0.2858	Pass		
	6/14/2011 9:48:52 AM	82247-334	0.2876	Pass	100.65	Pass
<i>AV148</i>	6/21/2011 2:32:02 PM	82237-334	0.2655	Pass		
	6/21/2011 2:32:43 PM	82236-334	0.2752	Pass	103.63	Pass
<i>AV149</i>	6/21/2011 2:34:00 PM	82238-334	0.2822	Pass		
	6/21/2011 2:34:33 PM	82237-334	0.2743	Pass	97.212	Pass
<i>AV151</i>	6/21/2011 2:36:24 PM	82240-334	0.2779	Pass		
	6/21/2011 2:36:47 PM	82239-334	0.2757	Pass	99.212	Pass
<i>AV152</i>	6/21/2011 2:37:11 PM	82241-334	0.2700	Pass		
	6/21/2011 2:37:32 PM	82240-334	0.2698	Pass	99.948	Pass
<i>AV153</i>	6/30/2011 9:05:44 AM	63508A-334	0.2610	Pass		
	6/30/2011 10:17:32 AM	63507-334	0.2585	Pass	99.026	Pass
<i>AV154</i>	6/21/2011 2:39:31 PM	82243-334	0.2680	Pass		
	6/21/2011 2:40:03 PM	82242-334	0.2722	Pass	101.56	Pass
<i>AV155</i>	6/27/2011 9:21:16 PM	82244-334	0.2651	Pass		
	6/27/2011 9:22:09 PM	82243-334	0.2628	Pass	99.134	Pass
<i>AV156</i>	6/27/2011 9:22:55 PM	82245-334	0.2721	Pass		
	6/27/2011 9:23:40 PM	82244-334	0.2640	Pass	97.019	Pass
<i>AV157</i>	6/27/2011 9:24:40 PM	82246-334	0.2630	Pass		
	6/27/2011 9:25:17 PM	82245-334	0.2703	Pass	102.74	Pass
<i>AV158</i>	6/30/2011 11:40:49 AM	82235-334	0.2758	Pass		
	6/30/2011 12:51:15 PM	82234-334	0.2756	Pass	99.948	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI59</i>	6/30/2011 9:06:12 AM	82236-334	0.2701	Pass		
	6/30/2011 9:06:45 AM	82235-334	0.2750	Pass	101.83	Pass
<i>AVI60</i>	6/30/2011 9:07:03 AM	82237-334	0.2630	Pass		
	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	100.98	Pass
<i>AVI61</i>	6/27/2011 9:29:26 PM	63508A-334	0.2652	Pass		
	6/27/2011 9:29:59 PM	63507-334	0.2604	Pass	98.212	Pass
<i>AVI62</i>	6/23/2011 11:26:56 AM	63509A-334	0.2637	Pass		
	6/23/2011 1:44:04 PM	63508A-334	0.2643	Pass	100.20	Pass
<i>AVI63</i>	6/15/2011 1:14:12 AM	82232-334	0.2782	Pass		
	6/27/2011 9:30:57 PM	63509A-334	0.2748	Pass	98.774	Pass
<i>AVI64</i>	6/30/2011 9:07:48 AM	82241-334	0.2661	Pass		
	6/30/2011 9:08:11 AM	82240-334	0.2702	Pass	101.52	Pass
<i>AVI65</i>	6/15/2011 1:14:21 AM	82234-334	0.2869	Pass		
	6/27/2011 9:32:32 PM	82233-334	0.2796	Pass	97.467	Pass
<i>AVI66</i>	6/15/2011 1:14:26 AM	82235-334	0.2773	Pass		
	6/27/2011 9:33:19 PM	82234-334	0.2771	Pass	99.922	Pass
<i>AVI67</i>	6/15/2011 1:14:30 AM	82236-334	0.2723	Pass		
	6/27/2011 9:34:00 PM	82235-334	0.2755	Pass	101.17	Pass
<i>AVI68</i>	6/15/2011 1:14:34 AM	82237-334	0.2627	Pass		
	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	102.85	Pass
<i>AVI69</i>	6/15/2011 1:14:37 AM	82238-334	0.2711	Pass		
	6/27/2011 9:35:26 PM	82237-334	0.2674	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV170</i>	6/15/2011 1:14:41 AM	82239-334	0.2783	Pass		
	6/27/2011 9:36:10 PM	82238-334	0.2688	Pass	96.606	Pass
<i>AV171</i>	6/15/2011 1:14:45 AM	82240-334	0.2709	Pass		
	6/27/2011 9:37:06 PM	82239-334	0.2813	Pass	103.84	Pass
<i>AV172</i>	6/15/2011 1:14:49 AM	82241-334	0.2699	Pass		
	6/27/2011 9:37:46 PM	82240-334	0.2705	Pass	100.22	Pass
<i>AV173</i>	6/15/2011 1:14:52 AM	82242-334	0.2830	Pass		
	6/27/2011 9:38:28 PM	82241-334	0.2716	Pass	95.991	Pass
<i>AV174</i>	6/15/2011 1:14:56 AM	82243-334	0.2679	Pass		
	6/27/2011 9:39:06 PM	82242-334	0.2743	Pass	102.42	Pass
<i>AV175</i>	6/15/2011 1:15:00 AM	82244-334	0.2675	Pass		
	6/27/2011 9:39:52 PM	82243-334	0.2720	Pass	101.67	Pass
<i>AV176</i>	6/15/2011 2:15:31 AM	82245-334	0.2726	Pass		
	6/27/2011 9:40:38 PM	82244-334	0.2661	Pass	97.631	Pass
<i>AV177</i>	6/15/2011 1:15:04 AM	82246-334	0.2651	Pass		
	6/15/2011 4:19:56 AM	82245-334	0.2751	Pass	103.75	Pass
<i>AV178</i>	6/15/2011 1:15:07 AM	82247-334	0.2746	Pass		
	6/27/2011 9:41:21 PM	82246-334	0.2711	Pass	98.745	Pass
<i>AV179</i>	6/30/2011 9:08:46 AM	82237-334	0.2742	Pass		
	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	104.51	Pass
<i>AV180</i>	6/15/2011 1:15:15 AM	63507-334	0.2625	Pass		
	6/27/2011 9:43:59 PM	63506-334	0.2532	Pass	96.455	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV181</i>	6/15/2011 1:15:18 AM	63508A-334	0.2611	Pass		
	6/27/2011 9:44:46 PM	63507-334	0.2587	Pass	99.069	Pass
<i>AV182</i>	6/27/2011 9:45:31 PM	63509A-334	0.2629	Pass		
	6/27/2011 9:46:14 PM	63508A-334	0.2625	Pass	99.822	Pass
<i>AV183</i>	6/20/2011 10:52:50 PM	82232-334	0.2795	Pass		
	6/27/2011 9:46:57 PM	63509A-334	0.2671	Pass	95.537	Pass
<i>AV184</i>	6/20/2011 10:52:55 PM	82233-334	0.2772	Pass		
	6/27/2011 9:47:46 PM	82232-334	0.2799	Pass	100.95	Pass
<i>AV185</i>	6/20/2011 10:52:58 PM	82234-334	0.2823	Pass		
	6/27/2011 9:48:33 PM	82233-334	0.2741	Pass	97.113	Pass
<i>AV186</i>	6/20/2011 10:53:06 PM	82235-334	0.2741	Pass		
	6/27/2011 9:49:22 PM	82234-334	0.2744	Pass	100.12	Pass
<i>AV187</i>	6/20/2011 10:53:09 PM	82236-334	0.2672	Pass		
	6/27/2011 9:50:09 PM	82235-334	0.2741	Pass	102.59	Pass
<i>AV188</i>	6/20/2011 10:53:13 PM	82237-334	0.2820	Pass		
	6/27/2011 9:50:56 PM	82236-334	0.2799	Pass	99.240	Pass
<i>AV189</i>	6/20/2011 10:53:16 PM	82238-334	0.2769	Pass		
	6/27/2011 9:51:48 PM	82237-334	0.2684	Pass	96.927	Pass
<i>AV190</i>	6/21/2011 1:27:18 AM	82239-334	0.2710	Pass		
	6/27/2011 9:52:36 PM	82238-334	0.2739	Pass	101.05	Pass
<i>AV191</i>	6/20/2011 10:53:19 PM	82240-334	0.2794	Pass		
	6/21/2011 4:20:11 AM	82239-334	0.2769	Pass	99.115	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV192</i>	6/20/2011 10:53:23 PM	82241-334	0.2797	Pass		
	6/27/2011 9:53:23 PM	82240-334	0.2797	Pass	100.02	Pass
<i>AV193</i>	6/20/2011 10:53:26 PM	82242-334	0.2736	Pass		
	6/27/2011 9:54:02 PM	82241-334	0.2750	Pass	100.50	Pass
<i>AV194</i>	6/20/2011 10:53:29 PM	82243-334	0.2734	Pass		
	6/27/2011 9:54:56 PM	82242-334	0.2776	Pass	101.56	Pass
<i>AV195</i>	6/20/2011 10:53:33 PM	82244-334	0.2644	Pass		
	6/27/2011 9:55:43 PM	82243-334	0.2668	Pass	100.90	Pass
<i>AV196</i>	6/20/2011 10:53:37 PM	82245-334	0.2839	Pass		
	6/27/2011 9:56:30 PM	82244-334	0.2753	Pass	96.985	Pass
<i>AV197</i>	6/24/2011 2:40:07 AM	82246-334	0.2672	Pass		
	6/27/2011 9:57:47 PM	82245-334	0.2763	Pass	103.37	Pass
<i>AV198</i>	6/24/2011 2:22:48 PM	82247-334	0.2725	Pass		
	6/24/2011 3:24:45 PM	82246-334	0.2672	Pass	98.027	Pass
<i>AV199</i>	6/30/2011 9:09:28 AM	82238-334	0.2684	Pass		
	6/30/2011 10:17:40 AM	82237-334	0.2638	Pass	98.291	Pass
<i>AV200</i>	6/20/2011 10:53:47 PM	63507-334	0.2618	Pass		
	6/27/2011 10:00:20 PM	63506-334	0.2543	Pass	97.155	Pass
<i>AV201</i>	6/20/2011 10:53:53 PM	63508A-334	0.2654	Pass		
	6/27/2011 10:01:08 PM	63507-334	0.2735	Pass	103.06	Pass
<i>AV202</i>	6/27/2011 10:01:51 PM	63509A-334	0.2648	Pass		
	6/27/2011 10:02:25 PM	63508A-334	0.2613	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV203</i>	6/21/2011 3:19:59 PM	82232-334	0.2768	Pass		
	6/21/2011 3:21:44 PM	63509A-334	0.2646	Pass	95.582	Pass
<i>AV204</i>	6/27/2011 10:03:31 PM	82233-334	0.2705	Pass		
	6/27/2011 10:04:08 PM	82232-334	0.2736	Pass	101.16	Pass
<i>AV205</i>	6/21/2011 3:29:26 PM	82234-334	0.2783	Pass		
	6/27/2011 10:04:59 PM	82233-334	0.2722	Pass	97.818	Pass
<i>AV206</i>	6/27/2011 10:05:51 PM	82235-334	0.2796	Pass		
	6/27/2011 10:06:38 PM	82234-334	0.2837	Pass	101.48	Pass
<i>AV207</i>	6/27/2011 10:07:21 PM	82236-334	0.2735	Pass		
	6/27/2011 10:08:05 PM	82235-334	0.2759	Pass	100.87	Pass
<i>AV208</i>	6/27/2011 10:08:56 PM	82237-334	0.2765	Pass		
	6/27/2011 10:09:30 PM	82236-334	0.2800	Pass	101.26	Pass
<i>AV209</i>	6/27/2011 10:10:06 PM	82238-334	0.2812	Pass		
	6/27/2011 10:10:39 PM	82237-334	0.2680	Pass	95.309	Pass
<i>AV210</i>	6/21/2011 9:13:09 AM	82239-334	0.2718	Pass		
	6/27/2011 10:11:34 PM	82238-334	0.2722	Pass	100.16	Pass
<i>AV211</i>	6/27/2011 10:12:37 PM	82240-334	0.2684	Pass		
	6/21/2011 10:55:13 AM	82239-334	0.2688	Pass	100.13	Pass
<i>AV212</i>	6/27/2011 10:13:23 PM	82241-334	0.2851	Pass		
	6/27/2011 10:13:58 PM	82240-334	0.2891	Pass	101.41	Pass
<i>AV213</i>	6/23/2011 11:27:18 AM	82242-334	0.2707	Pass		
	6/23/2011 1:44:14 PM	82241-334	0.2712	Pass	100.17	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV214</i>	6/27/2011 10:15:18 PM	82243-334	0.2701	Pass		
	6/27/2011 10:15:54 PM	82242-334	0.2728	Pass	100.98	Pass
<i>AV215</i>	6/27/2011 10:16:46 PM	82244-334	0.2907	Pass		
	6/27/2011 10:17:26 PM	82243-334	0.2768	Pass	95.222	Pass
<i>AV216</i>	6/27/2011 10:18:14 PM	82245-334	0.2815	Pass		
	6/27/2011 10:18:50 PM	82244-334	0.2736	Pass	97.176	Pass
<i>AV217</i>	7/1/2011 10:10:06 AM	82246-334	0.2656	Pass		
	7/1/2011 10:10:22 AM	82245-334	0.2746	Pass	103.39	Pass
<i>AV218</i>	6/24/2011 1:51:29 PM	82247-334	0.2743	Pass		
	6/24/2011 5:16:09 PM	82246-334	0.2696	Pass	98.287	Pass
<i>AV219</i>	6/30/2011 9:09:52 AM	82240-334	0.2749	Pass		
	6/30/2011 9:10:10 AM	82238-334	0.2711	Pass	98.608	Pass
<i>AV220</i>	6/27/2011 10:21:49 PM	63507-334	0.2632	Pass		
	6/27/2011 10:22:24 PM	63506-334	0.2579	Pass	97.981	Pass
<i>AV221</i>	6/27/2011 10:23:08 PM	63508A-334	0.2621	Pass		
	6/27/2011 10:23:43 PM	63507-334	0.2617	Pass	99.836	Pass
<i>AV222</i>	6/27/2011 10:24:23 PM	63509A-334	0.2675	Pass		
	6/27/2011 10:25:09 PM	63508A-334	0.2634	Pass	98.476	Pass
<i>AV223</i>	6/23/2011 11:28:00 AM	82232-334	0.2800	Pass		
	6/23/2011 1:44:18 PM	63509A-334	0.2682	Pass	95.794	Pass
<i>AV224</i>	6/23/2011 11:28:25 AM	82233-334	0.2755	Pass		
	6/23/2011 1:44:22 PM	82232-334	0.2798	Pass	101.55	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV225</i>	6/24/2011 2:40:10 AM	82234-334	0.2791	Pass		
	6/27/2011 10:26:27 PM	82233-334	0.2753	Pass	98.623	Pass
<i>AV226</i>	6/24/2011 2:40:15 AM	82235-334	0.2729	Pass		
	6/27/2011 10:27:06 PM	82234-334	0.2800	Pass	102.61	Pass
<i>AV227</i>	6/25/2011 10:39:33 AM	82236-334	0.2783	Pass		
	6/25/2011 1:18:30 PM	82235-334	0.2773	Pass	99.651	Pass
<i>AV228</i>	6/28/2011 9:07:26 AM	82237-334	0.2755	Pass		
	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	103.94	Pass
<i>AV229</i>	6/25/2011 10:39:43 AM	82238-334	0.2781	Pass		
	6/25/2011 1:18:41 PM	82237-334	0.2735	Pass	98.336	Pass
<i>AV230</i>	6/25/2011 10:39:47 AM	82239-334	0.2844	Pass		
	6/25/2011 1:19:16 PM	82238-334	0.2812	Pass	98.851	Pass
<i>AV231</i>	6/25/2011 10:50:22 AM	82240-334	0.2784	Pass		
	6/25/2011 1:19:42 PM	82239-334	0.2758	Pass	99.090	Pass
<i>AV232</i>	6/25/2011 10:58:31 AM	82241-334	0.2758	Pass		
	6/25/2011 1:19:51 PM	82240-334	0.2812	Pass	101.96	Pass
<i>AV233</i>	6/25/2011 10:58:37 AM	82242-334	0.2668	Pass		
	6/25/2011 1:20:13 PM	82241-334	0.2705	Pass	101.37	Pass
<i>AV234</i>	6/28/2011 9:08:33 AM	82243-334	0.2710	Pass		
	6/28/2011 9:08:49 AM	82242-334	0.2714	Pass	100.13	Pass
<i>AV235</i>	6/25/2011 11:19:40 AM	82244-334	0.2686	Pass		
	6/25/2011 1:21:34 PM	82243-334	0.2694	Pass	100.30	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV236</i>	6/25/2011 11:19:44 AM	82245-334	0.2759	Pass		
	6/25/2011 1:22:02 PM	82244-334	0.2647	Pass	95.960	Pass
<i>AV237</i>	6/25/2011 11:19:48 AM	82246-334	0.2679	Pass		
	6/25/2011 1:22:14 PM	82245-334	0.2783	Pass	103.89	Pass
<i>AV238</i>	6/25/2011 11:19:52 AM	82247-334	0.2740	Pass		
	6/25/2011 1:22:47 PM	82246-334	0.2642	Pass	96.404	Pass
<i>AV239</i>	6/29/2011 4:17:46 PM	82241-334	0.2816	Pass		
	6/29/2011 5:24:20 PM	82239-334	0.2770	Pass	98.355	Pass
<i>AV240</i>	6/28/2011 9:06:33 AM	63507-334	0.2675	Pass		
	6/25/2011 1:23:31 PM	63506-334	0.2636	Pass	98.508	Pass
<i>AV241</i>	6/25/2011 11:47:42 AM	63508A-334	0.2600	Pass		
	6/25/2011 1:23:51 PM	63507-334	0.2602	Pass	100.06	Pass
<i>AV242</i>	6/25/2011 11:47:57 AM	63509A-334	0.2680	Pass		
	6/25/2011 1:24:10 PM	63508A-334	0.2667	Pass	99.534	Pass
<i>AV243</i>	6/25/2011 9:28:07 AM	82232-334	0.2795	Pass		
	6/25/2011 1:24:52 PM	63509A-334	0.2676	Pass	95.760	Pass
<i>AV244</i>	6/25/2011 12:07:09 PM	82233-334	0.2858	Pass		
	6/25/2011 1:25:04 PM	82232-334	0.2904	Pass	101.61	Pass
<i>AV245</i>	6/25/2011 12:07:13 PM	82234-334	0.2856	Pass		
	6/25/2011 1:25:24 PM	82233-334	0.2793	Pass	97.792	Pass
<i>AV246</i>	6/25/2011 12:07:17 PM	82235-334	0.2981	Pass		
	6/25/2011 1:25:53 PM	82234-334	0.2968	Pass	99.576	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV247</i>	6/28/2011 9:04:33 AM	82236-334	0.2721	Pass		
	6/28/2011 9:04:52 AM	82235-334	0.2774	Pass	101.94	Pass
<i>AV248</i>	6/28/2011 9:09:30 AM	82237-334	0.2651	Pass		
	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	101.77	Pass
<i>AV249</i>	6/28/2011 9:10:11 AM	82238-334	0.2852	Pass		
	6/28/2011 9:10:27 AM	82237-334	0.2781	Pass	97.510	Pass
<i>AV250</i>	6/28/2011 9:10:53 AM	82239-334	0.2800	Pass		
	6/28/2011 9:11:12 AM	82238-334	0.2820	Pass	100.71	Pass

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Alpha Vision Yearly Calibrations Updated 2/22/12

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
Dec2011a_AV22_ICV	12/8/2011 2:38:54 PM	82236-334	0.2670	Pass 99.6280 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV48</i>						
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass		
June2011_AV48_ICV	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	98.9875	Pass
<i>AV88</i>						
May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass		
June2011_AV88_ICV	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	101.747	Pass
<i>AV103</i>						
June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass		
June2011_AV103a_ICVb	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	99.8524	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
June2011_AV68_ICV	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass 101.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV128</i>				
June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
June2011_AV128_ICV	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass 101.685 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV160</i>						
June2011A_AV160	2/21/2012 3:02:57 PM	82237-334	0.2708	Pass		
June2011A_AV160_ICV	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	98.0720	Pass
<i>AV168</i>						
June2011_AV168	2/21/2012 3:03:27 PM	82237-334	0.2704	Pass		
June2011_AV168_ICV	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	99.9393	Pass
<i>AV179</i>						
June2011B_AV179	2/21/2012 3:03:50 PM	82237-334	0.2821	Pass		
June2011_AV179b_ICV	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	101.588	Pass
<i>AV228</i>						
June2011A_AV228	2/21/2012 3:04:50 PM	82237-334	0.2834	Pass		
June2011A_AV228_ICV	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	101.035	Pass
<i>AV248</i>						
June2011_AV248	2/21/2012 3:05:18 PM	82237-334	0.2726	Pass		
June2011_AV248_ICV	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	98.9835	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV205</i>				
Dec2011_AV205	2/21/2012 3:04:20 PM	82237-334	0.2688	Pass
Dec2011_AV205_ICV	12/16/2011 3:08:08 AM	82236-334	0.2684	Pass 99.8398 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:35:47AM 2/27/2012

Calibration

Name: February2012_AV50
Description:
Detector: AV50

Calibration Date: 2/24/2012 9:01:31AM
Analyst: 60040

Source Info

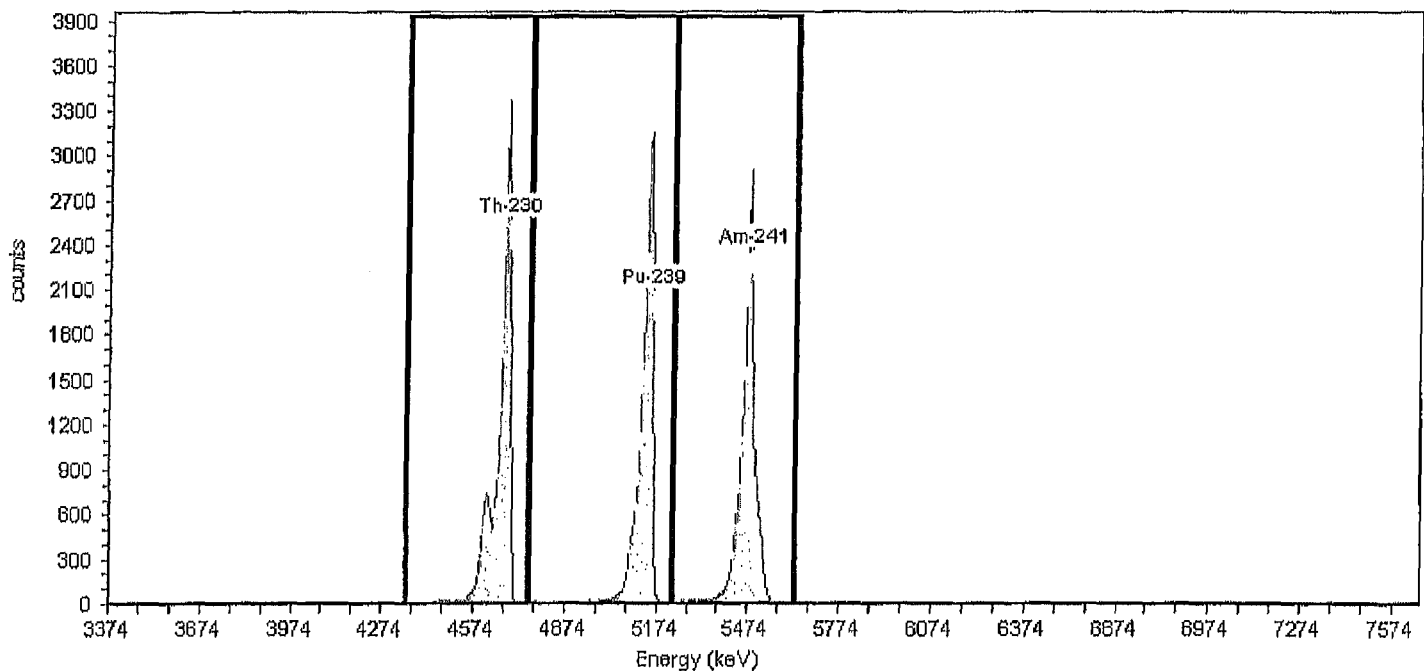
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV50, SN: 50-060W2
Acquisition Start Date: 2/23/2012 11:03:19PM
Live Time: 140.00 min.
Real Time: 140.06 min.
Efficiency: 28.22% +/- 0.31% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	18,073.00	129.09
Pu-239	240	5.16	186	249	17,064.00	121.89
Am-241	284	5.49	249	303	17,096.00	122.11

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:35:54AM 2/27/2012

Calibration

Name: Feb2012_AV50_ICV
Description:
Detector: AV50

Calibration Date: 2/24/2012 12:25:26PM
Analyst: 60040

Source Info

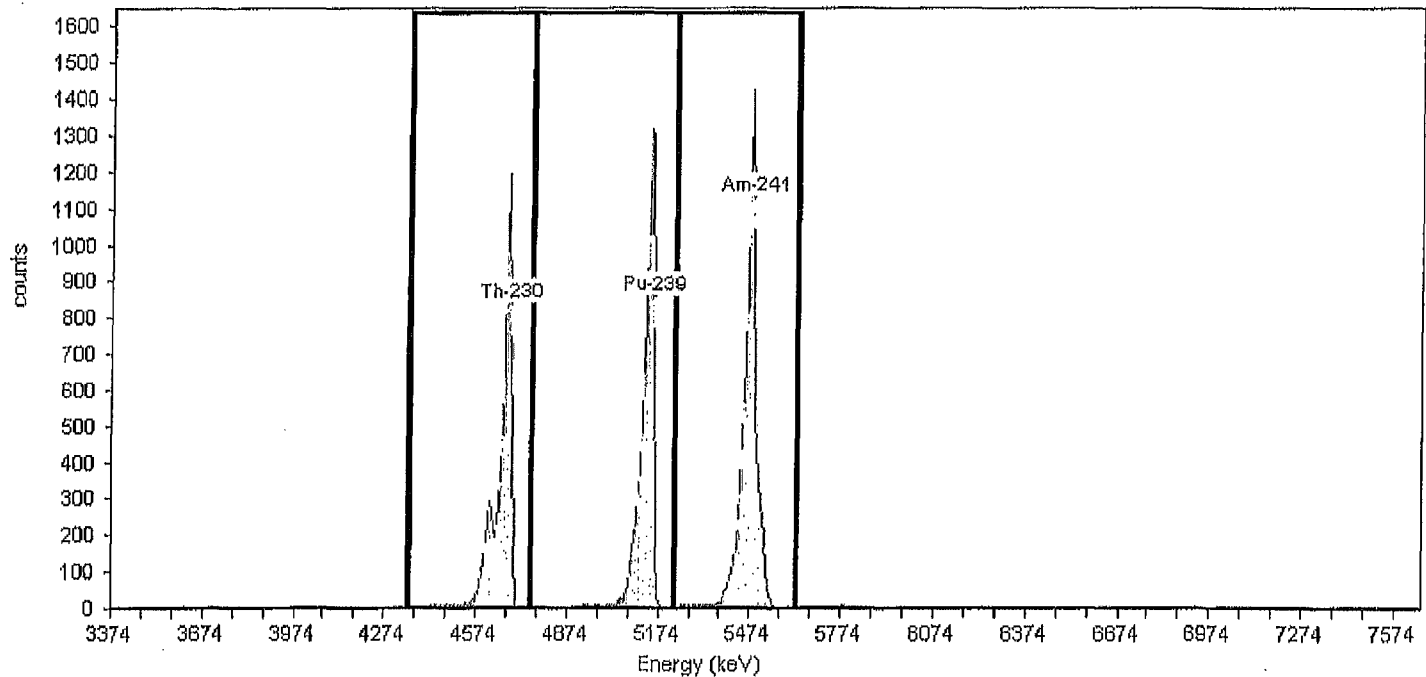
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV50, SN: 50-060W2
Acquisition Start Date: 2/24/2012 11:21:50AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.83% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,324.00	105.40
Pu-239	240	5.16	186	249	7,121.00	118.68
Am-241	284	5.49	249	303	8,342.00	139.03

Calibration

Name: June2011_AV51
Description:
Detector: AV51

Calibration Date: 6/2/2011 6:09:53AM
Analyst: 60040

Source Info

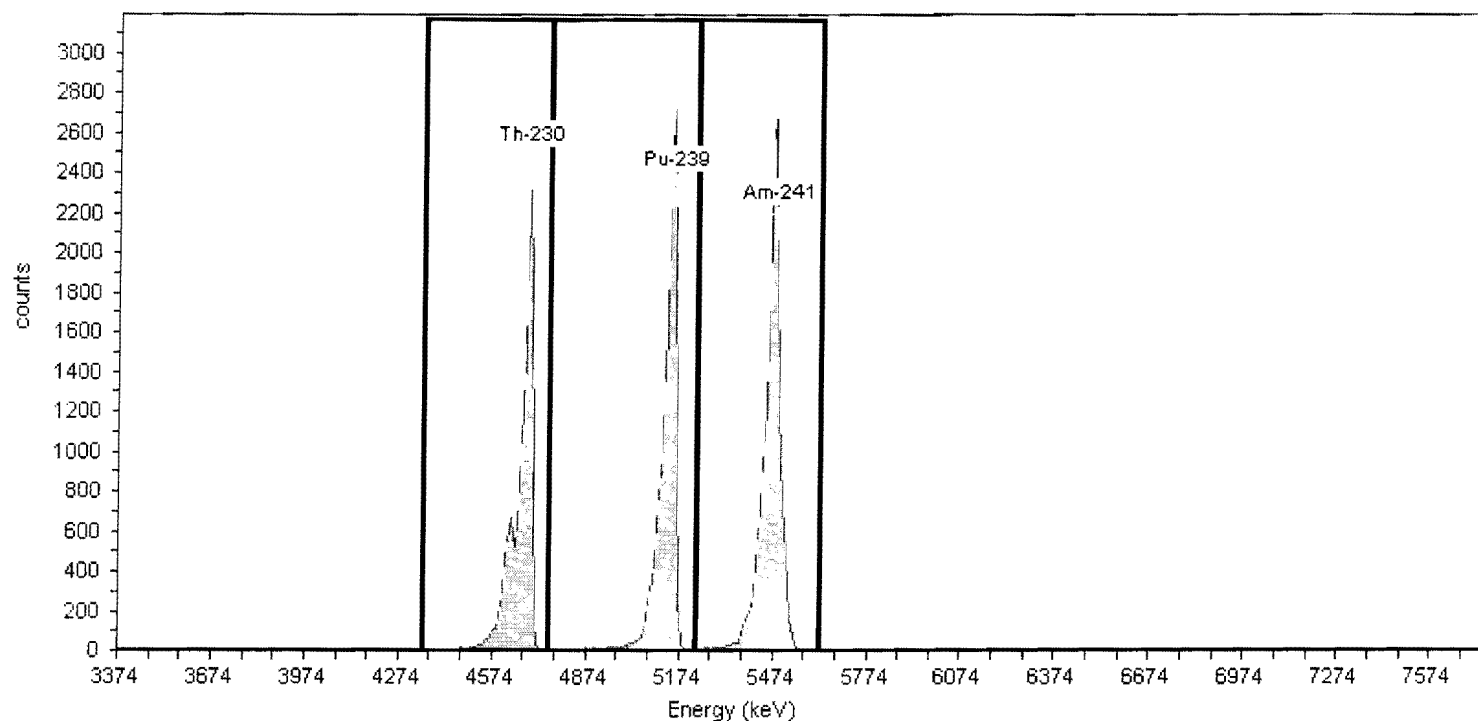
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV51, SN: 48-10911
Acquisition Start Date: 6/1/2011 5:40:06PM
Live Time: 140.00 min.
Real Time: 148.78 min.
Efficiency: 27.71% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,761.00	105.44
Pu-239	240	5.16	186	249	16,705.00	119.32
Am-241	284	5.49	249	303	19,192.00	137.09

Calibration

Name: June2011_AV51_ICV

Description:

Detector: AV51

Calibration Date: 6/2/2011 5:27:20PM

Analyst: 60040

Source Info

Certificate ID: 82239-334

Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM

Description:

Acquisition

Detector: AV51, SN: 48-10911

Acquisition Start Date: 6/2/2011 12:22:23PM

Live Time: 60.00 min.

Real Time: 60.03 min.

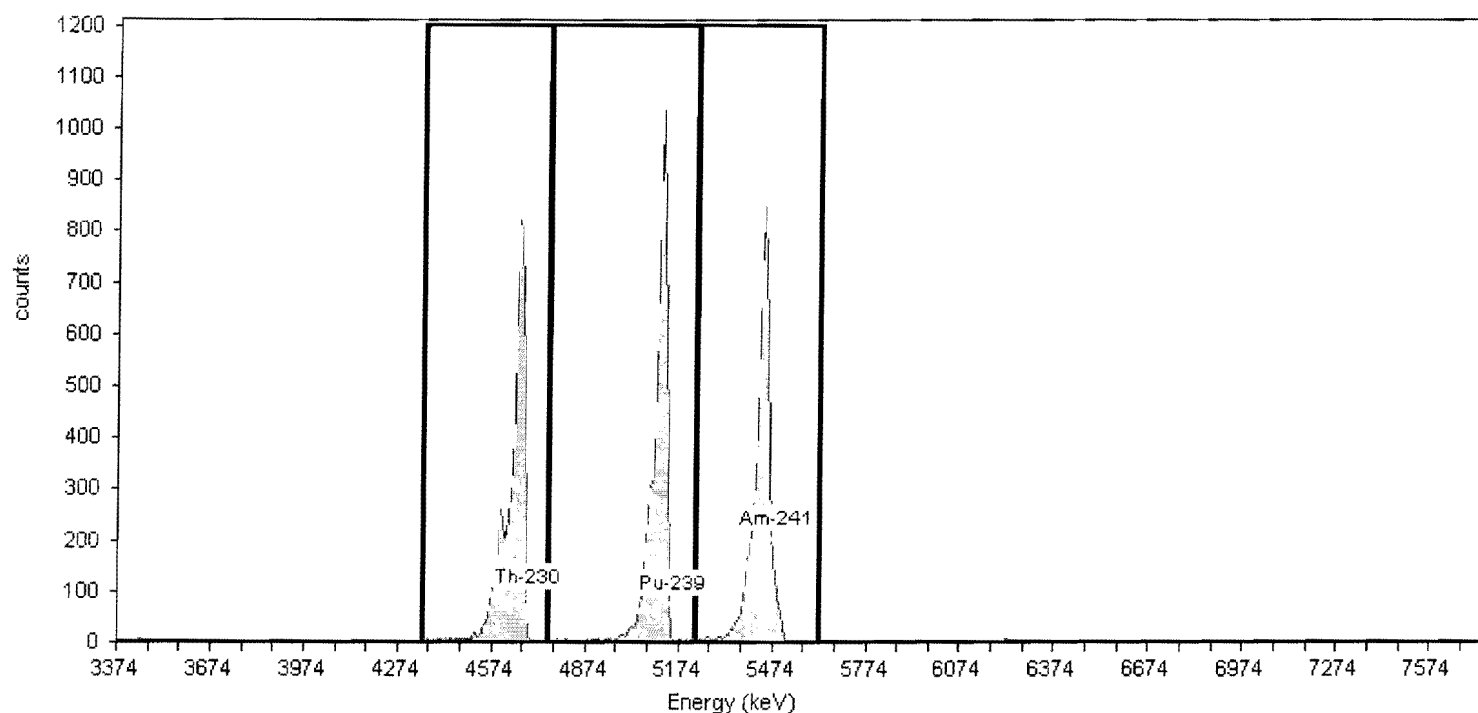
Efficiency: 27.04% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)

Algorithm: Linear

Initial Calibration: No

Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,543.00	92.38
Pu-239	240	5.16	186	249	5,891.00	98.18
Am-241	284	5.49	249	303	5,552.00	92.53

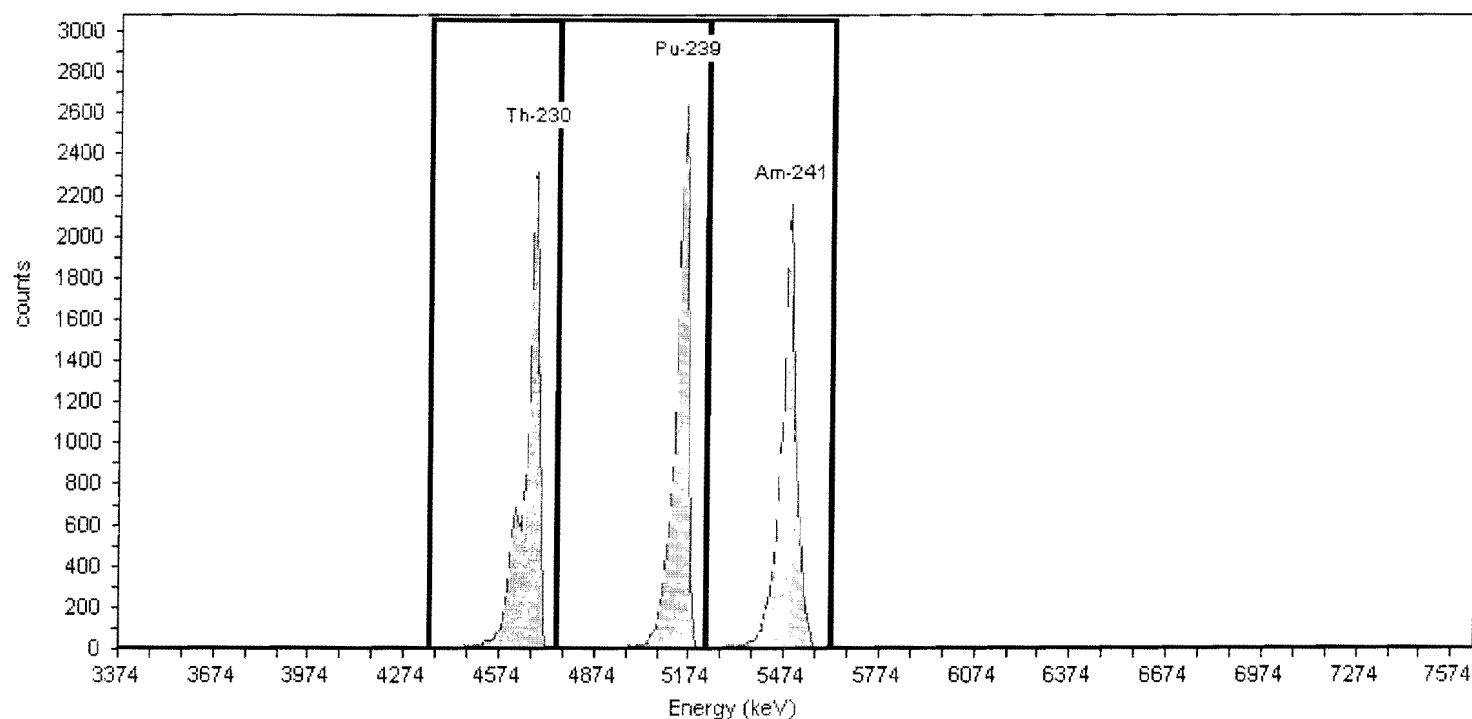
Calibration

Name: June2011_AV52
Description:
Detector: AV52Calibration Date: 6/2/2011 6:09:56AM
Analyst: 60040

Source Info

Certificate ID: 82241-334
Prepared by: AnalyticsCertification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV52, SN:
Acquisition Start Date: 6/1/2011 5:40:29PM
Live Time: 140.00 min.
Real Time: 148.79 min.
Efficiency: 28.70% +/- 0.34% TPU(2 sigma)Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²

General Analysis

Method: Manual (ROI)
Algorithm: LinearInitial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,916.00	113.69
Pu-239	240	5.16	186	249	16,303.00	116.45
Am-241	284	5.49	249	303	16,157.00	115.41

Calibration

Name: June2011_AV52_ICV
Description:
Detector: AV52

Calibration Date: 6/2/2011 5:27:24PM
Analyst: 60040

Source Info

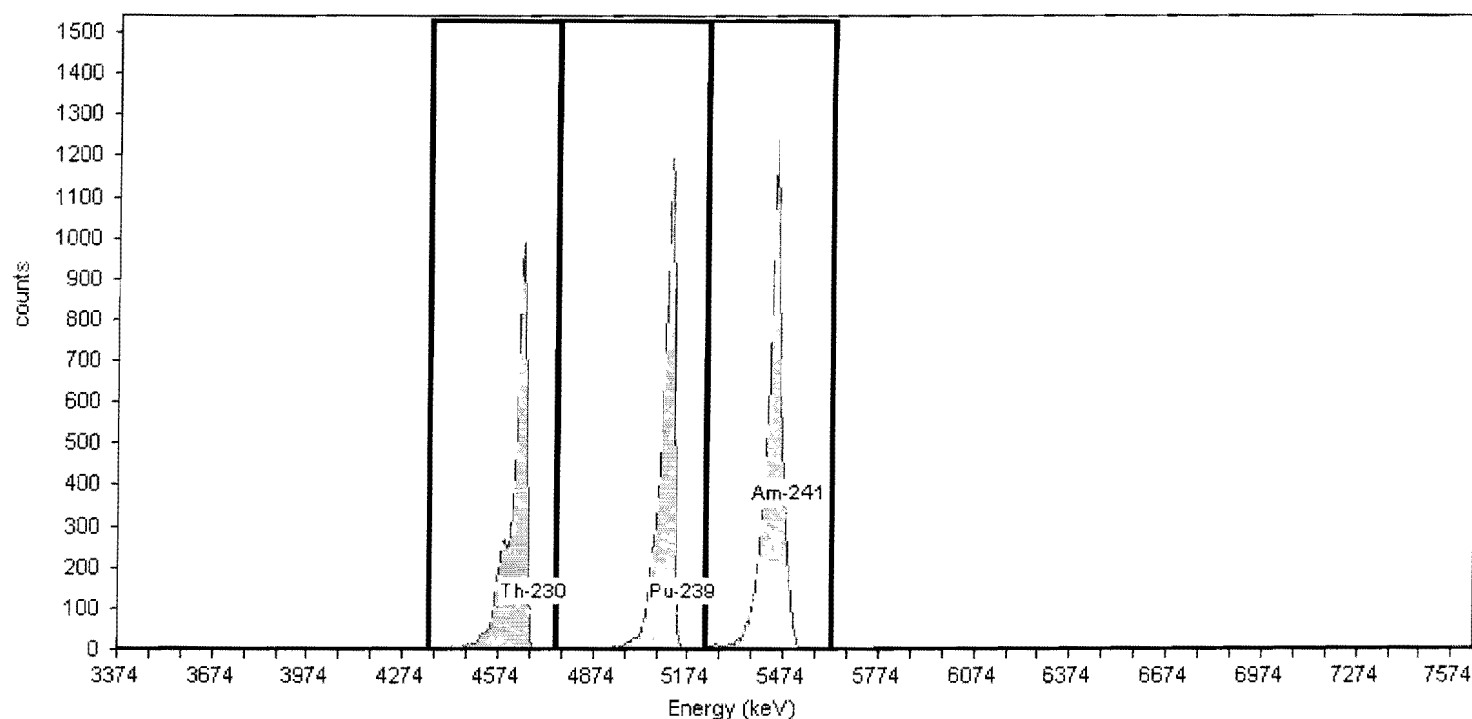
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV52 , SN:
Acquisition Start Date: 6/2/2011 12:23:01PM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 28.93% +/- 0.44% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,458.00	107.63
Pu-239	240	5.16	186	249	7,529.00	125.48
Am-241	284	5.49	249	303	8,671.00	144.52

**Alpha-Spectroscopy
Calibration Report**

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
2:50:34PM 12/16/2011

Calibration

Name: Dec2011_AV53
Description:
Detector: AV53

Calibration Date: 12/15/2011 9:35:01AM
Analyst: 60040

Source Info

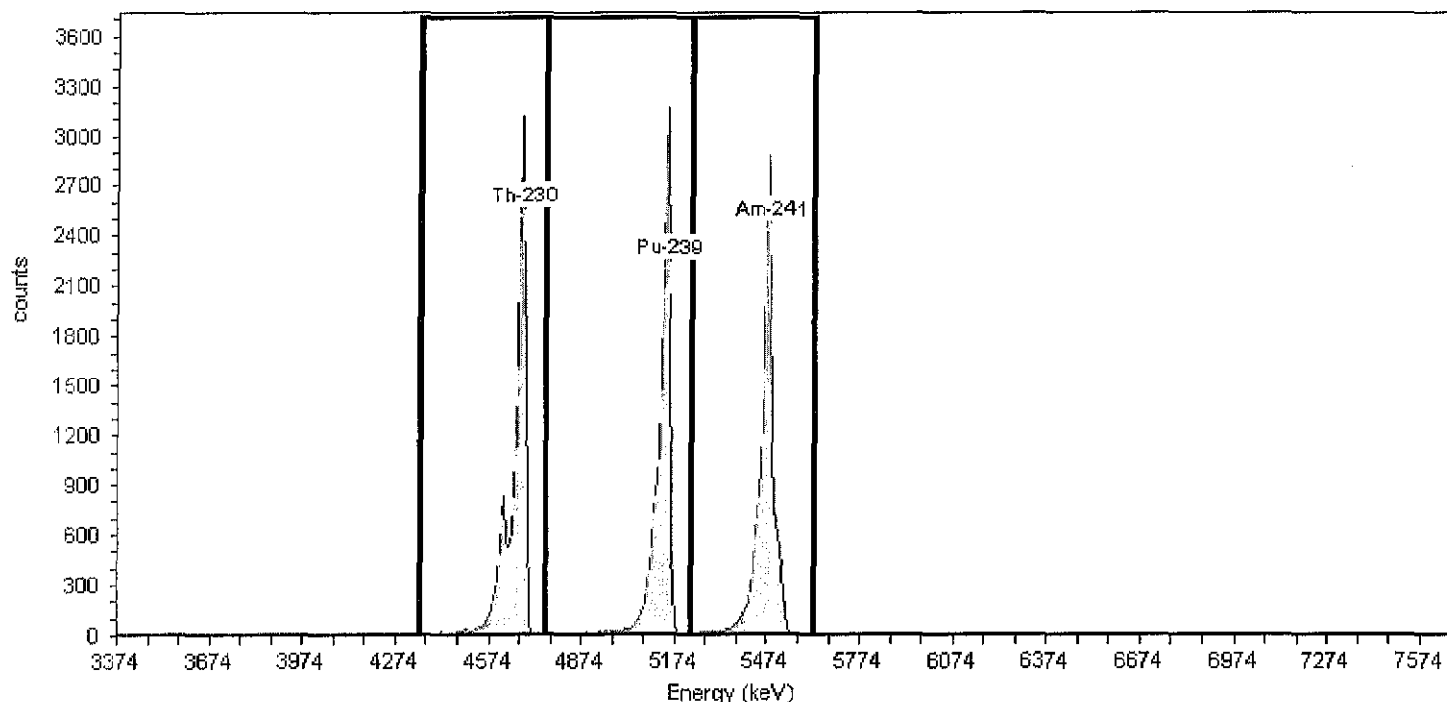
Certificate ID: 82235-334
Prepared by: Analytics

Certification Date: 6/4/2010 12:00:00PM
Description:

Acquisition

Detector: AV53, SN: 50-051A6
Acquisition Start Date: 12/14/2011 8:56:27PM
Live Time: 140.00 min.
Real Time: 140.28 min.
Efficiency: 28.46% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²

**General Analysis**

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	17,075.00	121.96
Pu-239	240	5.16	186	249	16,722.00	119.44
Am-241	284	5.49	249	303	17,662.00	126.16

Alpha-Spectroscopy
Calibration ReportTestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
2:50:39PM 12/16/2011

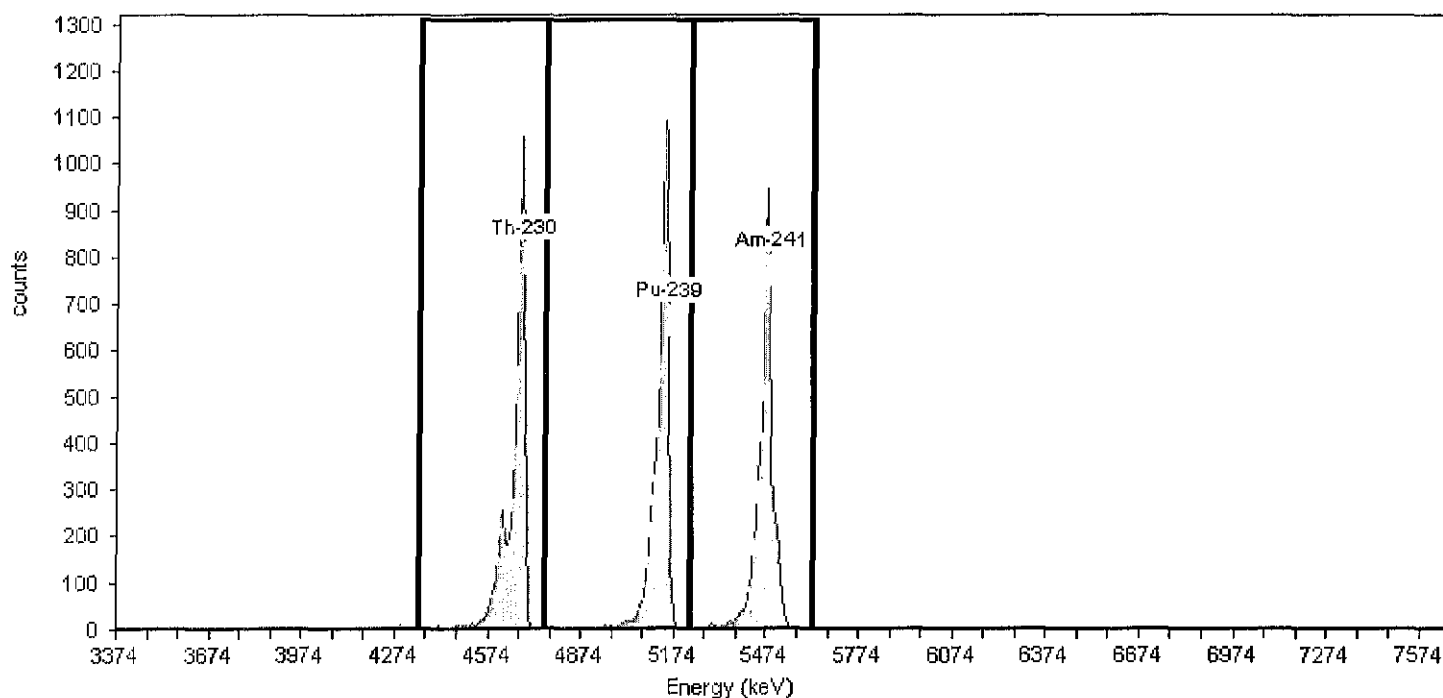
Calibration

Name: Dec2011_AV53_ICV
Description:
Detector: AV53Calibration Date: 12/15/2011 9:35:32AM
Analyst: 60040

Source Info

Certificate ID: 82234-334
Prepared by: AnalyticsCertification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV53, SN: 50-051A6
Acquisition Start Date: 12/15/2011 3:06:32AM
Live Time: 60.00 min.
Real Time: 60.17 min.
Efficiency: 28.52% +/- 0.50% TPU(2 sigma)Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²

General Analysis

Method: Manual (ROI)
Algorithm: LinearInitial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,729.00	95.48
Pu-239	240	5.16	186	249	6,156.00	102.60
Am-241	284	5.49	249	303	5,846.00	97.43

Calibration

Name: June2011_AV54
Description:
Detector: AV54

Calibration Date: 6/2/2011 6:10:00AM
Analyst: 60040

Source Info

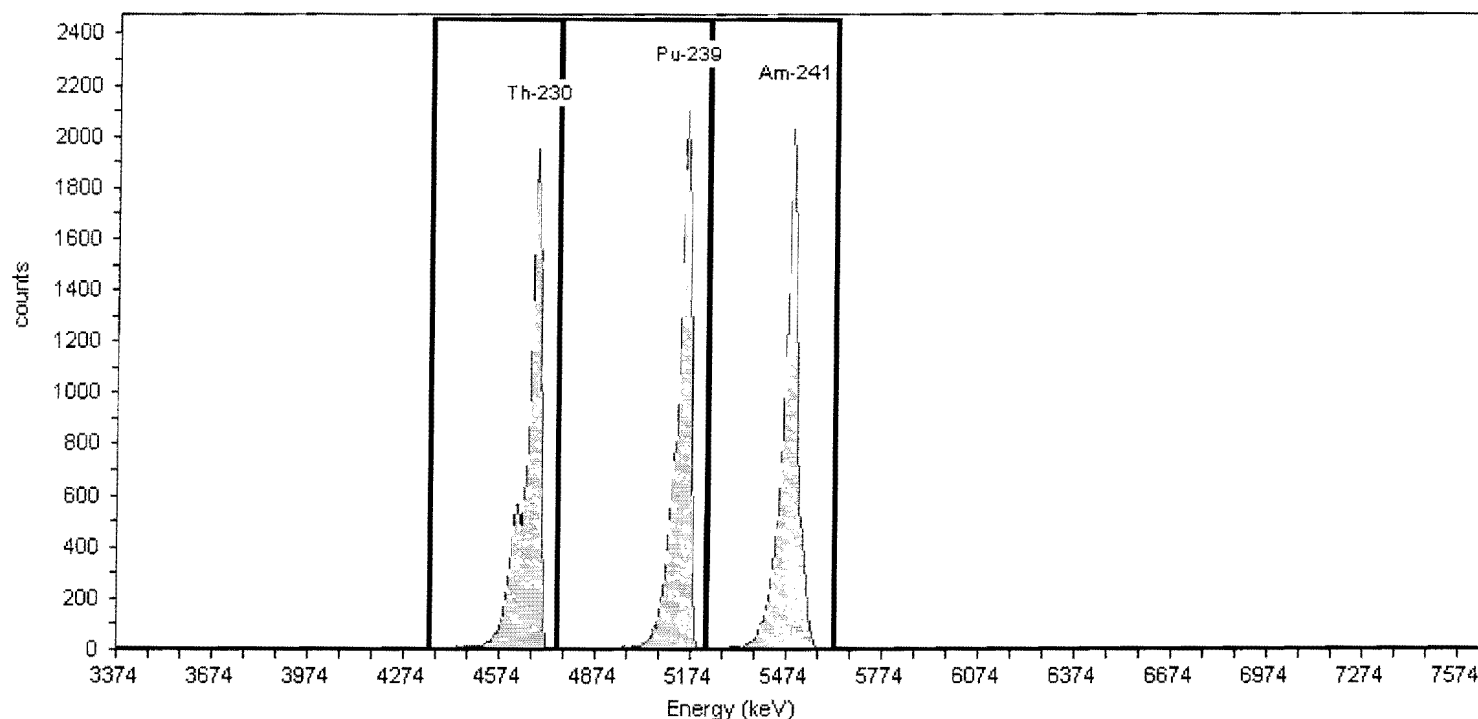
Certificate ID: 82243-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV54 , SN: 48-046116
Acquisition Start Date: 6/1/2011 5:40:52PM
Live Time: 140.00 min.
Real Time: 148.80 min.
Efficiency: 27.19% +/- 0.35% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,363.00	95.45
Pu-239	240	5.16	186	249	13,566.00	96.90
Am-241	284	5.49	249	303	14,682.00	104.87

Calibration

Name: June2011_AV54_ICV
Description:
Detector: AV54

Calibration Date: 6/2/2011 5:27:29PM
Analyst: 60040

Source Info

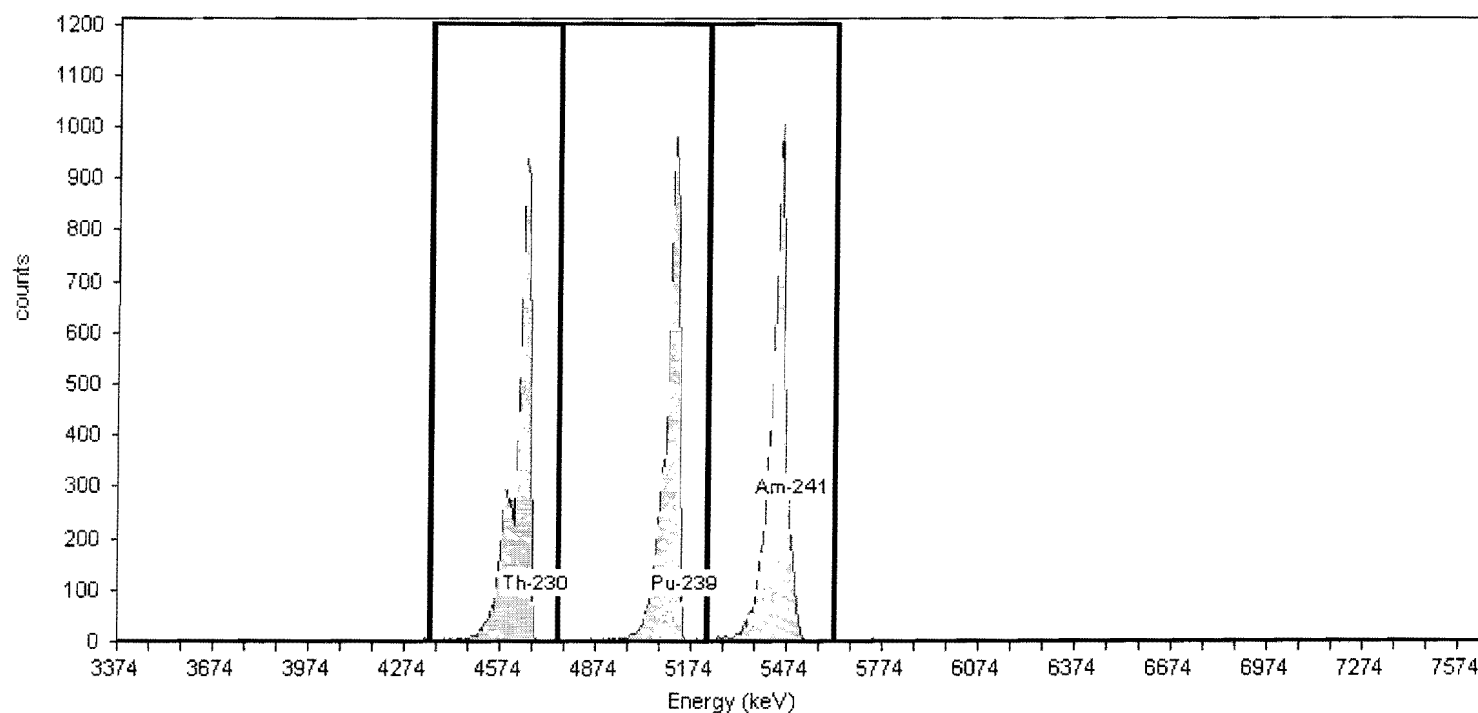
Certificate ID: 82242-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV54 , SN: 48-046116
Acquisition Start Date: 6/2/2011 12:23:45PM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 27.63% +/- 0.45% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,627.00	110.45
Pu-239	240	5.16	186	249	6,234.00	103.90
Am-241	284	5.49	249	303	7,175.00	119.58

Calibration

Name: June2011A_AV55
Description:
Detector: AV55

Calibration Date: 6/20/2011 8:44:19AM
Analyst: 60040

Source Info

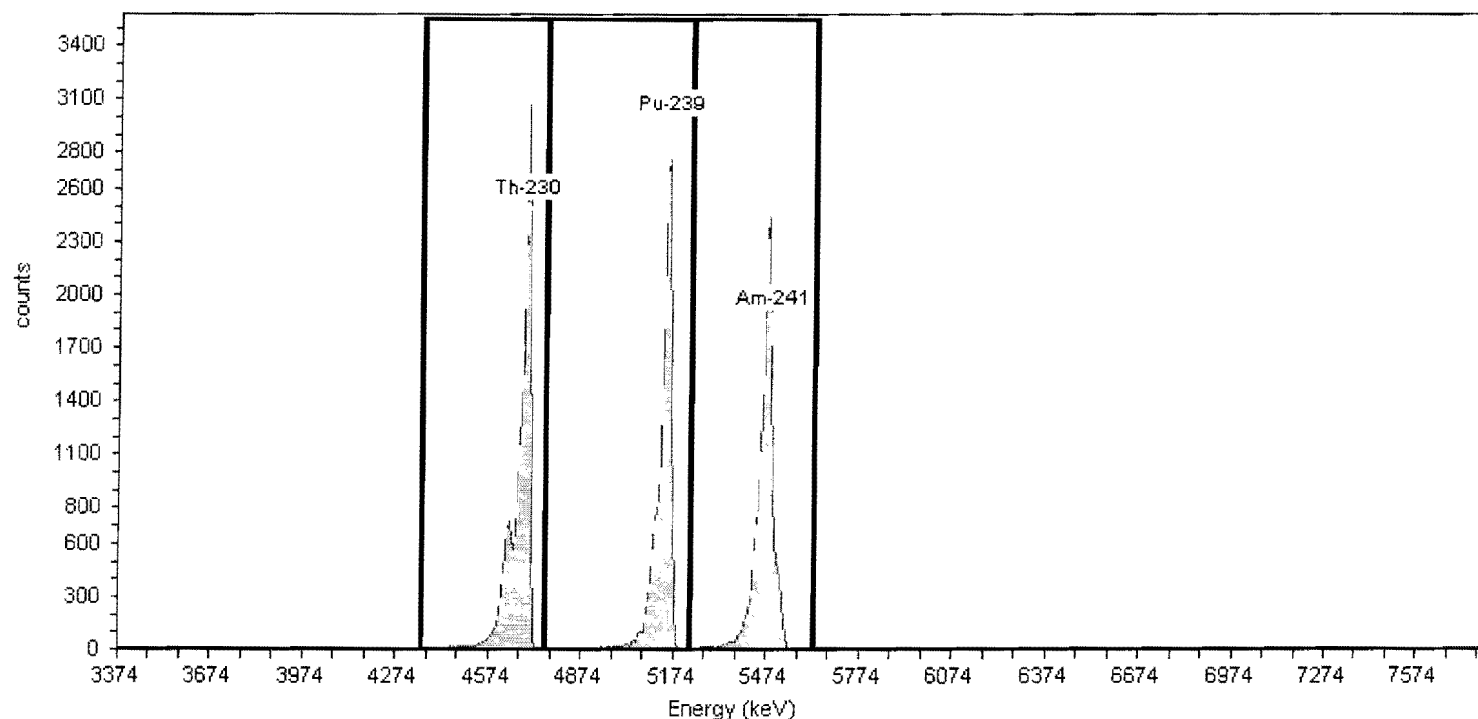
Certificate ID: 82244-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV55 , SN: 50-051C2
Acquisition Start Date: 6/20/2011 4:10:16AM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 26.85% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,633.00	118.81
Pu-239	240	5.16	186	249	15,204.00	108.60
Am-241	284	5.49	249	303	15,435.00	110.25

Calibration

Name: June2011_AV55_ICV
Description:
Detector: AV55

Calibration Date: 6/20/2011 12:56:00PM
Analyst: 60040

Source Info

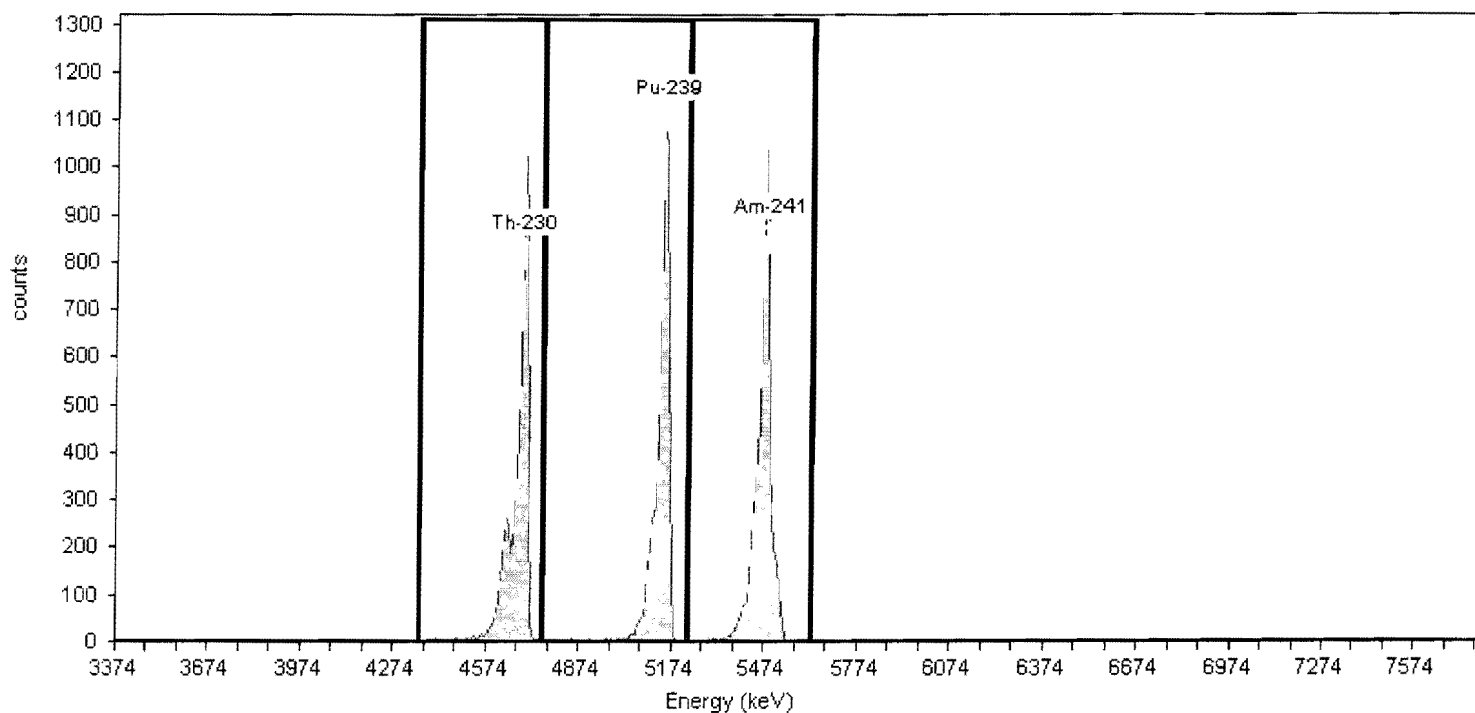
Certificate ID: 82243-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV55 , SN: 50-051C2
Acquisition Start Date: 6/20/2011 11:31:25AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.93% +/- 0.47% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,680.00	94.67
Pu-239	240	5.16	186	249	5,808.00	96.80
Am-241	284	5.49	249	303	6,178.00	102.97

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
2:51:34PM 12/16/2011

Calibration

Name: Dec2011_AV57
Description:
Detector: AV57

Calibration Date: 12/13/2011 9:33:31AM
Analyst: 60040

Source Info

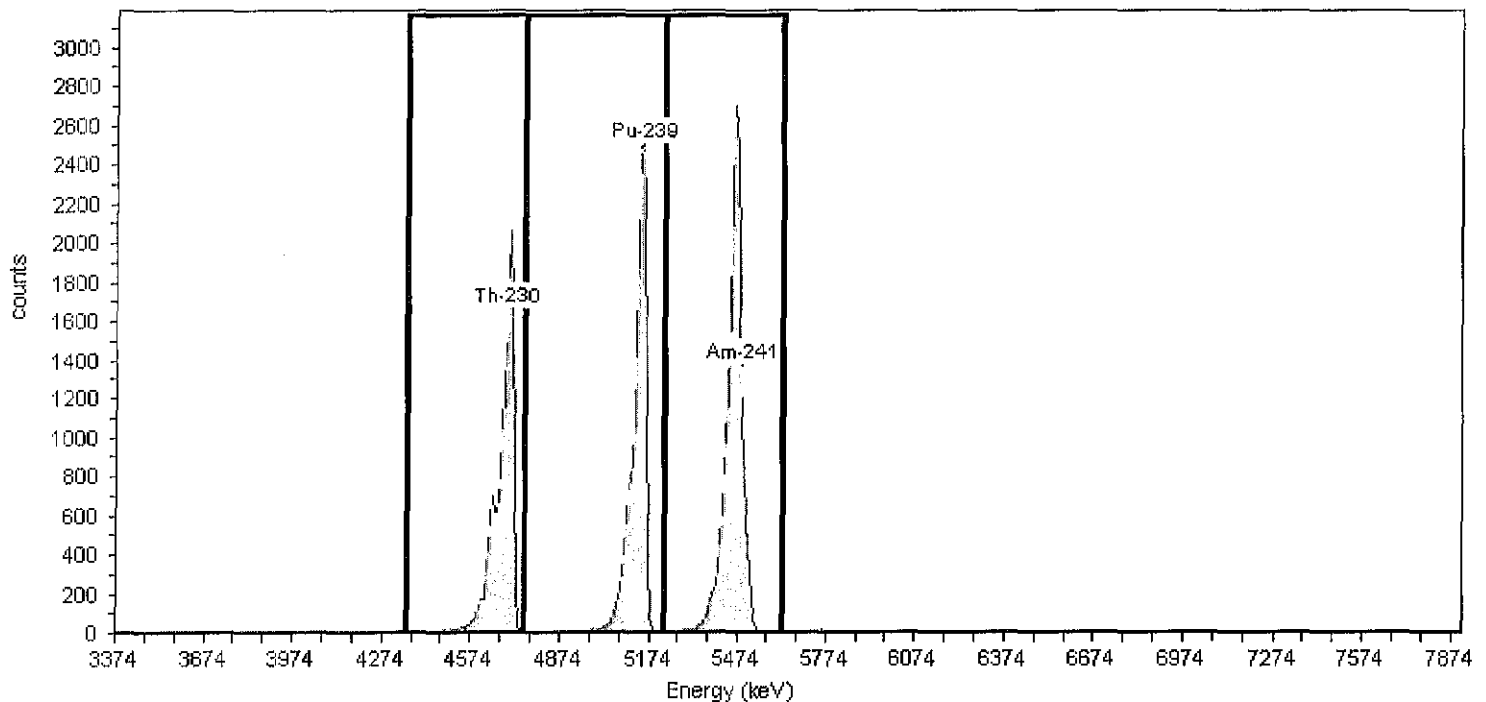
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV57, SN: 48-158EE3
Acquisition Start Date: 12/12/2011 8:11:21PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 27.92% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,573.00	104.09
Pu-239	240	5.16	186	249	16,916.00	120.83
Am-241	284	5.49	249	303	19,507.00	139.34

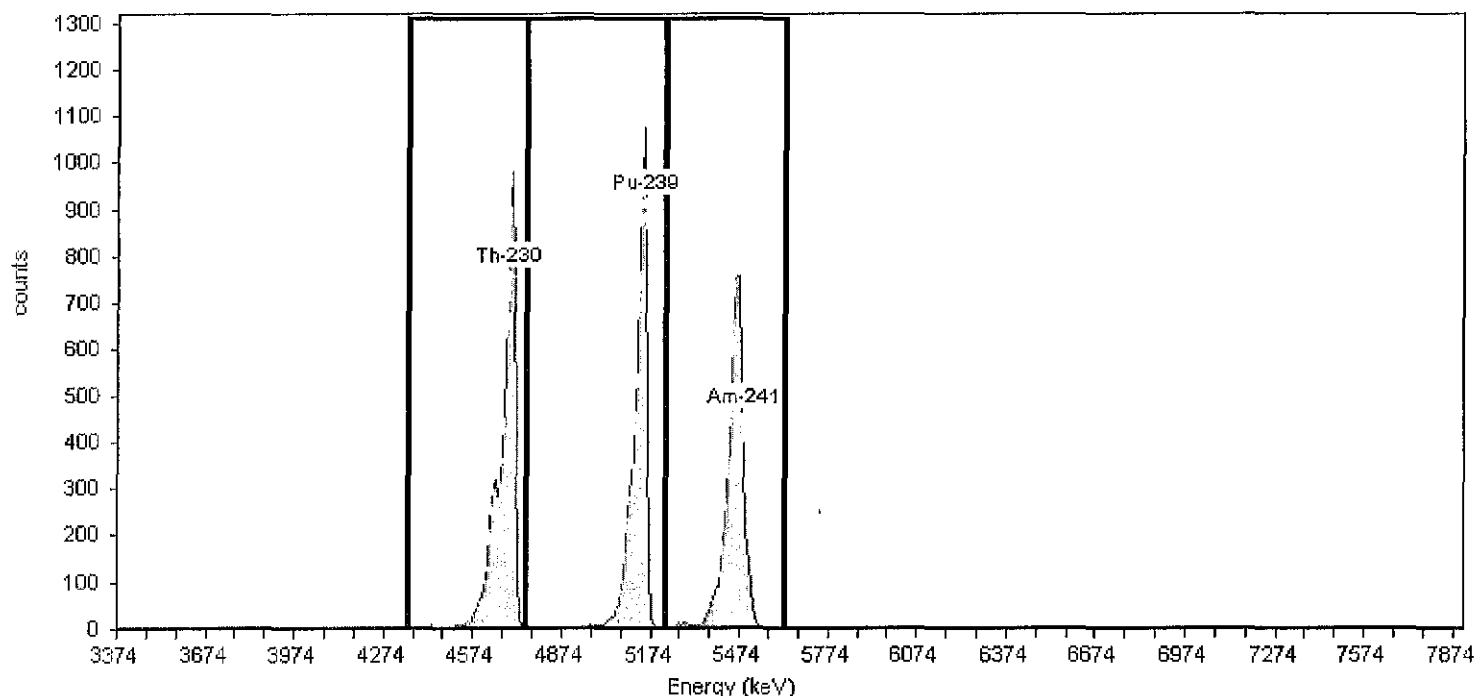
Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
2:51:43PM 12/16/2011

Calibration	
Name: Dec2011_AV57_ICVa	Calibration Date: 12/13/2011 9:33:55AM
Description:	Analyst: 60040
Detector: AV57	

Source Info	
Certificate ID: 82238-334	Certification Date: 6/1/2010 12:00:00PM
Prepared by: Analytics	Description:

Acquisition	
Detector: AV57, SN: 48-158EE3	Energy Calibration Equation:
Acquisition Start Date: 12/12/2011 10:41:11PM	Gain = 7.4575 keV / Ch
Live Time: 60.00 min.	Offset = 3,366.95 keV
Real Time: 60.01 min.	Quadratic = 0.0000 keV / Ch ²
Efficiency: 27.34% +/- 0.46% TPU(2 sigma)	



General Analysis	
Method: Manual (ROI)	Initial Calibration: No
Algorithm: Linear	Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,922.00	115.37
Pu-239	240	5.16	186	249	6,699.00	111.65
Am-241	284	5.49	249	303	5,839.00	97.32

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:36:09AM 2/27/2012

Calibration

Name: February2012_AV58
Description:
Detector: AV58

Calibration Date: 2/24/2012 9:01:54AM
Analyst: 60040

Source Info

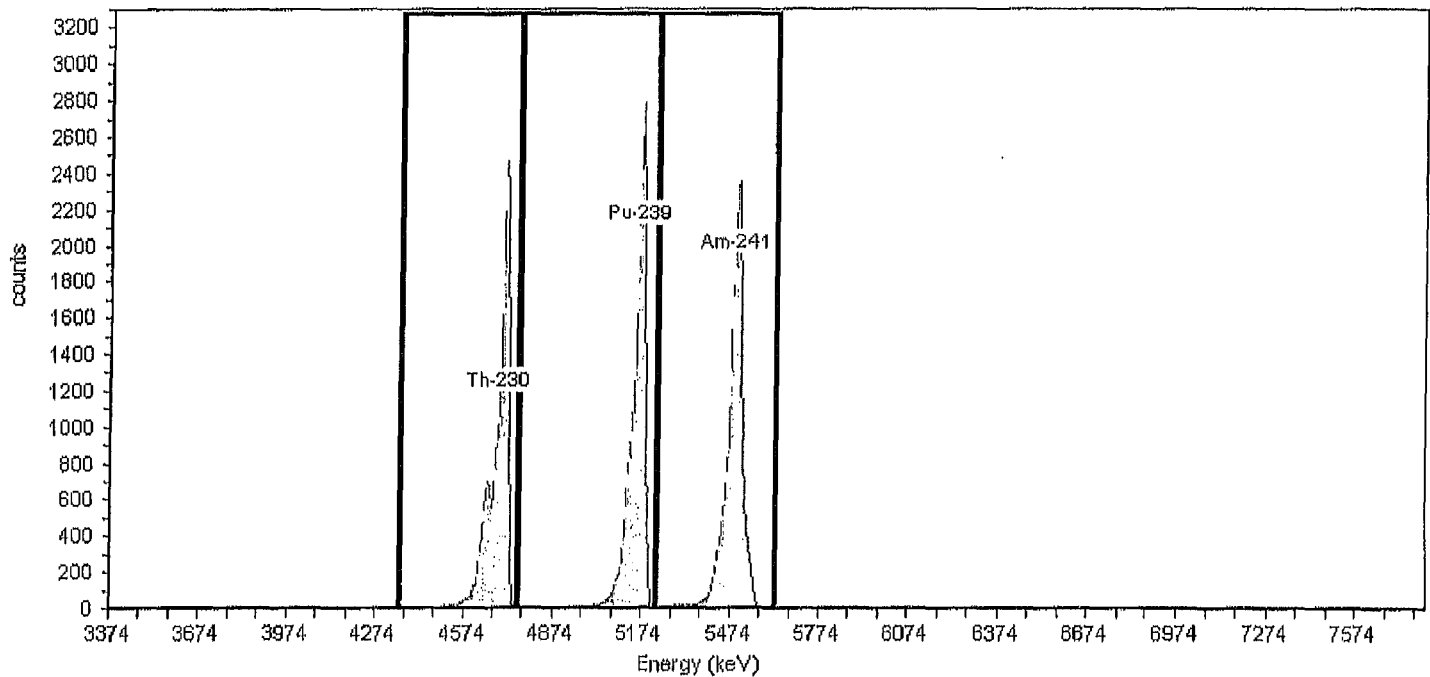
Certificate ID: 82241-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV58, SN: 48-158EE4
Acquisition Start Date: 2/23/2012 11:03:58PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 28.29% +/- 0.34% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,634.00	111.67
Pu-239	240	5.16	186	249	16,079.00	114.85
Am-241	284	5.49	249	303	15,943.00	113.88

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:36:20AM 2/27/2012

Calibration

Name: Feb2012_AV58_ICV
Description:
Detector: AV58

Calibration Date: 2/24/2012 12:25:49PM
Analyst: 60040

Source Info

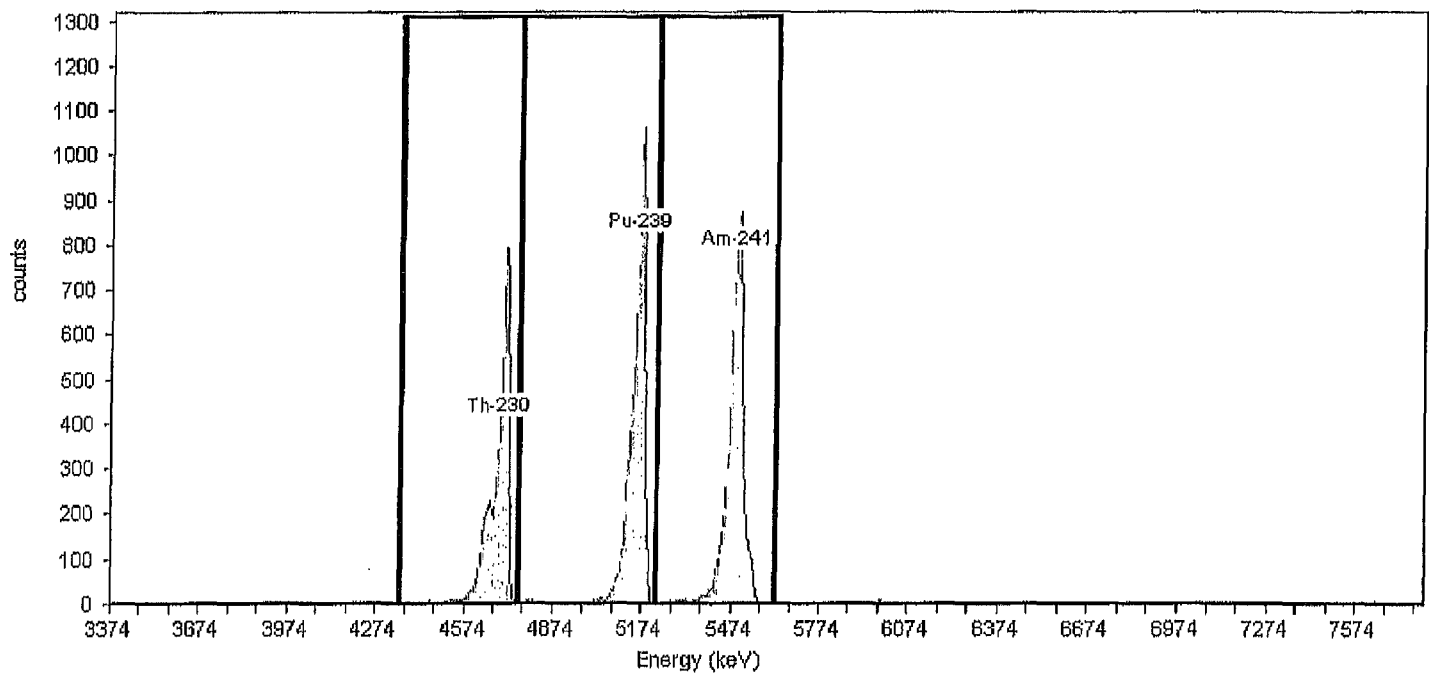
Certificate ID: 63507-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV58, SN: 48-158EE4
Acquisition Start Date: 2/24/2012 11:23:00AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.51% +/- 0.41% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,117.00	85.28
Pu-239	240	5.16	186	249	6,228.00	103.80
Am-241	284	5.49	249	303	5,990.00	99.83

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:36:25AM 2/27/2012

Calibration

Name: Feb2012_AV58a_ICV
Description:
Detector: AV58

Calibration Date: 2/24/2012 3:16:31PM
Analyst: 60040

Source Info

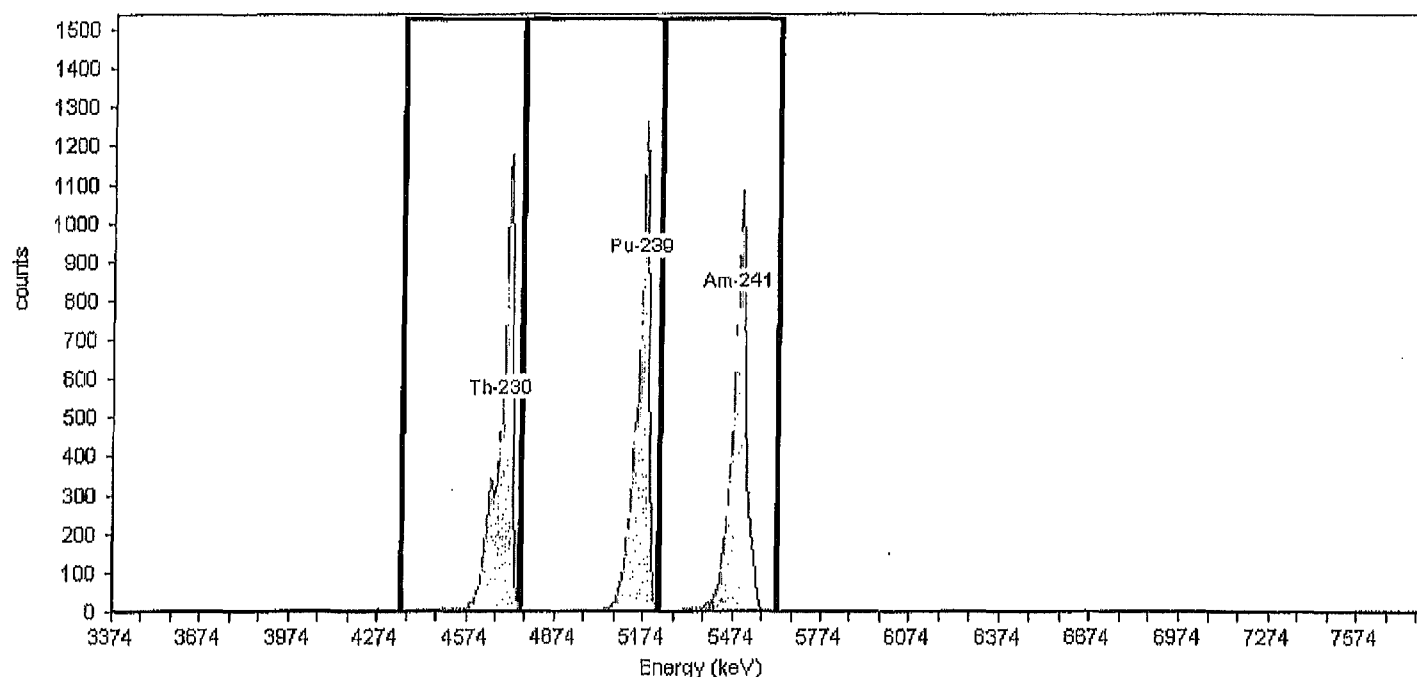
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV58, SN: 48-158EE4
Acquisition Start Date: 2/24/2012 2:16:15PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 28.63% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,831.00	130.52
Pu-239	240	5.16	186	249	7,354.00	122.57
Am-241	284	5.49	249	303	7,529.00	125.48

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:36:31AM 2/27/2012

Calibration

Name: Feb2012_AV58b_ICV
Description:
Detector: AV58

Calibration Date: 2/24/2012 4:28:08PM
Analyst: 60040

Source Info

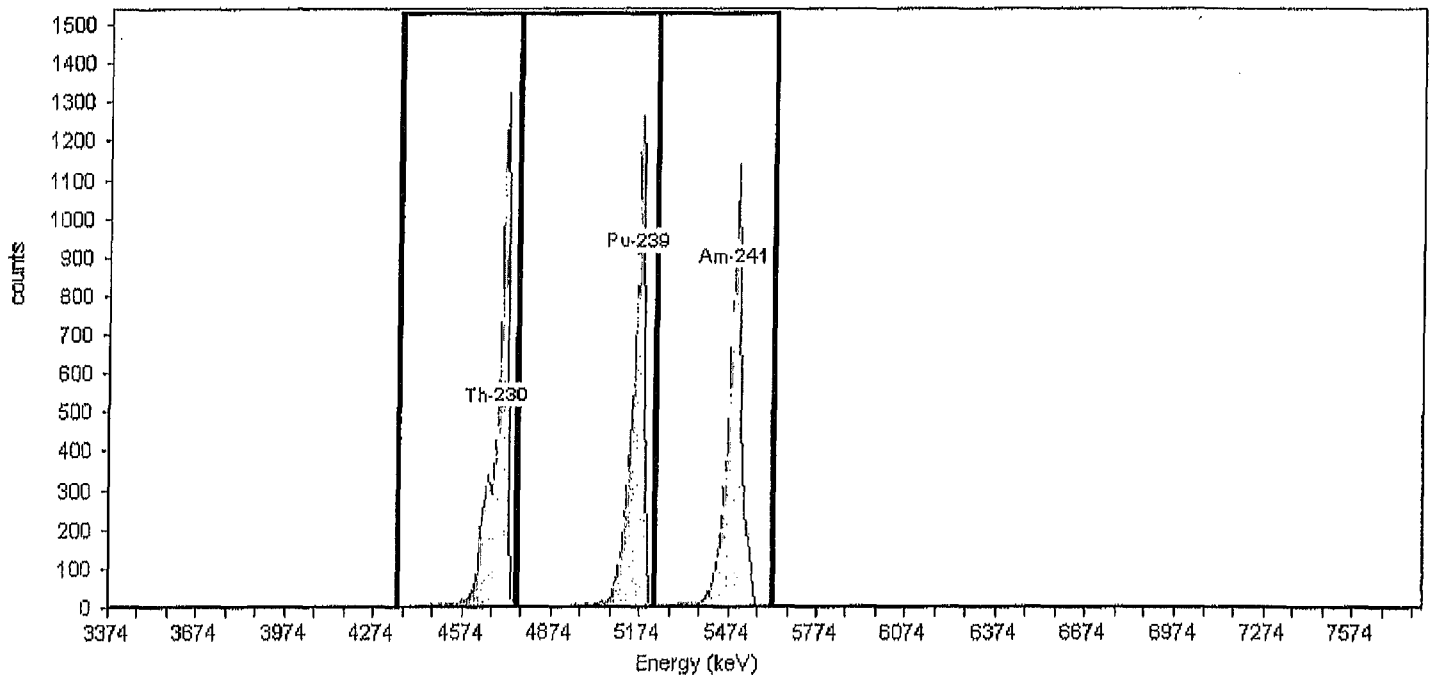
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV58, SN: 48-158EE4
Acquisition Start Date: 2/24/2012 3:27:02PM
Live Time: 60.00 min.
Real Time: 60.00 min.
Efficiency: 28.53% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,817.00	130.28
Pu-239	240	5.16	186	249	7,312.00	121.87
Am-241	284	5.49	249	303	7,502.00	125.03

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:36:41AM 2/27/2012

Calibration

Name: February2012_AV59
Description:
Detector: AV59

Calibration Date: 2/24/2012 9:02:17AM
Analyst: 60040

Source Info

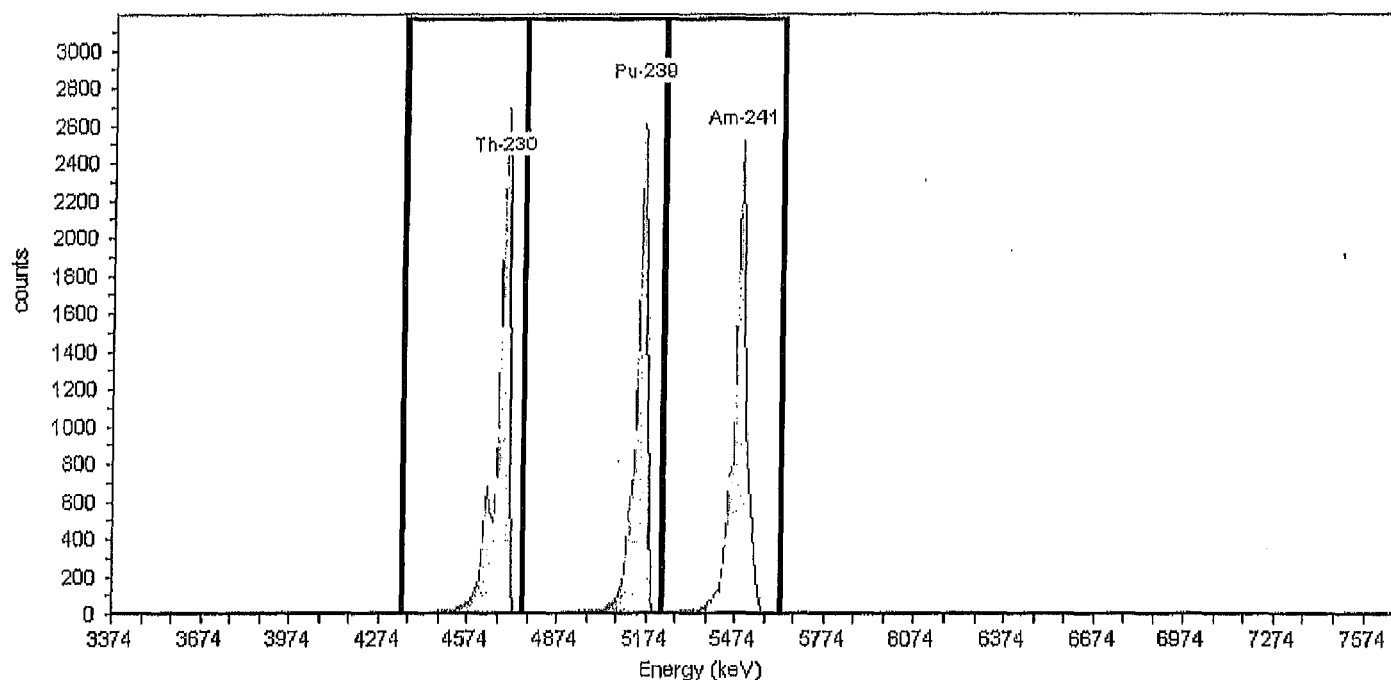
Certificate ID: 82242-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV59, SN: 49-155M7
Acquisition Start Date: 2/23/2012 11:04:15PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 27.94% +/- 0.34% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV /
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,685.00	112.04
Pu-239	240	5.16	186	249	14,815.00	105.82
Am-241	284	5.49	249	303	16,745.00	119.61

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:36:46AM 2/27/2012

Calibration

Name: Feb2012_AV59_ICV
Description:
Detector: AV59

Calibration Date: 2/24/2012 12:26:03PM
Analyst: 60040

Source Info

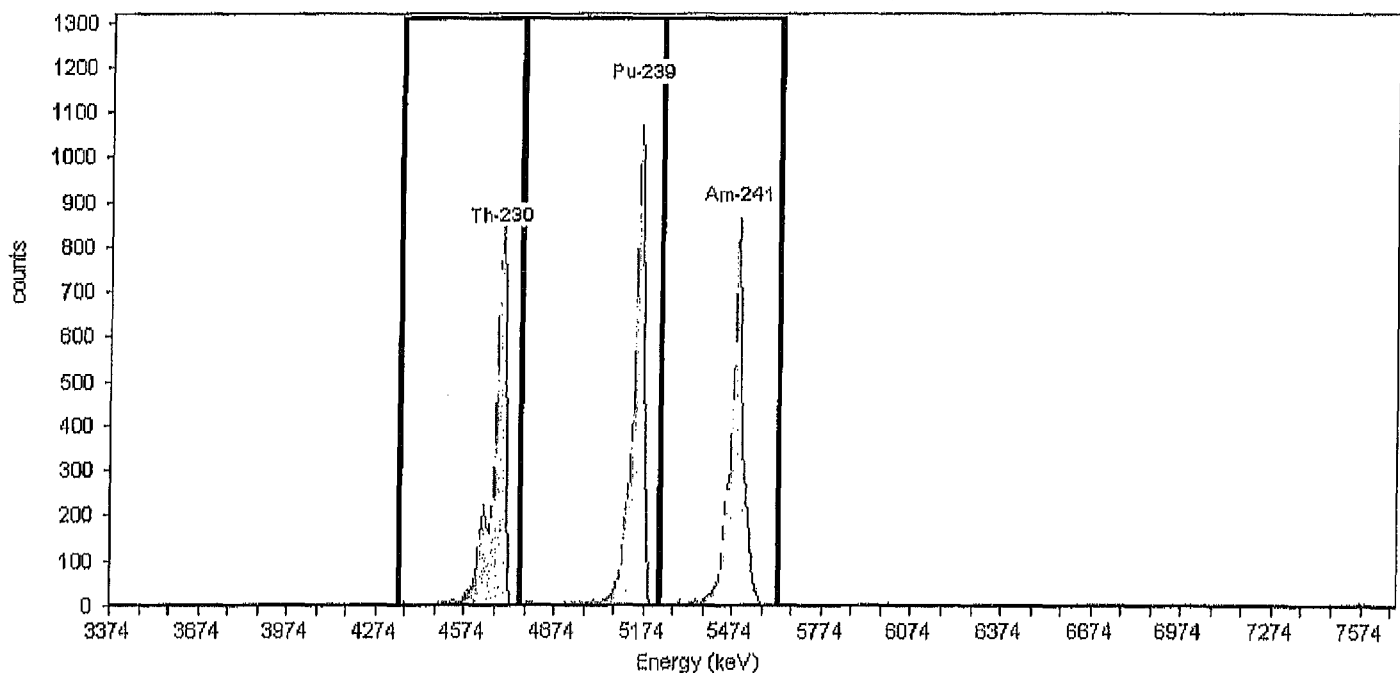
Certificate ID: 63508A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV59, SN: 49-155M7
Acquisition Start Date: 2/24/2012 11:23:02AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.97% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,182.00	86.37
Pu-239	240	5.16	186	249	6,201.00	103.35
Am-241	284	5.49	249	303	5,669.00	94.48

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibration
Alpha Vision
May 2012
AV48 and AV56**

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV1</i> Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass
<i>AV2</i> Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass
<i>AV3</i> June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass
<i>AV4</i> June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass
<i>AV6</i> June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass
<i>AV7</i> June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass
<i>AV8</i> June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass
<i>AV9</i> Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass
<i>AV10</i> Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass
<i>AV11</i> Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass
<i>AV12</i> Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass
<i>AV13</i> June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass
<i>AV14</i> Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass
<i>AV15</i> June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass
<i>AV16</i> Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
<i>AV17</i> June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV18</i> Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
<i>AV19</i> Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i> June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i> June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i> Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i> June2011_AV23	6/2/2011 6:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i> Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i> June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i> June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i> June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i> February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
<i>AV47</i> June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i> May2012_AV48	5/3/2012 9:38:16 AM	82237-334	0.2725	Pass
May2012_AV48_ICV	5/3/2012 9:38:44 AM	82238-334	0.2704	Pass 99.2470 Pass
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass
<i>AV56</i> May2012_AV56	5/3/2012 9:37:34 AM	82238-334	0.2680	Pass
May2012_AV56_ICV	5/3/2012 9:37:51 AM	82246-334	0.2612	Pass 97.4594 Pass
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass
<i>AV63</i> Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass
<i>AV64</i> May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass
<i>AV65</i> Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass
<i>AV66</i> Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass
<i>AV67</i> May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i> May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
<i>AV69</i> June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass
<i>AV70</i> June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass
<i>AV71</i> May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass
<i>AV72</i> May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass
<i>AV73</i> Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass
<i>AV74</i> Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass
<i>AV75</i> May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass
<i>AV77</i> May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass
<i>AV78</i> May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass
<i>AV79</i> June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV91</i> March2012_AV91a	3/30/2012 9:27:41 AM	82235-334	0.2781	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV120</i> June2011_AV120	6/10/2011 2:56:12 PM	63507-334	0.2673	Pass
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Thursday, May 03, 2012

Page 8 of 8

Sample Name: May2012_AV48

Description:

Detector: AV48

Calibration

Calibration Date: 5/3/2012 9:38:16AM

Analyst: 60040

Source Info

Certificate ID: 82237-334

Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM

Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4

Acquisition Start Date: 5/2/2012 11:00:36PM

Live Time: 140.00 min.

Real Time: 140.43 min.

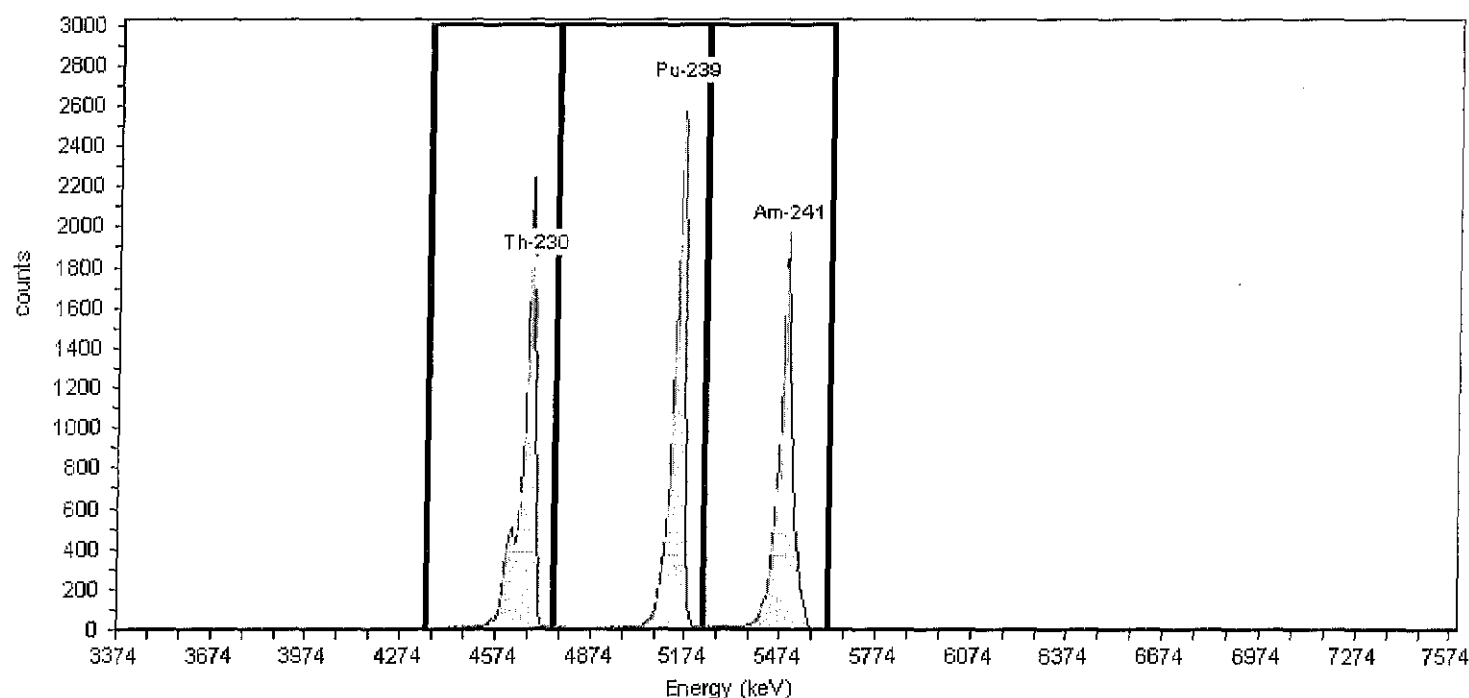
Efficiency: 27.25% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:

Gain = 7.4575 keV / Ch

Offset = 3,366.95 keV

Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)

Algorithm: Linear

Initial Calibration: No

Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,222.00	94.44
Pu-239	240	5.16	186	249	14,804.00	105.74
Am-241	284	5.49	249	303	12,886.00	92.04

Sample Name: May2012_AV48_ICV
Description:
Detector: AV48

Calibration

Calibration Date: 5/3/2012 9:38:44AM
Analyst: 60040

Certificate ID: 82238-334
Prepared by: Analytics

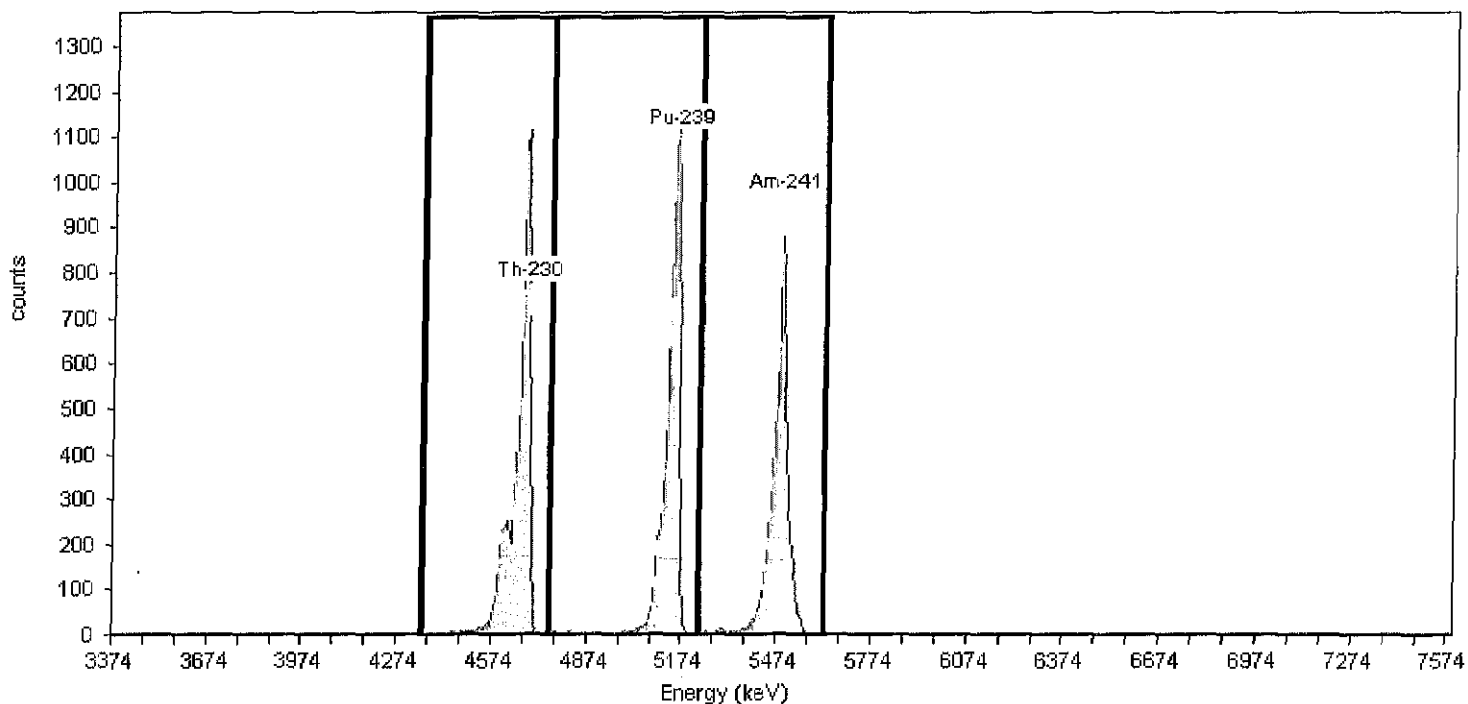
Source Info

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV48 , SN: 50-051JJ4
Acquisition Start Date: 5/3/2012 1:33:40AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.04% +/- 0.46% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,729.00	112.15
Pu-239	240	5.16	186	249	6,716.00	111.93
Am-241	284	5.49	249	303	5,825.00	97.08

Sample Name: May2012_AV56
Description:
Detector: AV56

Calibration

Calibration Date: 5/3/2012 9:37:34AM
Analyst: 60040

Certificate ID: 82238-334
Prepared by: Analytics

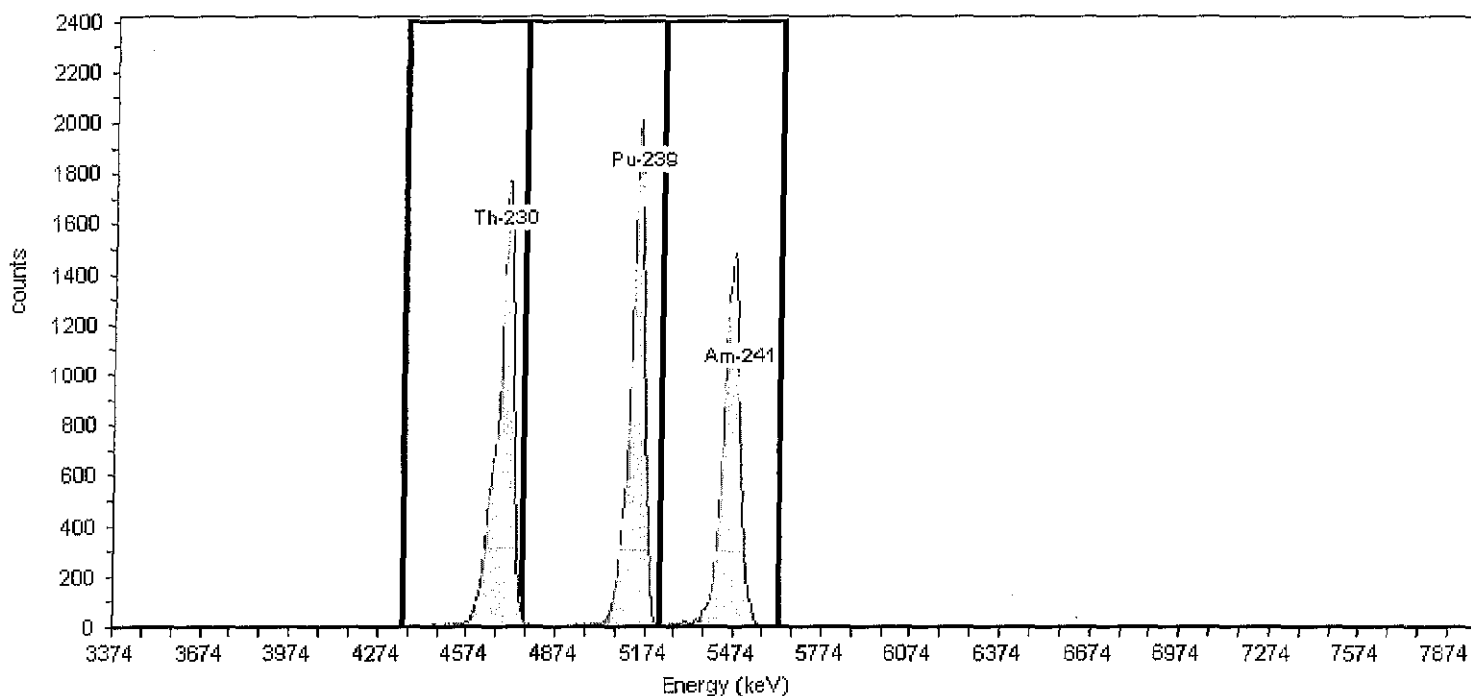
Source Info

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV56, SN:
Acquisition Start Date: 5/2/2012 11:00:52PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 26.80% +/- 0.35% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,862.00	113.30
Pu-239	240	5.16	186	249	15,428.00	110.20
Am-241	284	5.49	249	303	13,237.00	94.55

Calibration

Sample Name: May2012_AV56_ICV
Description:
Detector: AV56

Calibration Date: 5/3/2012 9:37:51AM
Analyst: 60040

Source Info

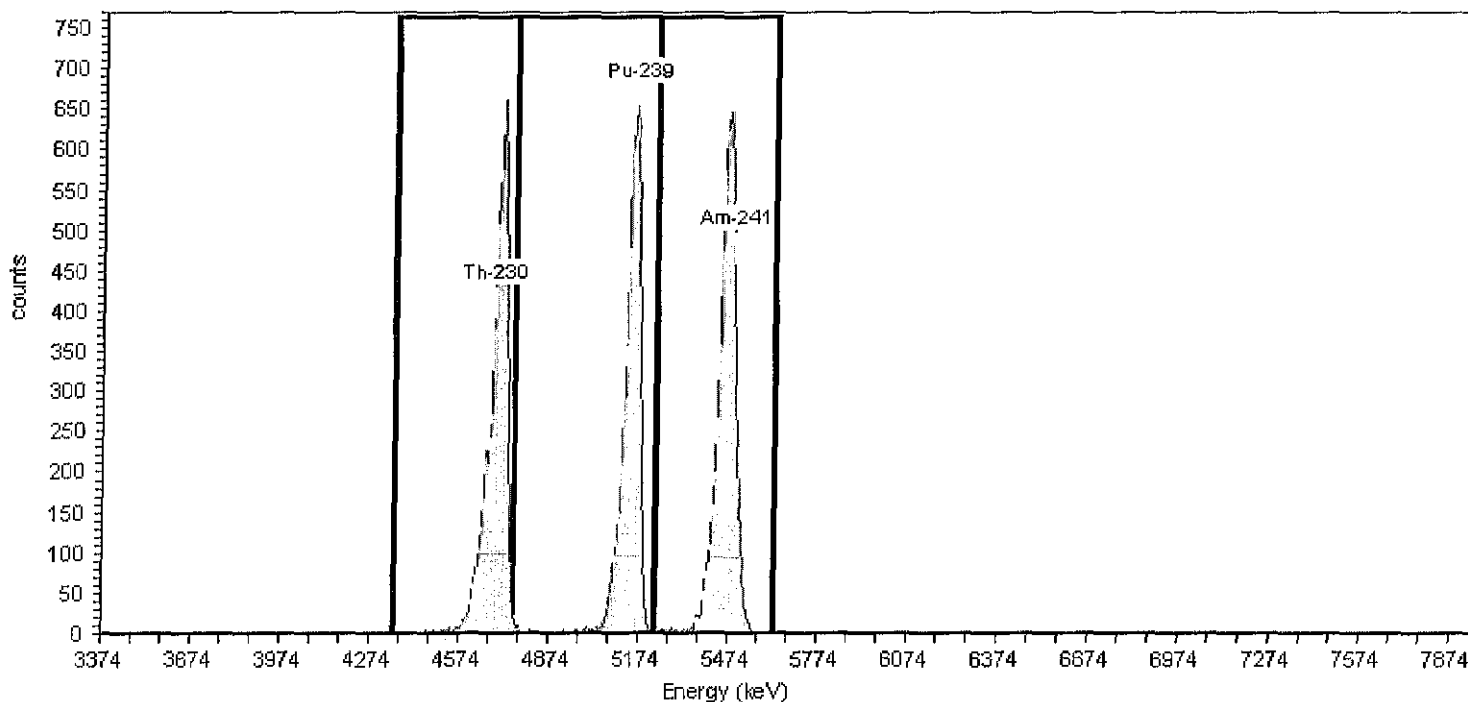
Certificate ID: 82246-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV56 , SN:
Acquisition Start Date: 5/3/2012 1:34:00AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.12% +/- 0.49% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,206.00	86.77
Pu-239	240	5.16	186	249	5,037.00	83.95
Am-241	284	5.49	249	303	5,660.00	94.33

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibrations
Alpha Vision
February 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)		
AV1 Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass		
AV2 Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass		
AV3 June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
AV4 June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
AV6 June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
AV7 June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
AV8 June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
AV9 Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass		
Feb2012_AV9a_ICV	2/22/2012 8:32:32 PM	82236-334	0.2761	Pass	99.4615	Pass
AV10 Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass		
Feb2012_AV10a_ICV	2/23/2012 11:15:43 AM	82237-334	0.2717	Pass	100.292	Pass
AV11 Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass		
AV12 Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass		
Feb2012_AV12a_ICV	2/22/2012 8:32:35 PM	82238-334	0.2707	Pass	100.940	Pass
AV13 June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
AV14 Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass		
AV15 June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV16</i>				
Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
Feb2012_AV16a_ICV	2/22/2012 8:32:38 PM	82243-334	0.2707	Pass 97.7705 Pass
<i>AV17</i>				
June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass
<i>AV18</i>				
Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
Feb2012_AV18a_ICV	2/22/2012 8:32:42 PM	82247-334	0.2566	Pass 95.0864 Pass
<i>AV19</i>				
Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i>				
June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i>				
June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i>				
June2011_AV23	6/2/2011 8:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i>				
Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i>				
June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i>				
June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i>				
June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i>				
February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
Feb2012_AV46_ICV	2/24/2012 12:25:10 PM	82236-334	0.2768	Pass 101.742 Pass
<i>AV47</i>				
June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i>				
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass		
Feb2012_AV50_ICV	2/24/2012 12:25:26 PM	82240-334	0.2783	Pass	98.6252	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass		
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
<i>AV56</i> Dec2011_AV56	12/15/2011 9:36:08 AM	82238-334	0.2691	Pass		
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass		
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass		
Feb2012_AV58_ICV	2/24/2012 12:25:49 PM	63507-334	0.2851	Pass	93.6999	Fail
Feb2012_AV58a_ICV	2/24/2012 3:16:31 PM	82232-334	0.2863	Pass	101.213	Pass
Feb2012_AV58b_ICV	2/24/2012 4:28:08 PM	82232-334	0.2853	Pass	100.844	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass		
Feb2012_AV59_ICV	2/24/2012 12:26:03 PM	63508A-334	0.2697	Pass	96.5361	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV63</i>				
Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass
Feb2012_AV63_ICV	2/23/2012 5:15:45 PM	82234-334	0.2798	Pass 104.191 Pass
<i>AV64</i>				
May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass
<i>AV65</i>				
Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass
Feb2012_AV65_ICV	2/23/2012 5:15:50 PM	82236-334	0.2714	Pass 95.5197 Pass
<i>AV66</i>				
Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass
<i>AV67</i>				
May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
<i>AV69</i>				
June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass
<i>AV70</i>				
June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass
<i>AV71</i>				
May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass
<i>AV72</i>				
May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass
<i>AV73</i>				
Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass
<i>AV74</i>				
Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass
<i>AV75</i>				
May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass
<i>AV77</i>				
May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass
<i>AV78</i>				
May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass
<i>AV79</i>				
June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
<i>AV120</i> June2011_AV120	6/10/2011 2:58:12 PM	63507-334	0.2673	Pass		
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass		
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass		
Feb2012_AV131_ICV	2/24/2012 12:26:24 PM	82245-334	0.2767	Pass	101.234	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
Feb2012_AV133_ICV	2/24/2012 3:16:36 PM	82247-334	0.2639	Pass 99.4605 Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 8 of 8

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV147</i>	6/14/2011 9:47:31 AM	82236-334	0.2858	Pass		
	6/14/2011 9:48:52 AM	82247-334	0.2876	Pass	100.65	Pass
<i>AV148</i>	6/21/2011 2:32:02 PM	82237-334	0.2655	Pass		
	6/21/2011 2:32:43 PM	82236-334	0.2752	Pass	103.63	Pass
<i>AV149</i>	6/21/2011 2:34:00 PM	82238-334	0.2822	Pass		
	6/21/2011 2:34:33 PM	82237-334	0.2743	Pass	97.212	Pass
<i>AV151</i>	6/21/2011 2:36:24 PM	82240-334	0.2779	Pass		
	6/21/2011 2:36:47 PM	82239-334	0.2757	Pass	99.212	Pass
<i>AV152</i>	6/21/2011 2:37:11 PM	82241-334	0.2700	Pass		
	6/21/2011 2:37:32 PM	82240-334	0.2698	Pass	99.948	Pass
<i>AV153</i>	6/30/2011 9:05:44 AM	63508A-334	0.2610	Pass		
	6/30/2011 10:17:32 AM	63507-334	0.2585	Pass	99.026	Pass
<i>AV154</i>	6/21/2011 2:39:31 PM	82243-334	0.2680	Pass		
	6/21/2011 2:40:03 PM	82242-334	0.2722	Pass	101.56	Pass
<i>AV155</i>	6/27/2011 9:21:16 PM	82244-334	0.2651	Pass		
	6/27/2011 9:22:09 PM	82243-334	0.2628	Pass	99.134	Pass
<i>AV156</i>	6/27/2011 9:22:55 PM	82245-334	0.2721	Pass		
	6/27/2011 9:23:40 PM	82244-334	0.2640	Pass	97.019	Pass
<i>AV157</i>	6/27/2011 9:24:40 PM	82246-334	0.2630	Pass		
	6/27/2011 9:25:17 PM	82245-334	0.2703	Pass	102.74	Pass
<i>AV158</i>	6/30/2011 11:40:49 AM	82235-334	0.2758	Pass		
	6/30/2011 12:51:15 PM	82234-334	0.2756	Pass	99.948	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI59</i>	6/30/2011 9:06:12 AM	82236-334	0.2701	Pass		
	6/30/2011 9:06:45 AM	82235-334	0.2750	Pass	101.83	Pass
<i>AVI60</i>	6/30/2011 9:07:03 AM	82237-334	0.2630	Pass		
	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	100.98	Pass
<i>AVI61</i>	6/27/2011 9:29:26 PM	63508A-334	0.2652	Pass		
	6/27/2011 9:29:59 PM	63507-334	0.2604	Pass	98.212	Pass
<i>AVI62</i>	6/23/2011 11:26:56 AM	63509A-334	0.2637	Pass		
	6/23/2011 1:44:04 PM	63508A-334	0.2643	Pass	100.20	Pass
<i>AVI63</i>	6/15/2011 1:14:12 AM	82232-334	0.2782	Pass		
	6/27/2011 9:30:57 PM	63509A-334	0.2748	Pass	98.774	Pass
<i>AVI64</i>	6/30/2011 9:07:48 AM	82241-334	0.2661	Pass		
	6/30/2011 9:08:11 AM	82240-334	0.2702	Pass	101.52	Pass
<i>AVI65</i>	6/15/2011 1:14:21 AM	82234-334	0.2869	Pass		
	6/27/2011 9:32:32 PM	82233-334	0.2796	Pass	97.467	Pass
<i>AVI66</i>	6/15/2011 1:14:26 AM	82235-334	0.2773	Pass		
	6/27/2011 9:33:19 PM	82234-334	0.2771	Pass	99.922	Pass
<i>AVI67</i>	6/15/2011 1:14:30 AM	82236-334	0.2723	Pass		
	6/27/2011 9:34:00 PM	82235-334	0.2755	Pass	101.17	Pass
<i>AVI68</i>	6/15/2011 1:14:34 AM	82237-334	0.2627	Pass		
	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	102.85	Pass
<i>AVI69</i>	6/15/2011 1:14:37 AM	82238-334	0.2711	Pass		
	6/27/2011 9:35:26 PM	82237-334	0.2674	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV170</i>	6/15/2011 1:14:41 AM	82239-334	0.2783	Pass		
	6/27/2011 9:36:10 PM	82238-334	0.2688	Pass	96.606	Pass
<i>AV171</i>	6/15/2011 1:14:45 AM	82240-334	0.2709	Pass		
	6/27/2011 9:37:06 PM	82239-334	0.2813	Pass	103.84	Pass
<i>AV172</i>	6/15/2011 1:14:49 AM	82241-334	0.2699	Pass		
	6/27/2011 9:37:46 PM	82240-334	0.2705	Pass	100.22	Pass
<i>AV173</i>	6/15/2011 1:14:52 AM	82242-334	0.2830	Pass		
	6/27/2011 9:38:28 PM	82241-334	0.2716	Pass	95.991	Pass
<i>AV174</i>	6/15/2011 1:14:56 AM	82243-334	0.2679	Pass		
	6/27/2011 9:39:06 PM	82242-334	0.2743	Pass	102.42	Pass
<i>AV175</i>	6/15/2011 1:15:00 AM	82244-334	0.2675	Pass		
	6/27/2011 9:39:52 PM	82243-334	0.2720	Pass	101.67	Pass
<i>AV176</i>	6/15/2011 2:15:31 AM	82245-334	0.2726	Pass		
	6/27/2011 9:40:38 PM	82244-334	0.2661	Pass	97.631	Pass
<i>AV177</i>	6/15/2011 1:15:04 AM	82246-334	0.2651	Pass		
	6/15/2011 4:19:56 AM	82245-334	0.2751	Pass	103.75	Pass
<i>AV178</i>	6/15/2011 1:15:07 AM	82247-334	0.2746	Pass		
	6/27/2011 9:41:21 PM	82246-334	0.2711	Pass	98.745	Pass
<i>AV179</i>	6/30/2011 9:08:46 AM	82237-334	0.2742	Pass		
	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	104.51	Pass
<i>AV180</i>	6/15/2011 1:15:15 AM	63507-334	0.2625	Pass		
	6/27/2011 9:43:59 PM	63506-334	0.2532	Pass	96.455	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV181</i>	6/15/2011 1:15:18 AM	63508A-334	0.2611	Pass		
	6/27/2011 9:44:46 PM	63507-334	0.2587	Pass	99.069	Pass
<i>AV182</i>	6/27/2011 9:45:31 PM	63509A-334	0.2629	Pass		
	6/27/2011 9:46:14 PM	63508A-334	0.2625	Pass	99.822	Pass
<i>AV183</i>	6/20/2011 10:52:50 PM	82232-334	0.2795	Pass		
	6/27/2011 9:46:57 PM	63509A-334	0.2671	Pass	95.537	Pass
<i>AV184</i>	6/20/2011 10:52:55 PM	82233-334	0.2772	Pass		
	6/27/2011 9:47:46 PM	82232-334	0.2799	Pass	100.95	Pass
<i>AV185</i>	6/20/2011 10:52:58 PM	82234-334	0.2823	Pass		
	6/27/2011 9:48:33 PM	82233-334	0.2741	Pass	97.113	Pass
<i>AV186</i>	6/20/2011 10:53:06 PM	82235-334	0.2741	Pass		
	6/27/2011 9:49:22 PM	82234-334	0.2744	Pass	100.12	Pass
<i>AV187</i>	6/20/2011 10:53:09 PM	82236-334	0.2672	Pass		
	6/27/2011 9:50:09 PM	82235-334	0.2741	Pass	102.59	Pass
<i>AV188</i>	6/20/2011 10:53:13 PM	82237-334	0.2820	Pass		
	6/27/2011 9:50:56 PM	82236-334	0.2799	Pass	99.240	Pass
<i>AV189</i>	6/20/2011 10:53:16 PM	82238-334	0.2769	Pass		
	6/27/2011 9:51:48 PM	82237-334	0.2684	Pass	96.927	Pass
<i>AV190</i>	6/21/2011 1:27:18 AM	82239-334	0.2710	Pass		
	6/27/2011 9:52:36 PM	82238-334	0.2739	Pass	101.05	Pass
<i>AV191</i>	6/20/2011 10:53:19 PM	82240-334	0.2794	Pass		
	6/21/2011 4:20:11 AM	82239-334	0.2769	Pass	99.115	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV192</i>	6/20/2011 10:53:23 PM	82241-334	0.2797	Pass		
	6/27/2011 9:53:23 PM	82240-334	0.2797	Pass	100.02	Pass
<i>AV193</i>	6/20/2011 10:53:26 PM	82242-334	0.2736	Pass		
	6/27/2011 9:54:02 PM	82241-334	0.2750	Pass	100.50	Pass
<i>AV194</i>	6/20/2011 10:53:29 PM	82243-334	0.2734	Pass		
	6/27/2011 9:54:56 PM	82242-334	0.2776	Pass	101.56	Pass
<i>AV195</i>	6/20/2011 10:53:33 PM	82244-334	0.2644	Pass		
	6/27/2011 9:55:43 PM	82243-334	0.2668	Pass	100.90	Pass
<i>AV196</i>	6/20/2011 10:53:37 PM	82245-334	0.2839	Pass		
	6/27/2011 9:56:30 PM	82244-334	0.2753	Pass	96.985	Pass
<i>AV197</i>	6/24/2011 2:40:07 AM	82246-334	0.2672	Pass		
	6/27/2011 9:57:47 PM	82245-334	0.2763	Pass	103.37	Pass
<i>AV198</i>	6/24/2011 2:22:48 PM	82247-334	0.2725	Pass		
	6/24/2011 3:24:45 PM	82246-334	0.2672	Pass	98.027	Pass
<i>AV199</i>	6/30/2011 9:09:28 AM	82238-334	0.2684	Pass		
	6/30/2011 10:17:40 AM	82237-334	0.2638	Pass	98.291	Pass
<i>AV200</i>	6/20/2011 10:53:47 PM	63507-334	0.2618	Pass		
	6/27/2011 10:00:20 PM	63506-334	0.2543	Pass	97.155	Pass
<i>AV201</i>	6/20/2011 10:53:53 PM	63508A-334	0.2654	Pass		
	6/27/2011 10:01:08 PM	63507-334	0.2735	Pass	103.06	Pass
<i>AV202</i>	6/27/2011 10:01:51 PM	63509A-334	0.2648	Pass		
	6/27/2011 10:02:25 PM	63508A-334	0.2613	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV203</i>	6/21/2011 3:19:59 PM	82232-334	0.2768	Pass		
	6/21/2011 3:21:44 PM	63509A-334	0.2646	Pass	95.582	Pass
<i>AV204</i>	6/27/2011 10:03:31 PM	82233-334	0.2705	Pass		
	6/27/2011 10:04:08 PM	82232-334	0.2736	Pass	101.16	Pass
<i>AV205</i>	6/21/2011 3:29:26 PM	82234-334	0.2783	Pass		
	6/27/2011 10:04:59 PM	82233-334	0.2722	Pass	97.818	Pass
<i>AV206</i>	6/27/2011 10:05:51 PM	82235-334	0.2796	Pass		
	6/27/2011 10:06:38 PM	82234-334	0.2837	Pass	101.48	Pass
<i>AV207</i>	6/27/2011 10:07:21 PM	82236-334	0.2735	Pass		
	6/27/2011 10:08:05 PM	82235-334	0.2759	Pass	100.87	Pass
<i>AV208</i>	6/27/2011 10:08:56 PM	82237-334	0.2765	Pass		
	6/27/2011 10:09:30 PM	82236-334	0.2800	Pass	101.26	Pass
<i>AV209</i>	6/27/2011 10:10:06 PM	82238-334	0.2812	Pass		
	6/27/2011 10:10:39 PM	82237-334	0.2680	Pass	95.309	Pass
<i>AV210</i>	6/21/2011 9:13:09 AM	82239-334	0.2718	Pass		
	6/27/2011 10:11:34 PM	82238-334	0.2722	Pass	100.16	Pass
<i>AV211</i>	6/27/2011 10:12:37 PM	82240-334	0.2684	Pass		
	6/21/2011 10:55:13 AM	82239-334	0.2688	Pass	100.13	Pass
<i>AV212</i>	6/27/2011 10:13:23 PM	82241-334	0.2851	Pass		
	6/27/2011 10:13:58 PM	82240-334	0.2891	Pass	101.41	Pass
<i>AV213</i>	6/23/2011 11:27:18 AM	82242-334	0.2707	Pass		
	6/23/2011 1:44:14 PM	82241-334	0.2712	Pass	100.17	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV214</i>	6/27/2011 10:15:18 PM	82243-334	0.2701	Pass		
	6/27/2011 10:15:54 PM	82242-334	0.2728	Pass	100.98	Pass
<i>AV215</i>	6/27/2011 10:16:46 PM	82244-334	0.2907	Pass		
	6/27/2011 10:17:26 PM	82243-334	0.2768	Pass	95.222	Pass
<i>AV216</i>	6/27/2011 10:18:14 PM	82245-334	0.2815	Pass		
	6/27/2011 10:18:50 PM	82244-334	0.2736	Pass	97.176	Pass
<i>AV217</i>	7/1/2011 10:10:06 AM	82246-334	0.2656	Pass		
	7/1/2011 10:10:22 AM	82245-334	0.2746	Pass	103.39	Pass
<i>AV218</i>	6/24/2011 1:51:29 PM	82247-334	0.2743	Pass		
	6/24/2011 5:16:09 PM	82246-334	0.2696	Pass	98.287	Pass
<i>AV219</i>	6/30/2011 9:09:52 AM	82240-334	0.2749	Pass		
	6/30/2011 9:10:10 AM	82238-334	0.2711	Pass	98.608	Pass
<i>AV220</i>	6/27/2011 10:21:49 PM	63507-334	0.2632	Pass		
	6/27/2011 10:22:24 PM	63506-334	0.2579	Pass	97.981	Pass
<i>AV221</i>	6/27/2011 10:23:08 PM	63508A-334	0.2621	Pass		
	6/27/2011 10:23:43 PM	63507-334	0.2617	Pass	99.836	Pass
<i>AV222</i>	6/27/2011 10:24:23 PM	63509A-334	0.2675	Pass		
	6/27/2011 10:25:09 PM	63508A-334	0.2634	Pass	98.476	Pass
<i>AV223</i>	6/23/2011 11:28:00 AM	82232-334	0.2800	Pass		
	6/23/2011 1:44:18 PM	63509A-334	0.2682	Pass	95.794	Pass
<i>AV224</i>	6/23/2011 11:28:25 AM	82233-334	0.2755	Pass		
	6/23/2011 1:44:22 PM	82232-334	0.2798	Pass	101.55	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV225</i>	6/24/2011 2:40:10 AM	82234-334	0.2791	Pass		
	6/27/2011 10:26:27 PM	82233-334	0.2753	Pass	98.623	Pass
<i>AV226</i>	6/24/2011 2:40:15 AM	82235-334	0.2729	Pass		
	6/27/2011 10:27:06 PM	82234-334	0.2800	Pass	102.61	Pass
<i>AV227</i>	6/25/2011 10:39:33 AM	82236-334	0.2783	Pass		
	6/25/2011 1:18:30 PM	82235-334	0.2773	Pass	99.651	Pass
<i>AV228</i>	6/28/2011 9:07:26 AM	82237-334	0.2755	Pass		
	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	103.94	Pass
<i>AV229</i>	6/25/2011 10:39:43 AM	82238-334	0.2781	Pass		
	6/25/2011 1:18:41 PM	82237-334	0.2735	Pass	98.336	Pass
<i>AV230</i>	6/25/2011 10:39:47 AM	82239-334	0.2844	Pass		
	6/25/2011 1:19:16 PM	82238-334	0.2812	Pass	98.851	Pass
<i>AV231</i>	6/25/2011 10:50:22 AM	82240-334	0.2784	Pass		
	6/25/2011 1:19:42 PM	82239-334	0.2758	Pass	99.090	Pass
<i>AV232</i>	6/25/2011 10:58:31 AM	82241-334	0.2758	Pass		
	6/25/2011 1:19:51 PM	82240-334	0.2812	Pass	101.96	Pass
<i>AV233</i>	6/25/2011 10:58:37 AM	82242-334	0.2668	Pass		
	6/25/2011 1:20:13 PM	82241-334	0.2705	Pass	101.37	Pass
<i>AV234</i>	6/28/2011 9:08:33 AM	82243-334	0.2710	Pass		
	6/28/2011 9:08:49 AM	82242-334	0.2714	Pass	100.13	Pass
<i>AV235</i>	6/25/2011 11:19:40 AM	82244-334	0.2686	Pass		
	6/25/2011 1:21:34 PM	82243-334	0.2694	Pass	100.30	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV236</i>	6/25/2011 11:19:44 AM	82245-334	0.2759	Pass		
	6/25/2011 1:22:02 PM	82244-334	0.2647	Pass	95.960	Pass
<i>AV237</i>	6/25/2011 11:19:48 AM	82246-334	0.2679	Pass		
	6/25/2011 1:22:14 PM	82245-334	0.2783	Pass	103.89	Pass
<i>AV238</i>	6/25/2011 11:19:52 AM	82247-334	0.2740	Pass		
	6/25/2011 1:22:47 PM	82246-334	0.2642	Pass	96.404	Pass
<i>AV239</i>	6/29/2011 4:17:46 PM	82241-334	0.2816	Pass		
	6/29/2011 5:24:20 PM	82239-334	0.2770	Pass	98.355	Pass
<i>AV240</i>	6/28/2011 9:06:33 AM	63507-334	0.2675	Pass		
	6/25/2011 1:23:31 PM	63506-334	0.2636	Pass	98.508	Pass
<i>AV241</i>	6/25/2011 11:47:42 AM	63508A-334	0.2600	Pass		
	6/25/2011 1:23:51 PM	63507-334	0.2602	Pass	100.06	Pass
<i>AV242</i>	6/25/2011 11:47:57 AM	63509A-334	0.2680	Pass		
	6/25/2011 1:24:10 PM	63508A-334	0.2667	Pass	99.534	Pass
<i>AV243</i>	6/25/2011 9:28:07 AM	82232-334	0.2795	Pass		
	6/25/2011 1:24:52 PM	63509A-334	0.2676	Pass	95.760	Pass
<i>AV244</i>	6/25/2011 12:07:09 PM	82233-334	0.2858	Pass		
	6/25/2011 1:25:04 PM	82232-334	0.2904	Pass	101.61	Pass
<i>AV245</i>	6/25/2011 12:07:13 PM	82234-334	0.2856	Pass		
	6/25/2011 1:25:24 PM	82233-334	0.2793	Pass	97.792	Pass
<i>AV246</i>	6/25/2011 12:07:17 PM	82235-334	0.2981	Pass		
	6/25/2011 1:25:53 PM	82234-334	0.2968	Pass	99.576	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV247</i>	6/28/2011 9:04:33 AM	82236-334	0.2721	Pass		
	6/28/2011 9:04:52 AM	82235-334	0.2774	Pass	101.94	Pass
<i>AV248</i>	6/28/2011 9:09:30 AM	82237-334	0.2651	Pass		
	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	101.77	Pass
<i>AV249</i>	6/28/2011 9:10:11 AM	82238-334	0.2852	Pass		
	6/28/2011 9:10:27 AM	82237-334	0.2781	Pass	97.510	Pass
<i>AV250</i>	6/28/2011 9:10:53 AM	82239-334	0.2800	Pass		
	6/28/2011 9:11:12 AM	82238-334	0.2820	Pass	100.71	Pass

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Alpha Vision Yearly Calibrations Updated 2/22/12

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
Dec2011a_AV22_ICV	12/8/2011 2:38:54 PM	82236-334	0.2670	Pass 99.6280 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV48</i>						
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass		
June2011_AV48_ICV	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	98.9875	Pass
<i>AV88</i>						
May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass		
June2011_AV88_ICV	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	101.747	Pass
<i>AV103</i>						
June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass		
June2011_AV103a_ICVb	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	99.8524	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
June2011_AV68_ICV	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass 101.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV128</i>				
June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
June2011_AV128_ICV	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass 101.685 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov</i>	<i>(+/-5%)</i>
<i>AV160</i>					
June2011A_AV160	2/21/2012 3:02:57 PM	82237-334	0.2708	Pass	
June2011A_AV160_ICV	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	98.0720 Pass
<i>AV168</i>					
June2011_AV168	2/21/2012 3:03:27 PM	82237-334	0.2704	Pass	
June2011_AV168_ICV	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	99.9393 Pass
<i>AV179</i>					
June2011B_AV179	2/21/2012 3:03:50 PM	82237-334	0.2821	Pass	
June2011_AV179b_ICV	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	101.588 Pass
<i>AV228</i>					
June2011A_AV228	2/21/2012 3:04:50 PM	82237-334	0.2834	Pass	
June2011A_AV228_ICV	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	101.035 Pass
<i>AV248</i>					
June2011_AV248	2/21/2012 3:05:18 PM	82237-334	0.2726	Pass	
June2011_AV248_ICV	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	98.9835 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV205</i>				
Dec2011_AV205	2/21/2012 3:04:20 PM	82237-334	0.2688	Pass
Dec2011_AV205_ICV	12/16/2011 3:08:08 AM	82236-334	0.2684	Pass 99.8398 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Calibration

Name: May2011_AV60
Description:
Detector: AV60

Calibration Date: 6/2/2011 11:03:44AM
Analyst: 60040

Source Info

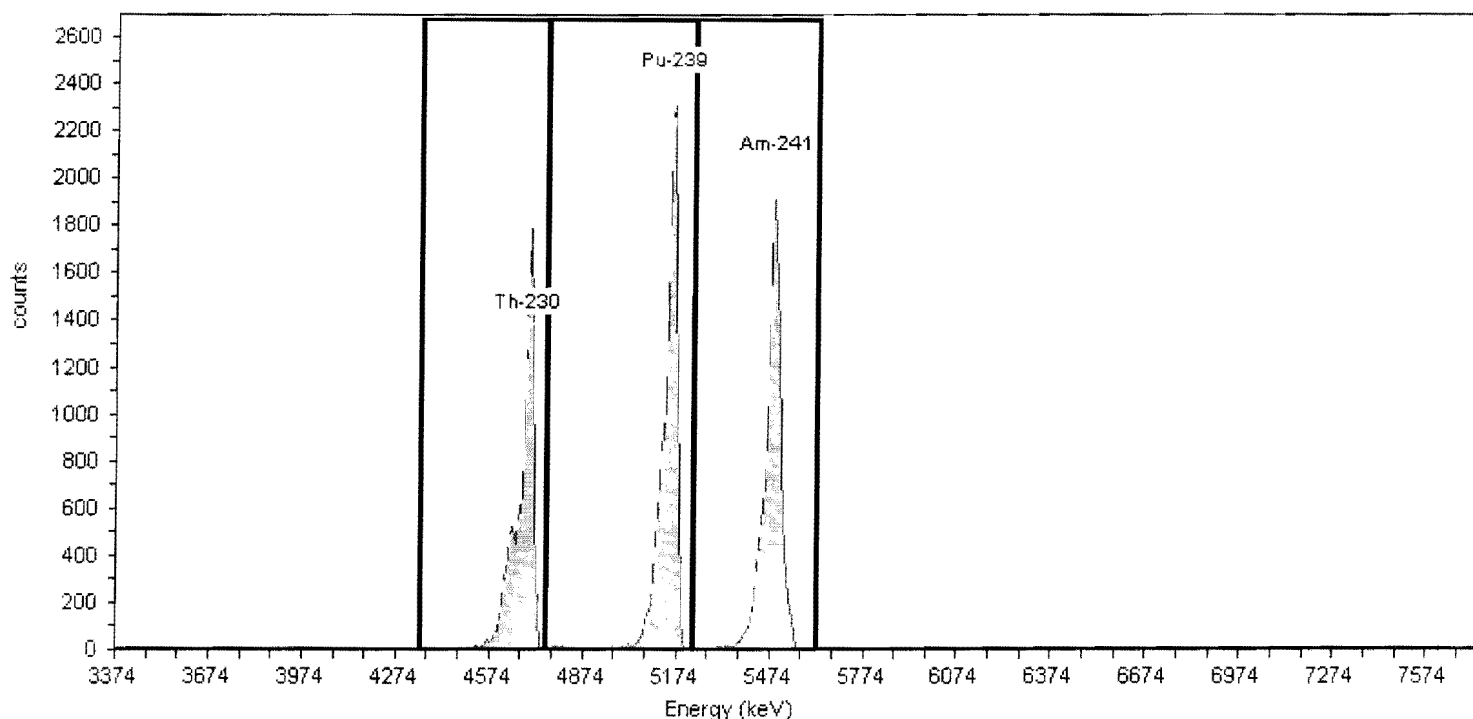
Certificate ID: 63507-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV60, SN:
Acquisition Start Date: 6/2/2011 8:26:19AM
Live Time: 140.00 min.
Real Time: 140.13 min.
Efficiency: 26.47% +/- 0.28% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,967.00	85.48
Pu-239	240	5.16	186	249	14,610.00	104.36
Am-241	284	5.49	249	303	13,828.00	98.77

Calibration

Name: June2011_AV60_ICV
Description:
Detector: AV60

Calibration Date: 6/2/2011 5:27:47PM
Analyst: 60040

Source Info

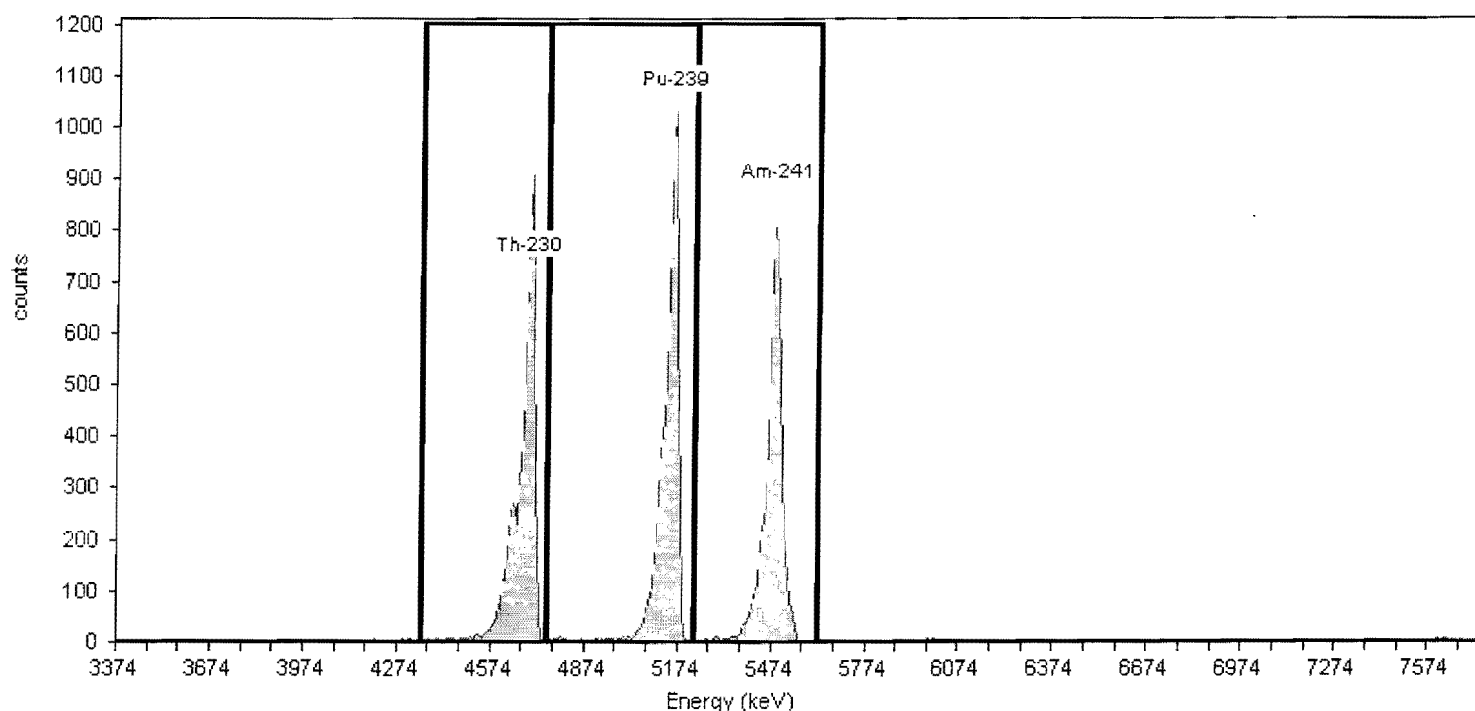
Certificate ID: 63506-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:07PM
Description:

Acquisition

Detector: AV60 , SN:
Acquisition Start Date: 6/2/2011 11:51:31AM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 25.70% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 0

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,378.00	106.30
Pu-239	240	5.16	186	249	6,733.00	112.22
Am-241	284	5.49	249	303	5,844.00	97.40

Calibration

Name: June2011_AV61
Description:
Detector: AV61

Calibration Date: 6/20/2011 2:14:49PM
Analyst: 60040

Source Info

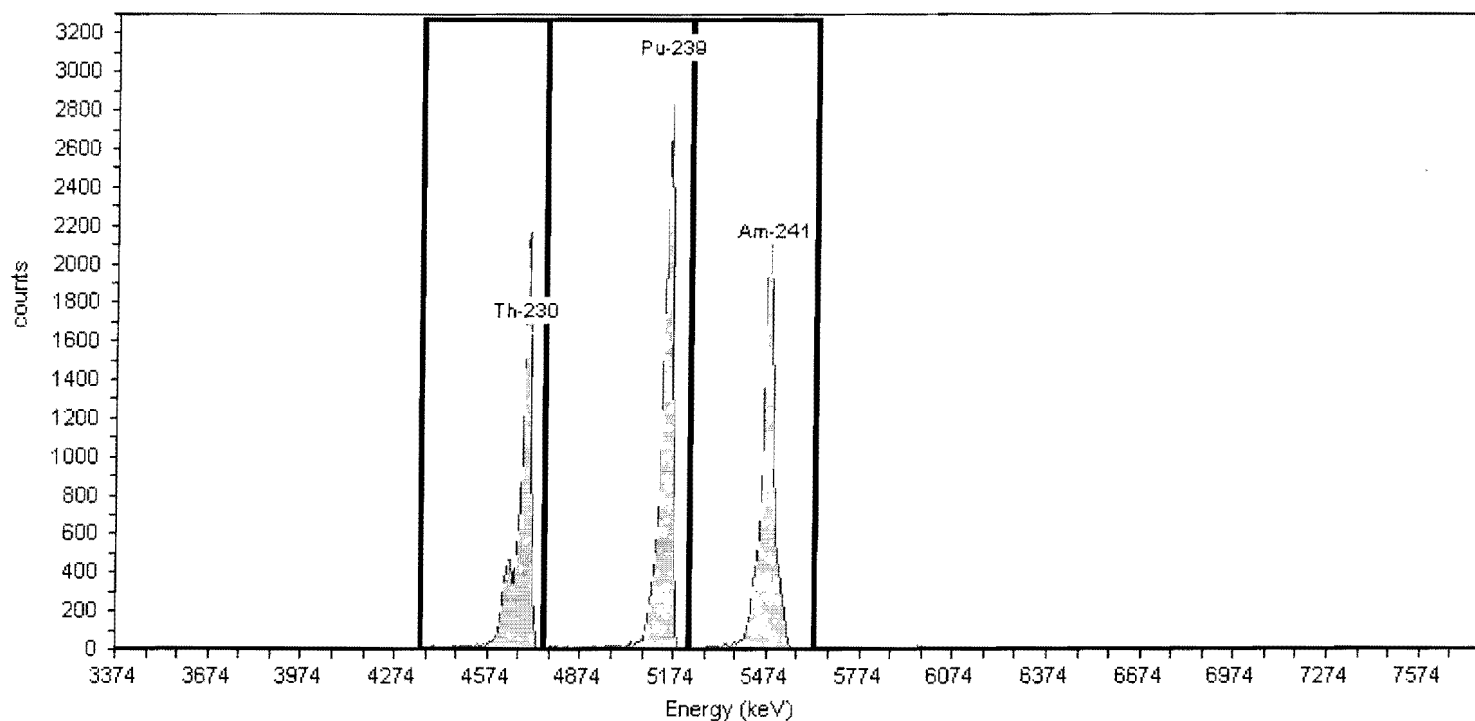
Certificate ID: 63508A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV61 , SN: 5-051JJ3
Acquisition Start Date: 6/20/2011 11:43:54AM
Live Time: 140.00 min.
Real Time: 140.03 min.
Efficiency: 26.63% +/- 0.29% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	12,151.00	86.79
Pu-239	240	5.16	186	249	14,250.00	101.79
Am-241	284	5.49	249	303	12,896.00	92.11

Calibration

Name: June2011_AV61_ICV
Description:
Detector: AV61

Calibration Date: 6/20/2011 3:32:40PM
Analyst: 60040

Source Info

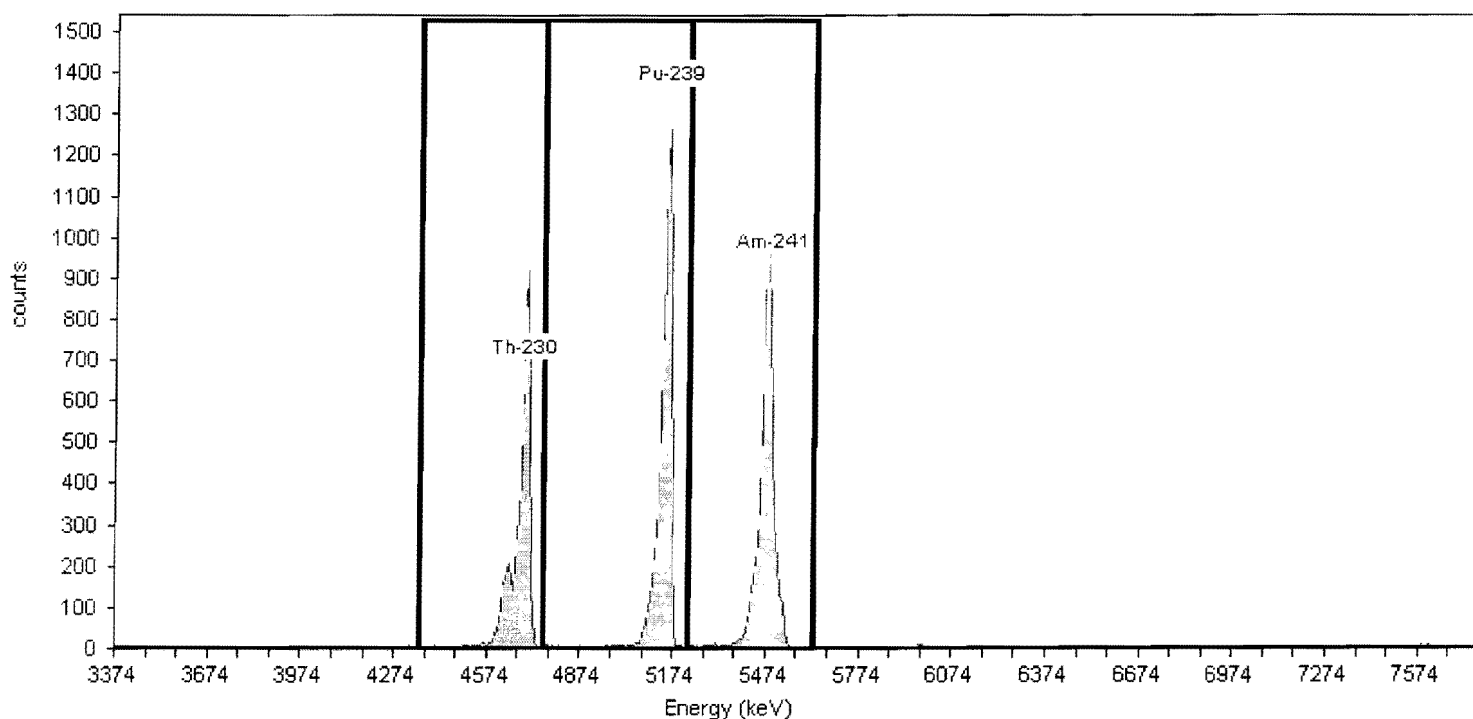
Certificate ID: 63507-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV61 , SN: 5-051JJ3
Acquisition Start Date: 6/20/2011 2:22:43PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.35% +/- 0.41% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,097.00	84.95
Pu-239	240	5.16	186	249	6,199.00	103.32
Am-241	284	5.49	249	303	5,945.00	99.08

Calibration

Name: May2011_AV62
Description:
Detector: AV62

Calibration Date: 6/2/2011 11:15:48AM
Analyst: 60040

Source Info

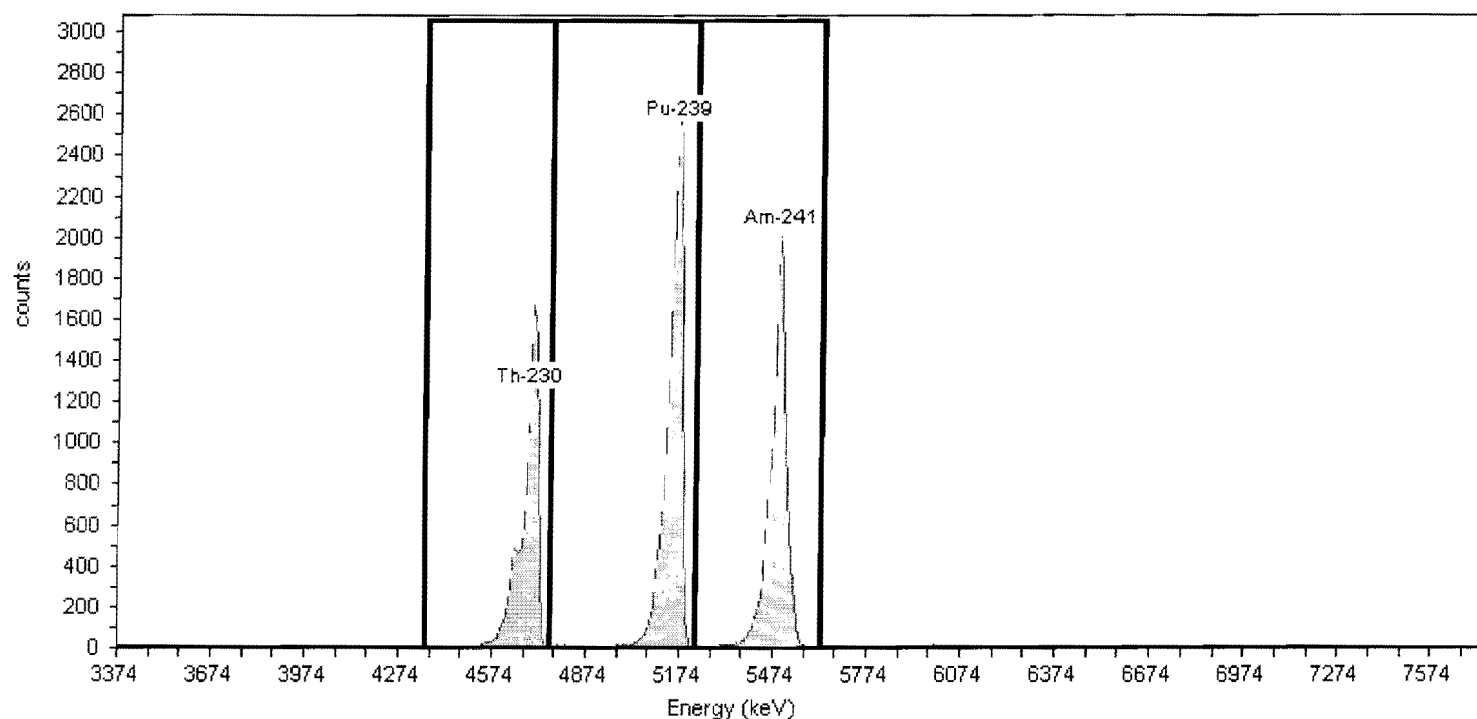
Certificate ID: 63509A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV62 , SN: 49-115DD4
Acquisition Start Date: 6/2/2011 8:27:27AM
Live Time: 140.00 min.
Real Time: 140.14 min.
Efficiency: 27.23% +/- 0.28% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,579.00	82.71
Pu-239	240	5.16	186	249	18,079.00	129.14
Am-241	284	5.49	249	303	15,040.00	107.43

Calibration

Name: June2011_AV62_ICV
Description:
Detector: AV62

Calibration Date: 6/2/2011 6:59:03PM
Analyst: 60040

Source Info

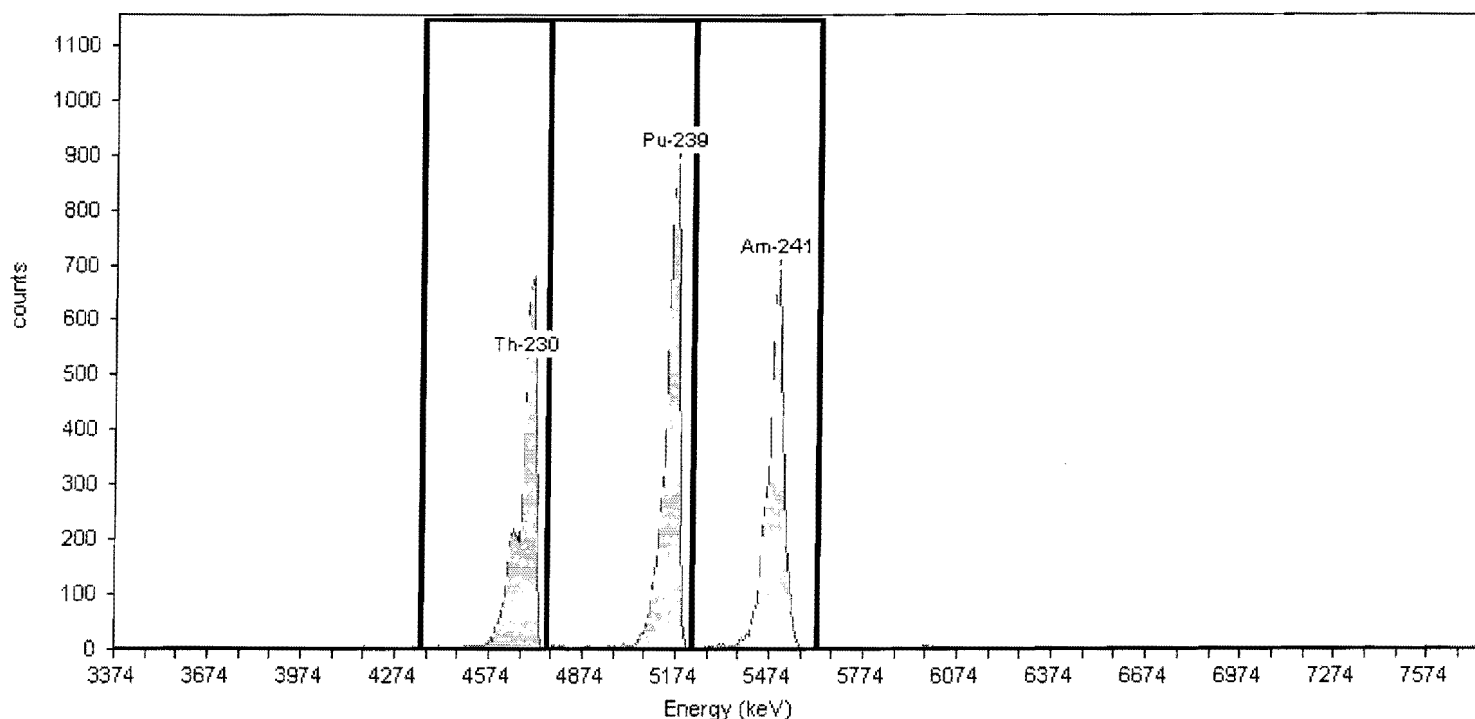
Certificate ID: 63508A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV62 , SN: 49-115DD4
Acquisition Start Date: 6/2/2011 5:52:08PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 26.97% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,146.00	85.77
Pu-239	240	5.16	186	249	6,310.00	105.17
Am-241	284	5.49	249	303	5,620.00	93.67

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Ridler Trail North
Earth City, MO 63045
10:37:00AM 2/27/2012

Calibration

Name: Feb2012_AV63
Description:
Detector: AV63

Calibration Date: 2/23/2012 4:05:57PM
Analyst: 60040

Source Info

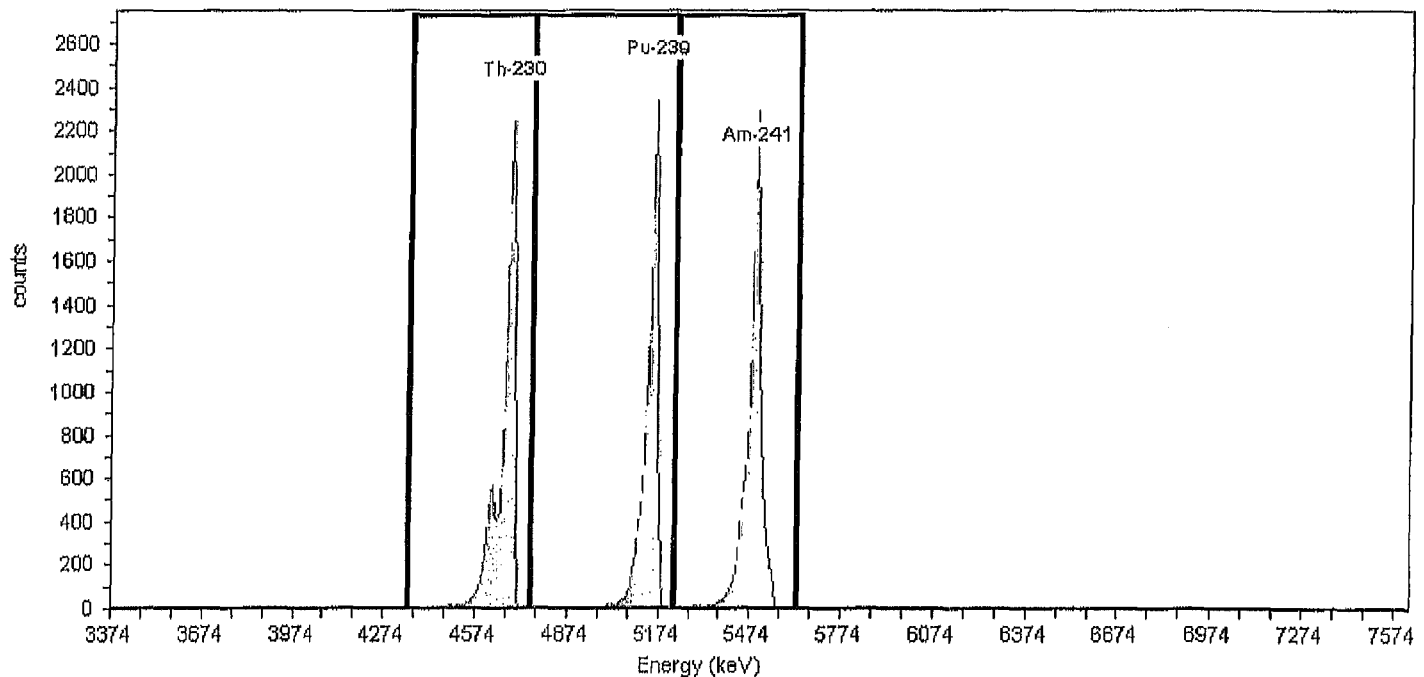
Certificate ID: 82246-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV63, SN: 47-029ff2
Acquisition Start Date: 2/23/2012 1:45:20PM
Live Time: 140.00 min.
Real Time: 140.04 min.
Efficiency: 26.86% +/- 0.39% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	12,605.00	90.04
Pu-239	240	5.16	186	249	11,972.00	85.51
Am-241	284	5.49	249	303	13,581.00	97.01

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:37:05AM 2/27/2012

Calibration

Name: Feb2012_AV63_ICV
Description:
Detector: AV63

Calibration Date: 2/23/2012 5:15:45PM
Analyst: 60040

Source Info

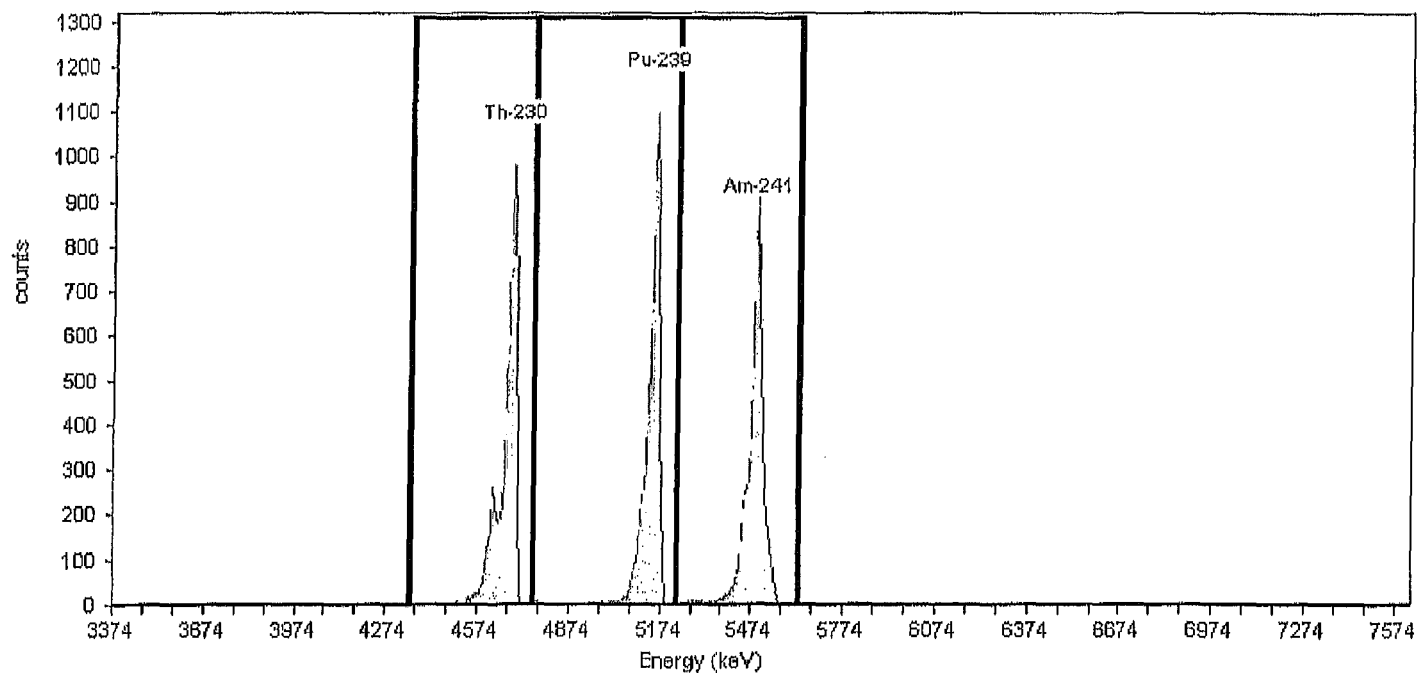
Certificate ID: 82234-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV63, SN: 47-029ff2
Acquisition Start Date: 2/23/2012 4:10:47PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.98% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,709.00	95.15
Pu-239	240	5.16	186	249	5,925.00	98.75
Am-241	284	5.49	249	303	5,761.00	96.02

Calibration

Name: May2011_AV64
Description:
Detector: AV64

Calibration Date: 6/2/2011 11:16:26AM
Analyst: 60040

Source Info

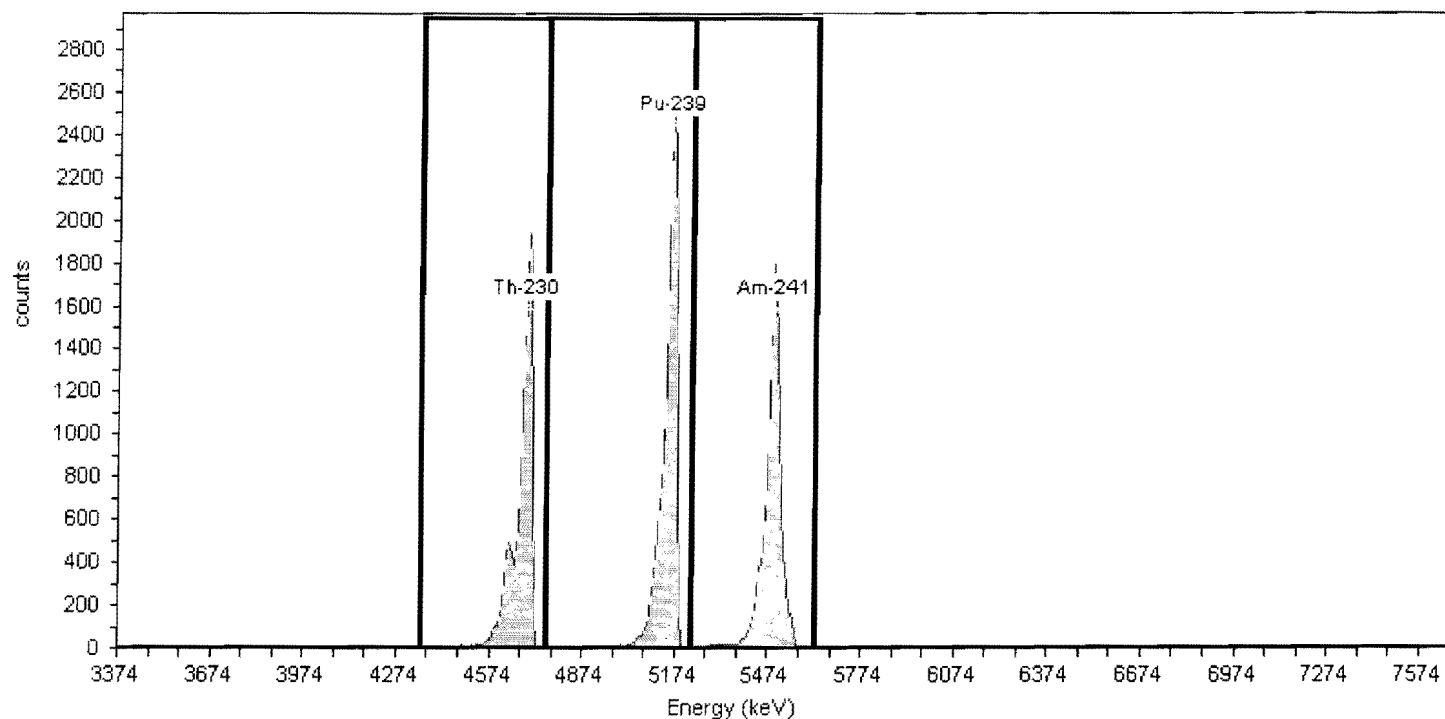
Certificate ID: 82233-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV64, SN:
Acquisition Start Date: 6/2/2011 8:28:58AM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 28.32% +/- 0.40% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,702.00	83.59
Pu-239	240	5.16	186	249	14,443.00	103.16
Am-241	284	5.49	249	303	12,218.00	87.27

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:37:17AM 2/27/2012

Calibration

Calibration Date: 2/23/2012 4:06:15PM
Analyst: 60040

Name: Feb2012_AV65
Description:
Detector: AV65

Source Info

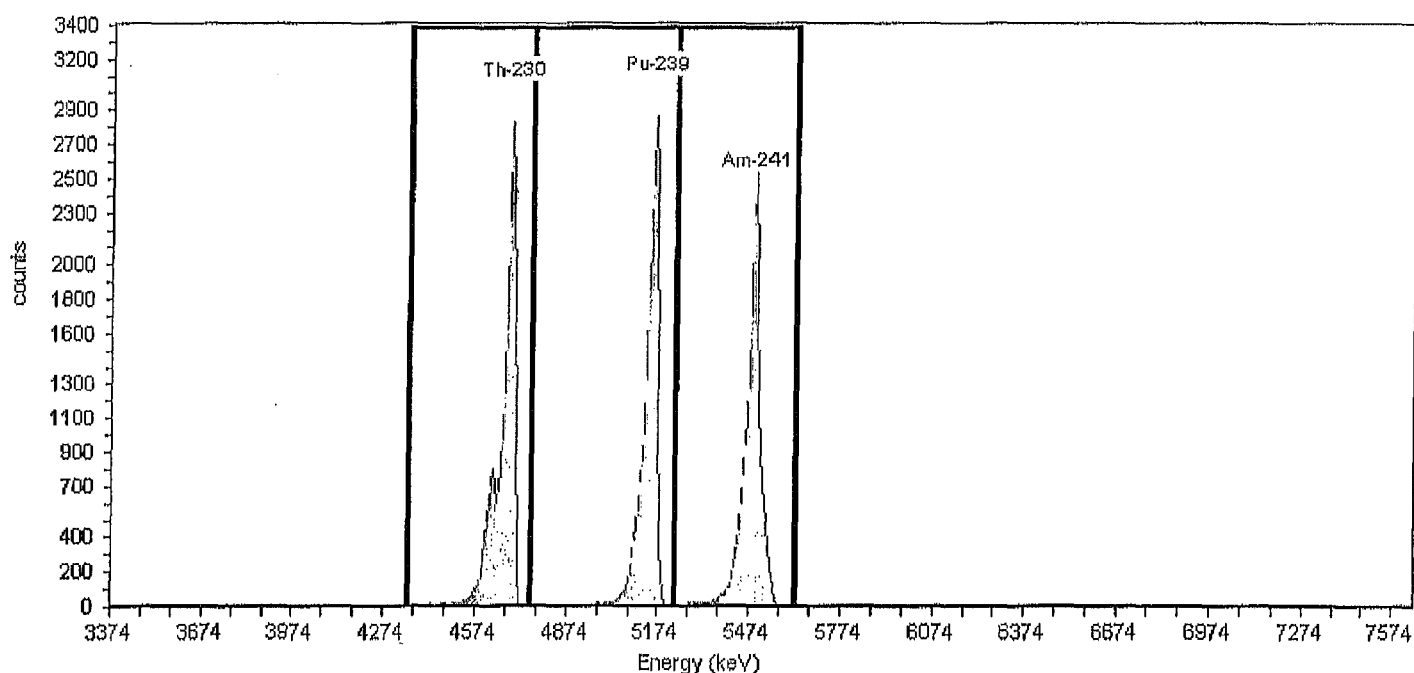
Certification Date: 6/3/2010 12:00:00PM
Description:

Certificate ID: 82232-334
Prepared by: Analytics

Acquisition

Detector: AV65, SN: 44-049JJ1
Acquisition Start Date: 2/23/2012 1:46:02PM
Live Time: 140.00 min.
Real Time: 140.04 min.
Efficiency: 28.41% +/- 0.31% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	18,039.00	128.85
Pu-239	240	5.16	186	249	17,111.00	122.22
Am-241	284	5.49	249	303	17,455.00	124.68

Alpha-Spectroscopy
Calibration ReportTestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
10:37:22AM 2/27/2012

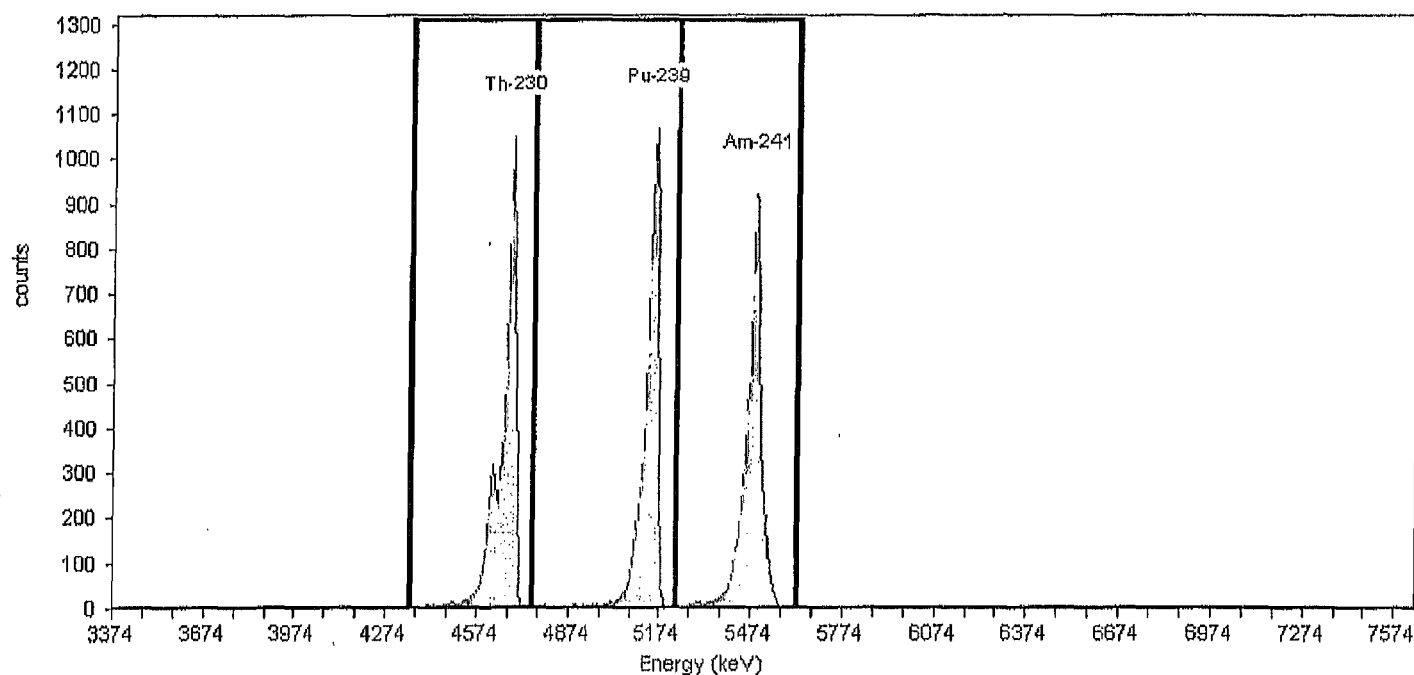
Calibration

Name: Feb2012_AV65_ICV
Description:
Detector: AV65Calibration Date: 2/23/2012 5:15:50PM
Analyst: 60040

Source Info

Certificate ID: 82236-334
Prepared by: AnalyticsCertification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV65, SN: 44-049JJ1
Acquisition Start Date: 2/23/2012 4:11:16PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.14% +/- 0.43% TPU(2 sigma)Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²

General Analysis

Method: Manual (ROI)
Algorithm: LinearInitial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,838.00	113.97
Pu-239	240	5.16	186	249	6,613.00	110.22
Am-241	284	5.49	249	303	6,734.00	112.23

Calibration

Name: June2011_AV64_ICV
Description:
Detector: AV64

Calibration Date: 6/2/2011 5:27:57PM
Analyst: 60040

Source Info

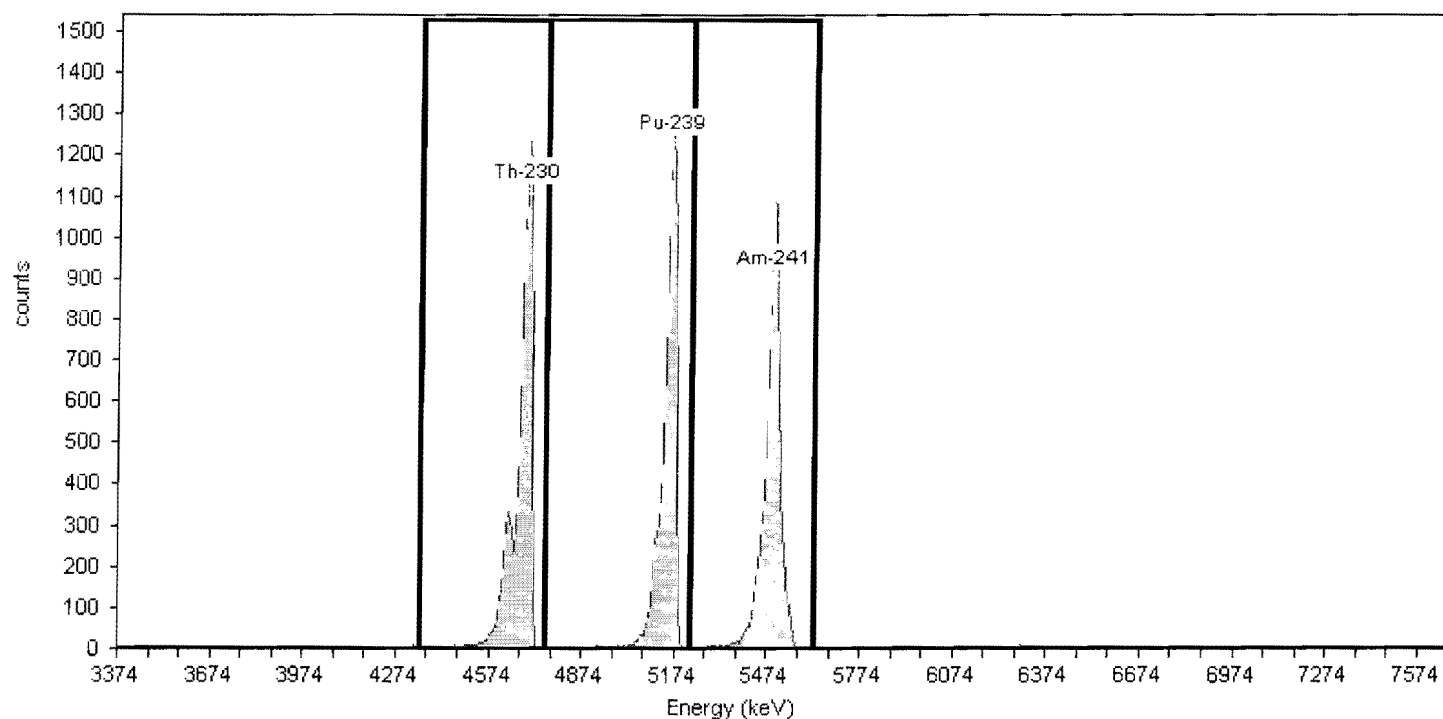
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV64 , SN:
Acquisition Start Date: 6/2/2011 11:54:36AM
Live Time: 60.00 min.
Real Time: 60.03 min.
Efficiency: 28.67% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



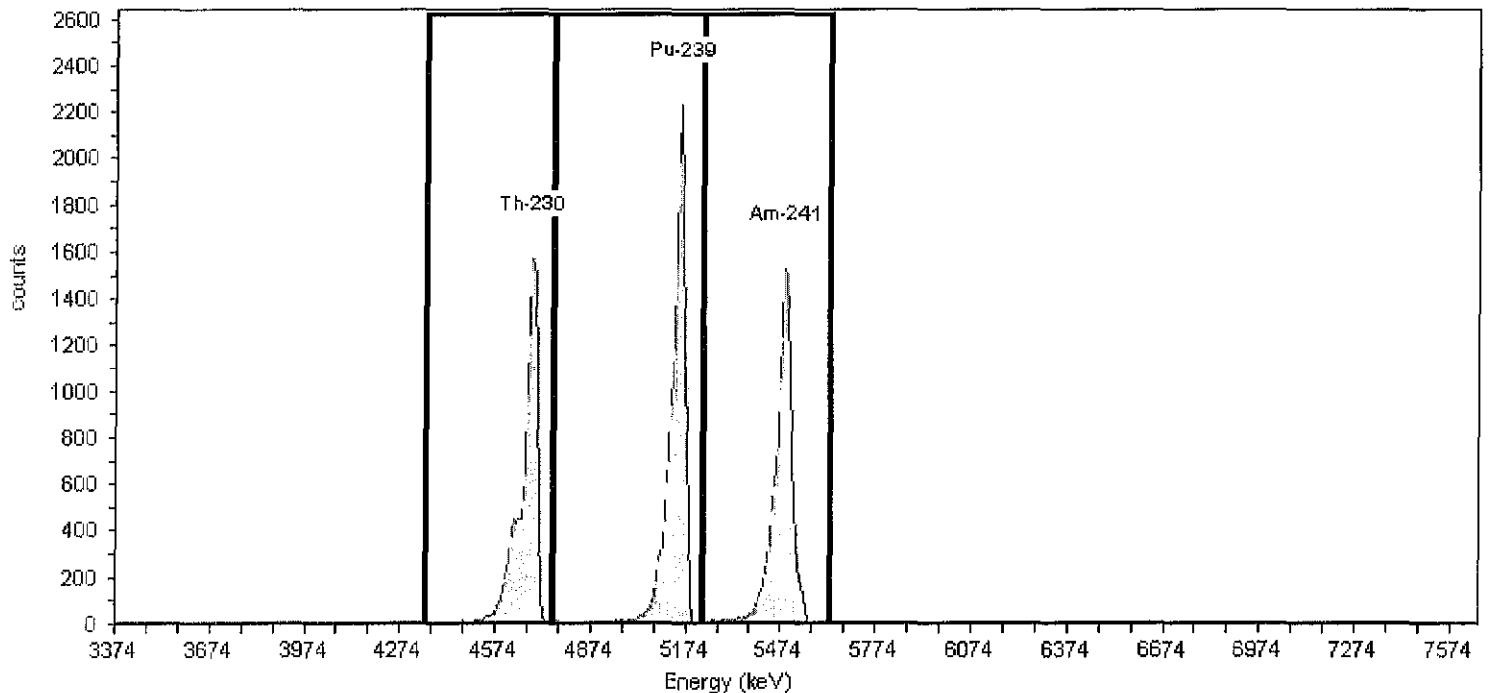
General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,866.00	131.10
Pu-239	240	5.16	186	249	7,408.00	123.47
Am-241	284	5.49	249	303	7,483.00	124.72

Name: Dec2011_AV66
Description:
Detector: AV66Calibration Date: 12/13/2011 9:35:41AM
Analyst: 60040Certificate ID: 82233-334
Prepared by: AnalyticsCertification Date: 6/3/2010 12:00:00PM
Description:Detector: AV66, SN: 48-158EE2
Acquisition Start Date: 12/12/2011 8:12:04PM
Live Time: 140.00 min.
Real Time: 140.03 min.
Efficiency: 27.72% +/- 0.39% TPU(2 sigma)Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²

General Analysis

Method: Manual (ROI)
Algorithm: LinearInitial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,251.00	80.36
Pu-239	240	5.16	186	249	14,372.00	102.66
Am-241	284	5.49	249	303	11,901.00	85.01

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
3:01:32PM 12/16/2011

Calibration

Name: Dec2011_AV66_ICVa
Description:
Detector: AV66

Calibration Date: 12/13/2011 9:35:56AM
Analyst: 60040

Source Info

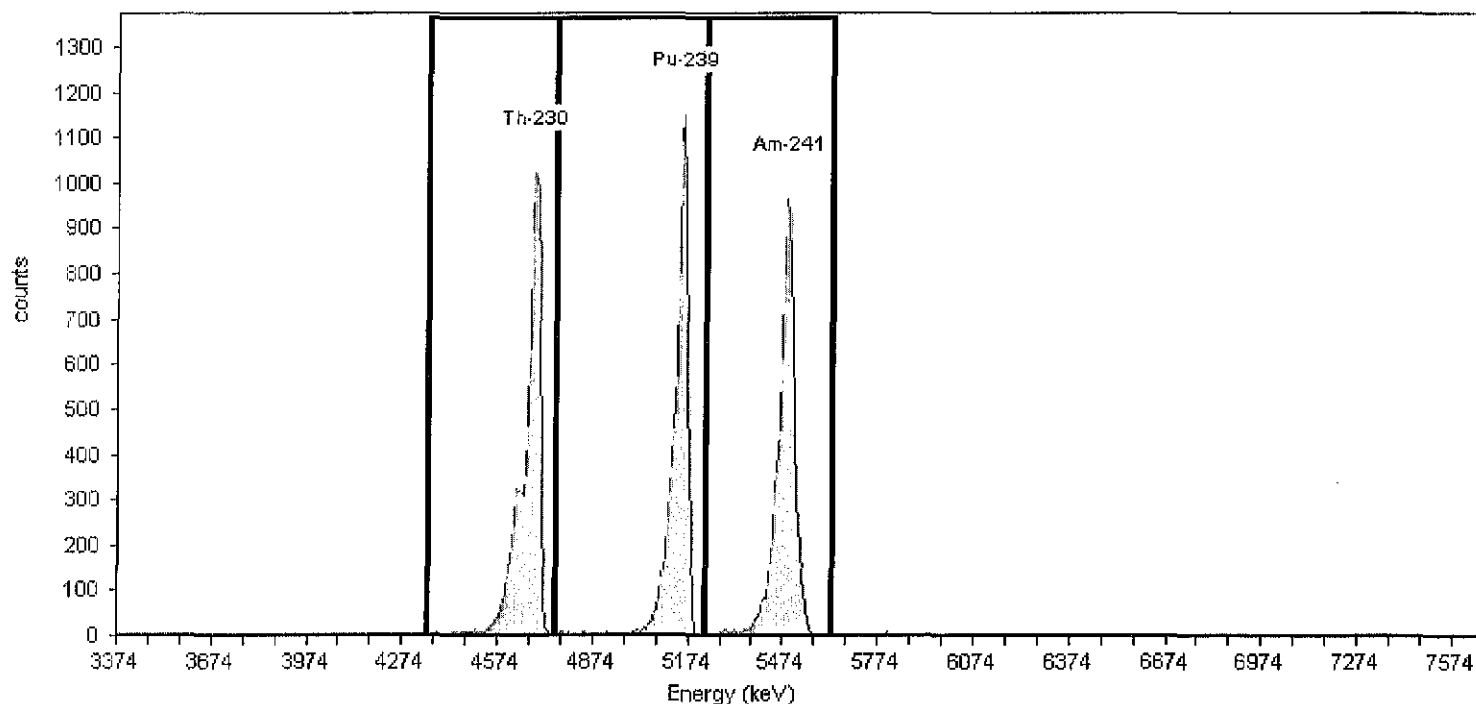
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV66, SN: 48-158EE2
Acquisition Start Date: 12/12/2011 10:41:46PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 28.53% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,759.00	129.32
Pu-239	240	5.16	186	249	7,443.00	124.05
Am-241	284	5.49	249	303	7,440.00	124.00

Calibration

Name: May2011_AV67
Description:
Detector: AV67

Calibration Date: 6/2/2011 11:17:07AM
Analyst: 60040

Source Info

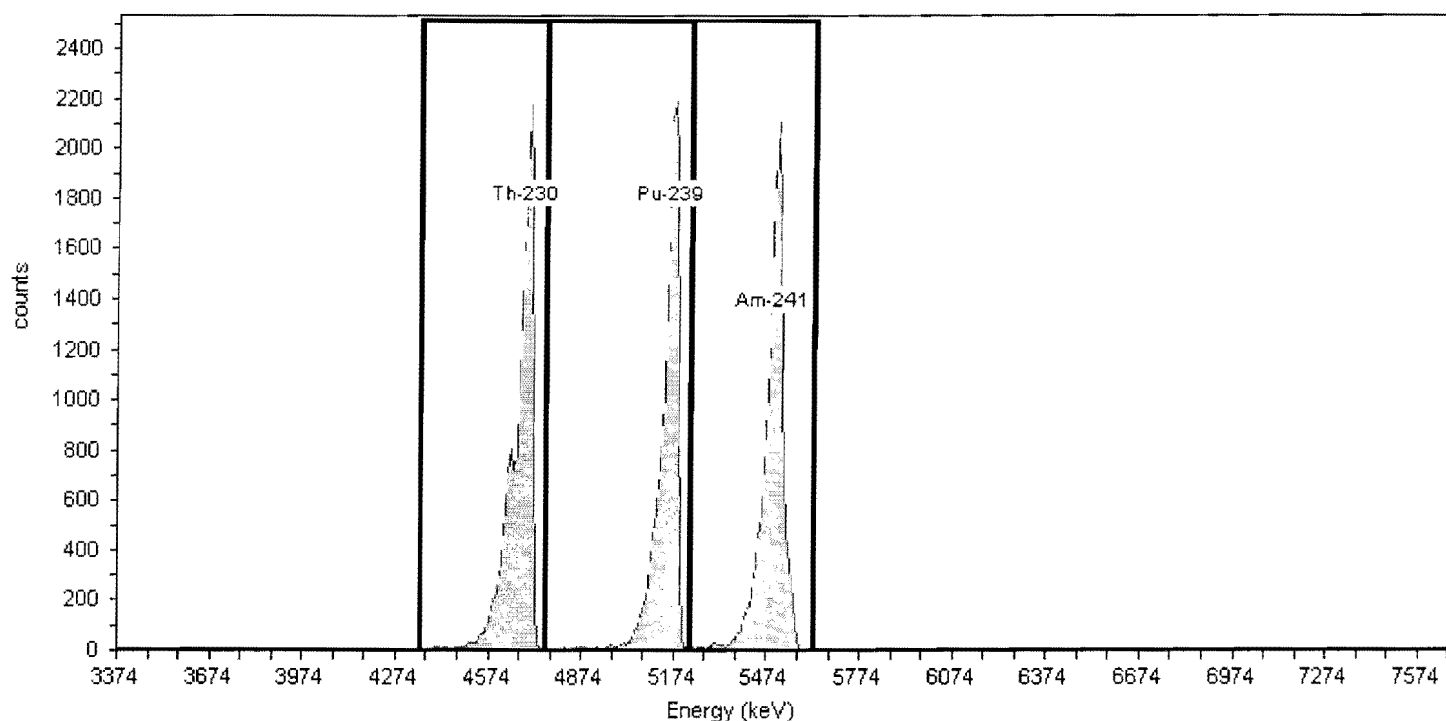
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV67 , SN: 48-046117
Acquisition Start Date: 6/2/2011 8:29:55AM
Live Time: 140.00 min.
Real Time: 140.09 min.
Efficiency: 29.30% +/- 0.34% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	17,499.00	124.99
Pu-239	240	5.16	186	249	16,429.00	117.35
Am-241	284	5.49	249	303	16,918.00	120.84

Calibration

Name: June2011_AV67_ICV
Description:
Detector: AV67

Calibration Date: 6/2/2011 5:28:01PM
Analyst: 60040

Source Info

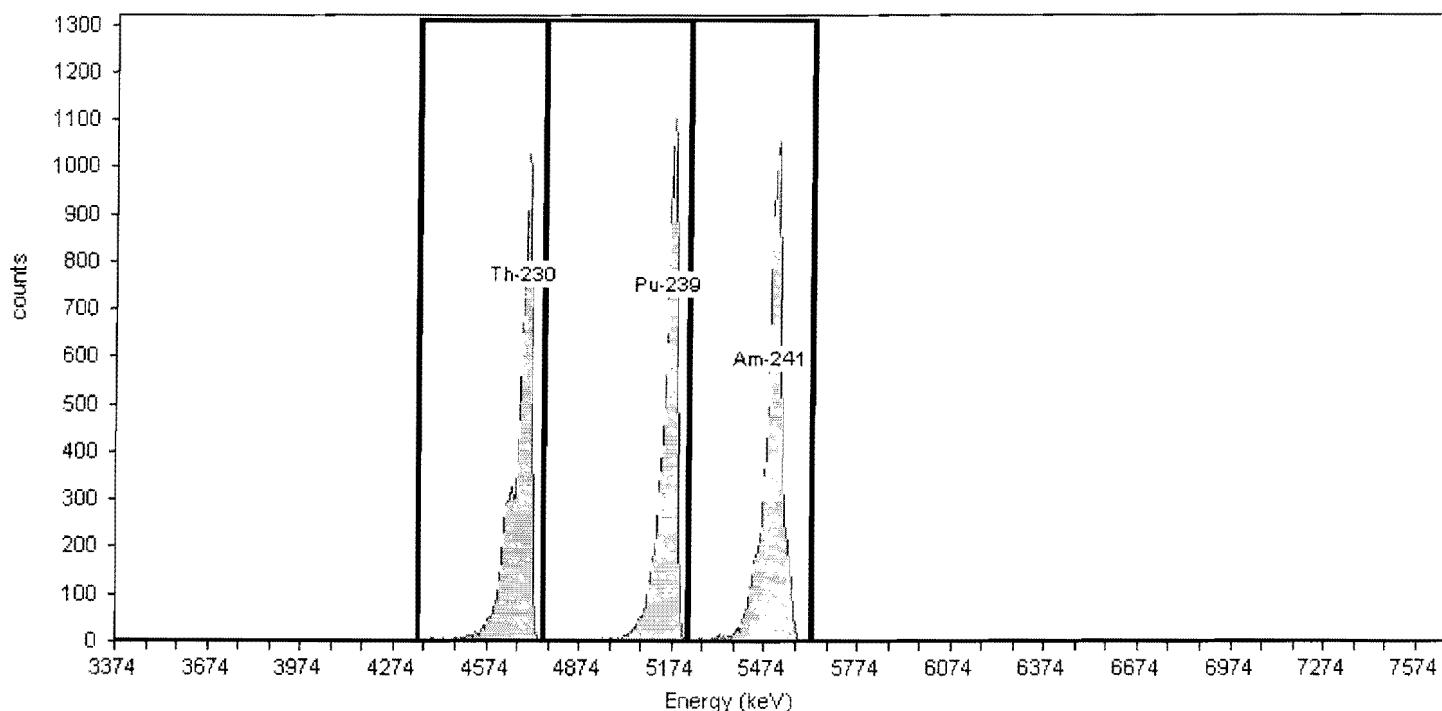
Certificate ID: 82235-334
Prepared by: Analytics

Certification Date: 6/4/2010 12:00:00PM
Description:

Acquisition

Detector: AV67 , SN: 48-046117
Acquisition Start Date: 6/2/2011 12:17:53PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 29.55% +/- 0.45% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,526.00	125.43
Pu-239	240	5.16	186	249	7,308.00	121.80
Am-241	284	5.49	249	303	8,068.00	134.47

Name: May2011_AV68
Description:
Detector: AV68

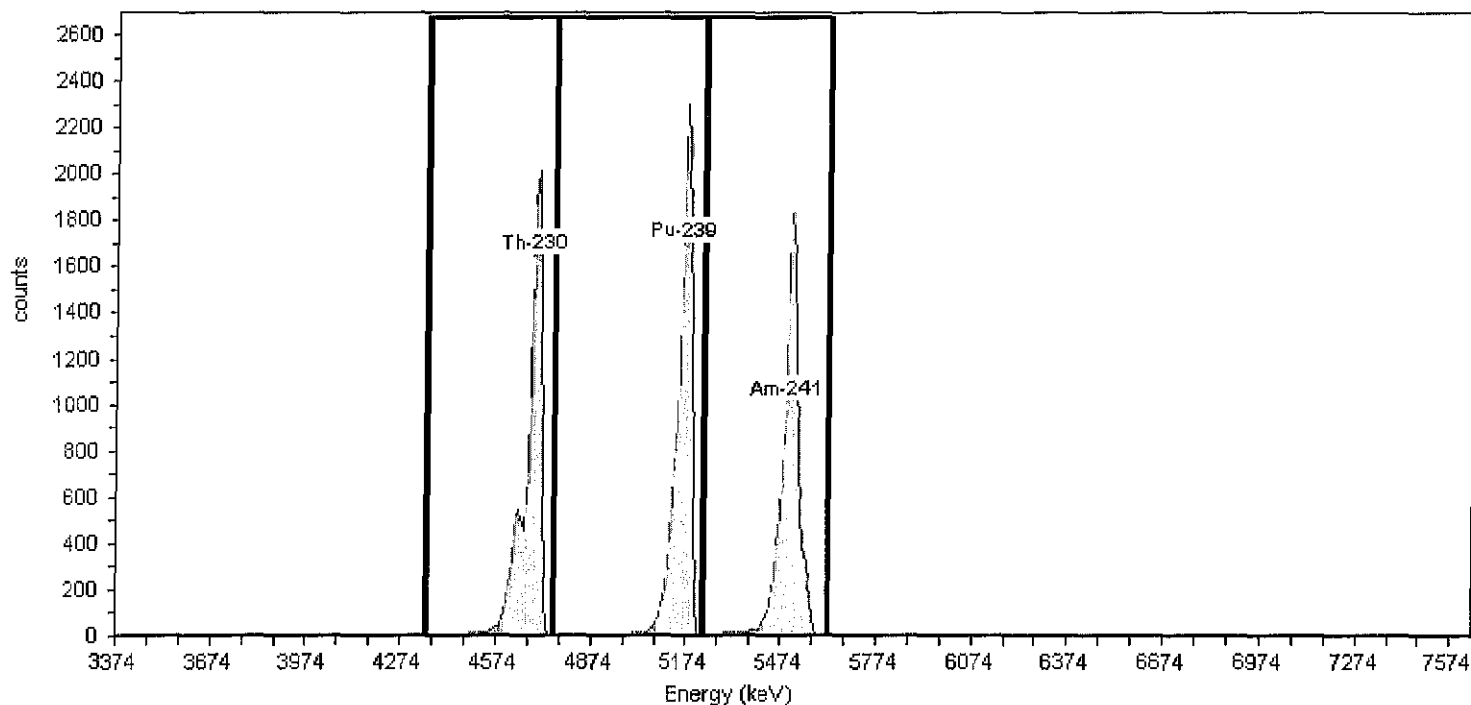
Calibration Date: 2/21/2012 2:59:22PM
Analyst: 60040

Certificate ID: 82237-334
Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM
Description:

Detector: AV68 , SN: 48-45884
Acquisition Start Date: 6/2/2011 8:30:14AM
Live Time: 140.00 min.
Real Time: 140.09 min.
Efficiency: 27.33% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,526.00	96.61
Pu-239	240	5.16	186	249	14,535.00	103.82
Am-241	284	5.49	249	303	13,035.00	93.11

Calibration

Name: June2011_AV68_ICV
Description:
Detector: AV68

Calibration Date: 6/2/2011 5:28:05PM
Analyst: 60040

Source Info

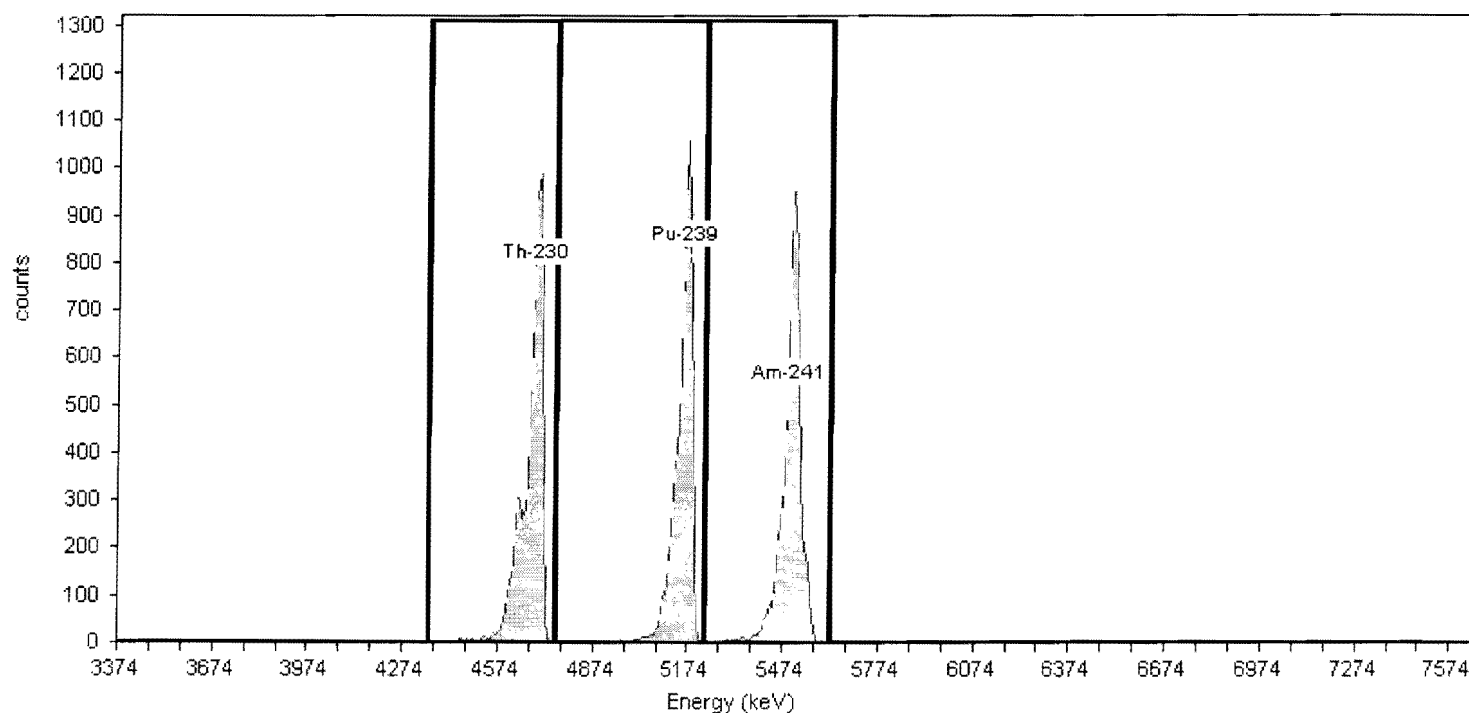
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV68, SN: 48-45884
Acquisition Start Date: 6/2/2011 12:18:37PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 27.67% +/- 0.44% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,039.00	117.32
Pu-239	240	5.16	186	249	6,793.00	113.22
Am-241	284	5.49	249	303	6,759.00	112.65

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibrations
Alpha Vision
February 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)		
AV1 Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass		
AV2 Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass		
AV3 June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
AV4 June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
AV6 June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
AV7 June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
AV8 June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
AV9 Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass		
Feb2012_AV9a_ICV	2/22/2012 8:32:32 PM	82236-334	0.2761	Pass	99.4615	Pass
AV10 Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass		
Feb2012_AV10a_ICV	2/23/2012 11:15:43 AM	82237-334	0.2717	Pass	100.292	Pass
AV11 Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass		
AV12 Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass		
Feb2012_AV12a_ICV	2/22/2012 8:32:35 PM	82238-334	0.2707	Pass	100.940	Pass
AV13 June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
AV14 Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass		
AV15 June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV16</i>				
Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
Feb2012_AV16a_ICV	2/22/2012 8:32:38 PM	82243-334	0.2707	Pass 97.7705 Pass
<i>AV17</i>				
June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass
<i>AV18</i>				
Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
Feb2012_AV18a_ICV	2/22/2012 8:32:42 PM	82247-334	0.2566	Pass 95.0864 Pass
<i>AV19</i>				
Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i>				
June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i>				
June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i>				
June2011_AV23	6/2/2011 8:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i>				
Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i>				
June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i>				
June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i>				
June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i>				
February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
Feb2012_AV46_ICV	2/24/2012 12:25:10 PM	82236-334	0.2768	Pass 101.742 Pass
<i>AV47</i>				
June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i>				
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass		
Feb2012_AV50_ICV	2/24/2012 12:25:26 PM	82240-334	0.2783	Pass	98.6252	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass		
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
<i>AV56</i> Dec2011_AV56	12/15/2011 9:36:08 AM	82238-334	0.2691	Pass		
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass		
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass		
Feb2012_AV58_ICV	2/24/2012 12:25:49 PM	63507-334	0.2851	Pass	93.6999	Fail
Feb2012_AV58a_ICV	2/24/2012 3:16:31 PM	82232-334	0.2863	Pass	101.213	Pass
Feb2012_AV58b_ICV	2/24/2012 4:28:08 PM	82232-334	0.2853	Pass	100.844	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass		
Feb2012_AV59_ICV	2/24/2012 12:26:03 PM	63508A-334	0.2697	Pass	96.5361	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV63</i>						
Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass		
Feb2012_AV63_ICV	2/23/2012 5:15:45 PM	82234-334	0.2798	Pass	104.191	Pass
<i>AV64</i>						
May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass		
<i>AV65</i>						
Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass		
Feb2012_AV65_ICV	2/23/2012 5:15:50 PM	82236-334	0.2714	Pass	95.5197	Pass
<i>AV66</i>						
Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass		
<i>AV67</i>						
May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass		
<i>AV68</i>						
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass		
<i>AV69</i>						
June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass		
<i>AV70</i>						
June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass		
<i>AV71</i>						
May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass		
<i>AV72</i>						
May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass		
<i>AV73</i>						
Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass		
<i>AV74</i>						
Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass		
<i>AV75</i>						
May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass		
<i>AV77</i>						
May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass		
<i>AV78</i>						
May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass		
<i>AV79</i>						
June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
<i>AV120</i> June2011_AV120	6/10/2011 2:58:12 PM	63507-334	0.2673	Pass		
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass		
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass		
Feb2012_AV131_ICV	2/24/2012 12:26:24 PM	82245-334	0.2767	Pass	101.234	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
Feb2012_AV133_ICV	2/24/2012 3:16:36 PM	82247-334	0.2639	Pass 99.4605 Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 8 of 8

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV147</i>	6/14/2011 9:47:31 AM	82236-334	0.2858	Pass		
	6/14/2011 9:48:52 AM	82247-334	0.2876	Pass	100.65	Pass
<i>AV148</i>	6/21/2011 2:32:02 PM	82237-334	0.2655	Pass		
	6/21/2011 2:32:43 PM	82236-334	0.2752	Pass	103.63	Pass
<i>AV149</i>	6/21/2011 2:34:00 PM	82238-334	0.2822	Pass		
	6/21/2011 2:34:33 PM	82237-334	0.2743	Pass	97.212	Pass
<i>AV151</i>	6/21/2011 2:36:24 PM	82240-334	0.2779	Pass		
	6/21/2011 2:36:47 PM	82239-334	0.2757	Pass	99.212	Pass
<i>AV152</i>	6/21/2011 2:37:11 PM	82241-334	0.2700	Pass		
	6/21/2011 2:37:32 PM	82240-334	0.2698	Pass	99.948	Pass
<i>AV153</i>	6/30/2011 9:05:44 AM	63508A-334	0.2610	Pass		
	6/30/2011 10:17:32 AM	63507-334	0.2585	Pass	99.026	Pass
<i>AV154</i>	6/21/2011 2:39:31 PM	82243-334	0.2680	Pass		
	6/21/2011 2:40:03 PM	82242-334	0.2722	Pass	101.56	Pass
<i>AV155</i>	6/27/2011 9:21:16 PM	82244-334	0.2651	Pass		
	6/27/2011 9:22:09 PM	82243-334	0.2628	Pass	99.134	Pass
<i>AV156</i>	6/27/2011 9:22:55 PM	82245-334	0.2721	Pass		
	6/27/2011 9:23:40 PM	82244-334	0.2640	Pass	97.019	Pass
<i>AV157</i>	6/27/2011 9:24:40 PM	82246-334	0.2630	Pass		
	6/27/2011 9:25:17 PM	82245-334	0.2703	Pass	102.74	Pass
<i>AV158</i>	6/30/2011 11:40:49 AM	82235-334	0.2758	Pass		
	6/30/2011 12:51:15 PM	82234-334	0.2756	Pass	99.948	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI59</i>	6/30/2011 9:06:12 AM	82236-334	0.2701	Pass		
	6/30/2011 9:06:45 AM	82235-334	0.2750	Pass	101.83	Pass
<i>AVI60</i>	6/30/2011 9:07:03 AM	82237-334	0.2630	Pass		
	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	100.98	Pass
<i>AVI61</i>	6/27/2011 9:29:26 PM	63508A-334	0.2652	Pass		
	6/27/2011 9:29:59 PM	63507-334	0.2604	Pass	98.212	Pass
<i>AVI62</i>	6/23/2011 11:26:56 AM	63509A-334	0.2637	Pass		
	6/23/2011 1:44:04 PM	63508A-334	0.2643	Pass	100.20	Pass
<i>AVI63</i>	6/15/2011 1:14:12 AM	82232-334	0.2782	Pass		
	6/27/2011 9:30:57 PM	63509A-334	0.2748	Pass	98.774	Pass
<i>AVI64</i>	6/30/2011 9:07:48 AM	82241-334	0.2661	Pass		
	6/30/2011 9:08:11 AM	82240-334	0.2702	Pass	101.52	Pass
<i>AVI65</i>	6/15/2011 1:14:21 AM	82234-334	0.2869	Pass		
	6/27/2011 9:32:32 PM	82233-334	0.2796	Pass	97.467	Pass
<i>AVI66</i>	6/15/2011 1:14:26 AM	82235-334	0.2773	Pass		
	6/27/2011 9:33:19 PM	82234-334	0.2771	Pass	99.922	Pass
<i>AVI67</i>	6/15/2011 1:14:30 AM	82236-334	0.2723	Pass		
	6/27/2011 9:34:00 PM	82235-334	0.2755	Pass	101.17	Pass
<i>AVI68</i>	6/15/2011 1:14:34 AM	82237-334	0.2627	Pass		
	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	102.85	Pass
<i>AVI69</i>	6/15/2011 1:14:37 AM	82238-334	0.2711	Pass		
	6/27/2011 9:35:26 PM	82237-334	0.2674	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV170</i>	6/15/2011 1:14:41 AM	82239-334	0.2783	Pass		
	6/27/2011 9:36:10 PM	82238-334	0.2688	Pass	96.606	Pass
<i>AV171</i>	6/15/2011 1:14:45 AM	82240-334	0.2709	Pass		
	6/27/2011 9:37:06 PM	82239-334	0.2813	Pass	103.84	Pass
<i>AV172</i>	6/15/2011 1:14:49 AM	82241-334	0.2699	Pass		
	6/27/2011 9:37:46 PM	82240-334	0.2705	Pass	100.22	Pass
<i>AV173</i>	6/15/2011 1:14:52 AM	82242-334	0.2830	Pass		
	6/27/2011 9:38:28 PM	82241-334	0.2716	Pass	95.991	Pass
<i>AV174</i>	6/15/2011 1:14:56 AM	82243-334	0.2679	Pass		
	6/27/2011 9:39:06 PM	82242-334	0.2743	Pass	102.42	Pass
<i>AV175</i>	6/15/2011 1:15:00 AM	82244-334	0.2675	Pass		
	6/27/2011 9:39:52 PM	82243-334	0.2720	Pass	101.67	Pass
<i>AV176</i>	6/15/2011 2:15:31 AM	82245-334	0.2726	Pass		
	6/27/2011 9:40:38 PM	82244-334	0.2661	Pass	97.631	Pass
<i>AV177</i>	6/15/2011 1:15:04 AM	82246-334	0.2651	Pass		
	6/15/2011 4:19:56 AM	82245-334	0.2751	Pass	103.75	Pass
<i>AV178</i>	6/15/2011 1:15:07 AM	82247-334	0.2746	Pass		
	6/27/2011 9:41:21 PM	82246-334	0.2711	Pass	98.745	Pass
<i>AV179</i>	6/30/2011 9:08:46 AM	82237-334	0.2742	Pass		
	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	104.51	Pass
<i>AV180</i>	6/15/2011 1:15:15 AM	63507-334	0.2625	Pass		
	6/27/2011 9:43:59 PM	63506-334	0.2532	Pass	96.455	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV181</i>	6/15/2011 1:15:18 AM	63508A-334	0.2611	Pass		
	6/27/2011 9:44:46 PM	63507-334	0.2587	Pass	99.069	Pass
<i>AV182</i>	6/27/2011 9:45:31 PM	63509A-334	0.2629	Pass		
	6/27/2011 9:46:14 PM	63508A-334	0.2625	Pass	99.822	Pass
<i>AV183</i>	6/20/2011 10:52:50 PM	82232-334	0.2795	Pass		
	6/27/2011 9:46:57 PM	63509A-334	0.2671	Pass	95.537	Pass
<i>AV184</i>	6/20/2011 10:52:55 PM	82233-334	0.2772	Pass		
	6/27/2011 9:47:46 PM	82232-334	0.2799	Pass	100.95	Pass
<i>AV185</i>	6/20/2011 10:52:58 PM	82234-334	0.2823	Pass		
	6/27/2011 9:48:33 PM	82233-334	0.2741	Pass	97.113	Pass
<i>AV186</i>	6/20/2011 10:53:06 PM	82235-334	0.2741	Pass		
	6/27/2011 9:49:22 PM	82234-334	0.2744	Pass	100.12	Pass
<i>AV187</i>	6/20/2011 10:53:09 PM	82236-334	0.2672	Pass		
	6/27/2011 9:50:09 PM	82235-334	0.2741	Pass	102.59	Pass
<i>AV188</i>	6/20/2011 10:53:13 PM	82237-334	0.2820	Pass		
	6/27/2011 9:50:56 PM	82236-334	0.2799	Pass	99.240	Pass
<i>AV189</i>	6/20/2011 10:53:16 PM	82238-334	0.2769	Pass		
	6/27/2011 9:51:48 PM	82237-334	0.2684	Pass	96.927	Pass
<i>AV190</i>	6/21/2011 1:27:18 AM	82239-334	0.2710	Pass		
	6/27/2011 9:52:36 PM	82238-334	0.2739	Pass	101.05	Pass
<i>AV191</i>	6/20/2011 10:53:19 PM	82240-334	0.2794	Pass		
	6/21/2011 4:20:11 AM	82239-334	0.2769	Pass	99.115	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV192</i>	6/20/2011 10:53:23 PM	82241-334	0.2797	Pass		
	6/27/2011 9:53:23 PM	82240-334	0.2797	Pass	100.02	Pass
<i>AV193</i>	6/20/2011 10:53:26 PM	82242-334	0.2736	Pass		
	6/27/2011 9:54:02 PM	82241-334	0.2750	Pass	100.50	Pass
<i>AV194</i>	6/20/2011 10:53:29 PM	82243-334	0.2734	Pass		
	6/27/2011 9:54:56 PM	82242-334	0.2776	Pass	101.56	Pass
<i>AV195</i>	6/20/2011 10:53:33 PM	82244-334	0.2644	Pass		
	6/27/2011 9:55:43 PM	82243-334	0.2668	Pass	100.90	Pass
<i>AV196</i>	6/20/2011 10:53:37 PM	82245-334	0.2839	Pass		
	6/27/2011 9:56:30 PM	82244-334	0.2753	Pass	96.985	Pass
<i>AV197</i>	6/24/2011 2:40:07 AM	82246-334	0.2672	Pass		
	6/27/2011 9:57:47 PM	82245-334	0.2763	Pass	103.37	Pass
<i>AV198</i>	6/24/2011 2:22:48 PM	82247-334	0.2725	Pass		
	6/24/2011 3:24:45 PM	82246-334	0.2672	Pass	98.027	Pass
<i>AV199</i>	6/30/2011 9:09:28 AM	82238-334	0.2684	Pass		
	6/30/2011 10:17:40 AM	82237-334	0.2638	Pass	98.291	Pass
<i>AV200</i>	6/20/2011 10:53:47 PM	63507-334	0.2618	Pass		
	6/27/2011 10:00:20 PM	63506-334	0.2543	Pass	97.155	Pass
<i>AV201</i>	6/20/2011 10:53:53 PM	63508A-334	0.2654	Pass		
	6/27/2011 10:01:08 PM	63507-334	0.2735	Pass	103.06	Pass
<i>AV202</i>	6/27/2011 10:01:51 PM	63509A-334	0.2648	Pass		
	6/27/2011 10:02:25 PM	63508A-334	0.2613	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV203</i>	6/21/2011 3:19:59 PM	82232-334	0.2768	Pass		
	6/21/2011 3:21:44 PM	63509A-334	0.2646	Pass	95.582	Pass
<i>AV204</i>	6/27/2011 10:03:31 PM	82233-334	0.2705	Pass		
	6/27/2011 10:04:08 PM	82232-334	0.2736	Pass	101.16	Pass
<i>AV205</i>	6/21/2011 3:29:26 PM	82234-334	0.2783	Pass		
	6/27/2011 10:04:59 PM	82233-334	0.2722	Pass	97.818	Pass
<i>AV206</i>	6/27/2011 10:05:51 PM	82235-334	0.2796	Pass		
	6/27/2011 10:06:38 PM	82234-334	0.2837	Pass	101.48	Pass
<i>AV207</i>	6/27/2011 10:07:21 PM	82236-334	0.2735	Pass		
	6/27/2011 10:08:05 PM	82235-334	0.2759	Pass	100.87	Pass
<i>AV208</i>	6/27/2011 10:08:56 PM	82237-334	0.2765	Pass		
	6/27/2011 10:09:30 PM	82236-334	0.2800	Pass	101.26	Pass
<i>AV209</i>	6/27/2011 10:10:06 PM	82238-334	0.2812	Pass		
	6/27/2011 10:10:39 PM	82237-334	0.2680	Pass	95.309	Pass
<i>AV210</i>	6/21/2011 9:13:09 AM	82239-334	0.2718	Pass		
	6/27/2011 10:11:34 PM	82238-334	0.2722	Pass	100.16	Pass
<i>AV211</i>	6/27/2011 10:12:37 PM	82240-334	0.2684	Pass		
	6/21/2011 10:55:13 AM	82239-334	0.2688	Pass	100.13	Pass
<i>AV212</i>	6/27/2011 10:13:23 PM	82241-334	0.2851	Pass		
	6/27/2011 10:13:58 PM	82240-334	0.2891	Pass	101.41	Pass
<i>AV213</i>	6/23/2011 11:27:18 AM	82242-334	0.2707	Pass		
	6/23/2011 1:44:14 PM	82241-334	0.2712	Pass	100.17	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV214</i>	6/27/2011 10:15:18 PM	82243-334	0.2701	Pass		
	6/27/2011 10:15:54 PM	82242-334	0.2728	Pass	100.98	Pass
<i>AV215</i>	6/27/2011 10:16:46 PM	82244-334	0.2907	Pass		
	6/27/2011 10:17:26 PM	82243-334	0.2768	Pass	95.222	Pass
<i>AV216</i>	6/27/2011 10:18:14 PM	82245-334	0.2815	Pass		
	6/27/2011 10:18:50 PM	82244-334	0.2736	Pass	97.176	Pass
<i>AV217</i>	7/1/2011 10:10:06 AM	82246-334	0.2656	Pass		
	7/1/2011 10:10:22 AM	82245-334	0.2746	Pass	103.39	Pass
<i>AV218</i>	6/24/2011 1:51:29 PM	82247-334	0.2743	Pass		
	6/24/2011 5:16:09 PM	82246-334	0.2696	Pass	98.287	Pass
<i>AV219</i>	6/30/2011 9:09:52 AM	82240-334	0.2749	Pass		
	6/30/2011 9:10:10 AM	82238-334	0.2711	Pass	98.608	Pass
<i>AV220</i>	6/27/2011 10:21:49 PM	63507-334	0.2632	Pass		
	6/27/2011 10:22:24 PM	63506-334	0.2579	Pass	97.981	Pass
<i>AV221</i>	6/27/2011 10:23:08 PM	63508A-334	0.2621	Pass		
	6/27/2011 10:23:43 PM	63507-334	0.2617	Pass	99.836	Pass
<i>AV222</i>	6/27/2011 10:24:23 PM	63509A-334	0.2675	Pass		
	6/27/2011 10:25:09 PM	63508A-334	0.2634	Pass	98.476	Pass
<i>AV223</i>	6/23/2011 11:28:00 AM	82232-334	0.2800	Pass		
	6/23/2011 1:44:18 PM	63509A-334	0.2682	Pass	95.794	Pass
<i>AV224</i>	6/23/2011 11:28:25 AM	82233-334	0.2755	Pass		
	6/23/2011 1:44:22 PM	82232-334	0.2798	Pass	101.55	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV225</i>	6/24/2011 2:40:10 AM	82234-334	0.2791	Pass		
	6/27/2011 10:26:27 PM	82233-334	0.2753	Pass	98.623	Pass
<i>AV226</i>	6/24/2011 2:40:15 AM	82235-334	0.2729	Pass		
	6/27/2011 10:27:06 PM	82234-334	0.2800	Pass	102.61	Pass
<i>AV227</i>	6/25/2011 10:39:33 AM	82236-334	0.2783	Pass		
	6/25/2011 1:18:30 PM	82235-334	0.2773	Pass	99.651	Pass
<i>AV228</i>	6/28/2011 9:07:26 AM	82237-334	0.2755	Pass		
	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	103.94	Pass
<i>AV229</i>	6/25/2011 10:39:43 AM	82238-334	0.2781	Pass		
	6/25/2011 1:18:41 PM	82237-334	0.2735	Pass	98.336	Pass
<i>AV230</i>	6/25/2011 10:39:47 AM	82239-334	0.2844	Pass		
	6/25/2011 1:19:16 PM	82238-334	0.2812	Pass	98.851	Pass
<i>AV231</i>	6/25/2011 10:50:22 AM	82240-334	0.2784	Pass		
	6/25/2011 1:19:42 PM	82239-334	0.2758	Pass	99.090	Pass
<i>AV232</i>	6/25/2011 10:58:31 AM	82241-334	0.2758	Pass		
	6/25/2011 1:19:51 PM	82240-334	0.2812	Pass	101.96	Pass
<i>AV233</i>	6/25/2011 10:58:37 AM	82242-334	0.2668	Pass		
	6/25/2011 1:20:13 PM	82241-334	0.2705	Pass	101.37	Pass
<i>AV234</i>	6/28/2011 9:08:33 AM	82243-334	0.2710	Pass		
	6/28/2011 9:08:49 AM	82242-334	0.2714	Pass	100.13	Pass
<i>AV235</i>	6/25/2011 11:19:40 AM	82244-334	0.2686	Pass		
	6/25/2011 1:21:34 PM	82243-334	0.2694	Pass	100.30	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV236</i>	6/25/2011 11:19:44 AM	82245-334	0.2759	Pass		
	6/25/2011 1:22:02 PM	82244-334	0.2647	Pass	95.960	Pass
<i>AV237</i>	6/25/2011 11:19:48 AM	82246-334	0.2679	Pass		
	6/25/2011 1:22:14 PM	82245-334	0.2783	Pass	103.89	Pass
<i>AV238</i>	6/25/2011 11:19:52 AM	82247-334	0.2740	Pass		
	6/25/2011 1:22:47 PM	82246-334	0.2642	Pass	96.404	Pass
<i>AV239</i>	6/29/2011 4:17:46 PM	82241-334	0.2816	Pass		
	6/29/2011 5:24:20 PM	82239-334	0.2770	Pass	98.355	Pass
<i>AV240</i>	6/28/2011 9:06:33 AM	63507-334	0.2675	Pass		
	6/25/2011 1:23:31 PM	63506-334	0.2636	Pass	98.508	Pass
<i>AV241</i>	6/25/2011 11:47:42 AM	63508A-334	0.2600	Pass		
	6/25/2011 1:23:51 PM	63507-334	0.2602	Pass	100.06	Pass
<i>AV242</i>	6/25/2011 11:47:57 AM	63509A-334	0.2680	Pass		
	6/25/2011 1:24:10 PM	63508A-334	0.2667	Pass	99.534	Pass
<i>AV243</i>	6/25/2011 9:28:07 AM	82232-334	0.2795	Pass		
	6/25/2011 1:24:52 PM	63509A-334	0.2676	Pass	95.760	Pass
<i>AV244</i>	6/25/2011 12:07:09 PM	82233-334	0.2858	Pass		
	6/25/2011 1:25:04 PM	82232-334	0.2904	Pass	101.61	Pass
<i>AV245</i>	6/25/2011 12:07:13 PM	82234-334	0.2856	Pass		
	6/25/2011 1:25:24 PM	82233-334	0.2793	Pass	97.792	Pass
<i>AV246</i>	6/25/2011 12:07:17 PM	82235-334	0.2981	Pass		
	6/25/2011 1:25:53 PM	82234-334	0.2968	Pass	99.576	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV247</i>	6/28/2011 9:04:33 AM	82236-334	0.2721	Pass		
	6/28/2011 9:04:52 AM	82235-334	0.2774	Pass	101.94	Pass
<i>AV248</i>	6/28/2011 9:09:30 AM	82237-334	0.2651	Pass		
	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	101.77	Pass
<i>AV249</i>	6/28/2011 9:10:11 AM	82238-334	0.2852	Pass		
	6/28/2011 9:10:27 AM	82237-334	0.2781	Pass	97.510	Pass
<i>AV250</i>	6/28/2011 9:10:53 AM	82239-334	0.2800	Pass		
	6/28/2011 9:11:12 AM	82238-334	0.2820	Pass	100.71	Pass

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Alpha Vision Yearly Calibrations Updated 2/22/12

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
Dec2011a_AV22_ICV	12/8/2011 2:38:54 PM	82236-334	0.2670	Pass 99.6280 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV48</i>						
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass		
June2011_AV48_ICV	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	98.9875	Pass
<i>AV88</i>						
May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass		
June2011_AV88_ICV	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	101.747	Pass
<i>AV103</i>						
June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass		
June2011_AV103a_ICVb	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	99.8524	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
June2011_AV68_ICV	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass 101.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV128</i>				
June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
June2011_AV128_ICV	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass 101.685 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov</i>	<i>(+/-5%)</i>
<i>AV160</i>					
June2011A_AV160	2/21/2012 3:02:57 PM	82237-334	0.2708	Pass	
June2011A_AV160_ICV	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	98.0720 Pass
<i>AV168</i>					
June2011_AV168	2/21/2012 3:03:27 PM	82237-334	0.2704	Pass	
June2011_AV168_ICV	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	99.9393 Pass
<i>AV179</i>					
June2011B_AV179	2/21/2012 3:03:50 PM	82237-334	0.2821	Pass	
June2011_AV179b_ICV	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	101.588 Pass
<i>AV228</i>					
June2011A_AV228	2/21/2012 3:04:50 PM	82237-334	0.2834	Pass	
June2011A_AV228_ICV	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	101.035 Pass
<i>AV248</i>					
June2011_AV248	2/21/2012 3:05:18 PM	82237-334	0.2726	Pass	
June2011_AV248_ICV	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	98.9835 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV205</i>				
Dec2011_AV205	2/21/2012 3:04:20 PM	82237-334	0.2688	Pass
Dec2011_AV205_ICV	12/16/2011 3:08:08 AM	82236-334	0.2684	Pass 99.8398 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Calibration

Name: June2011_AV70
Description:
Detector: AV70

Calibration Date: 6/21/2011 2:26:58PM
Analyst: 60040

Source Info

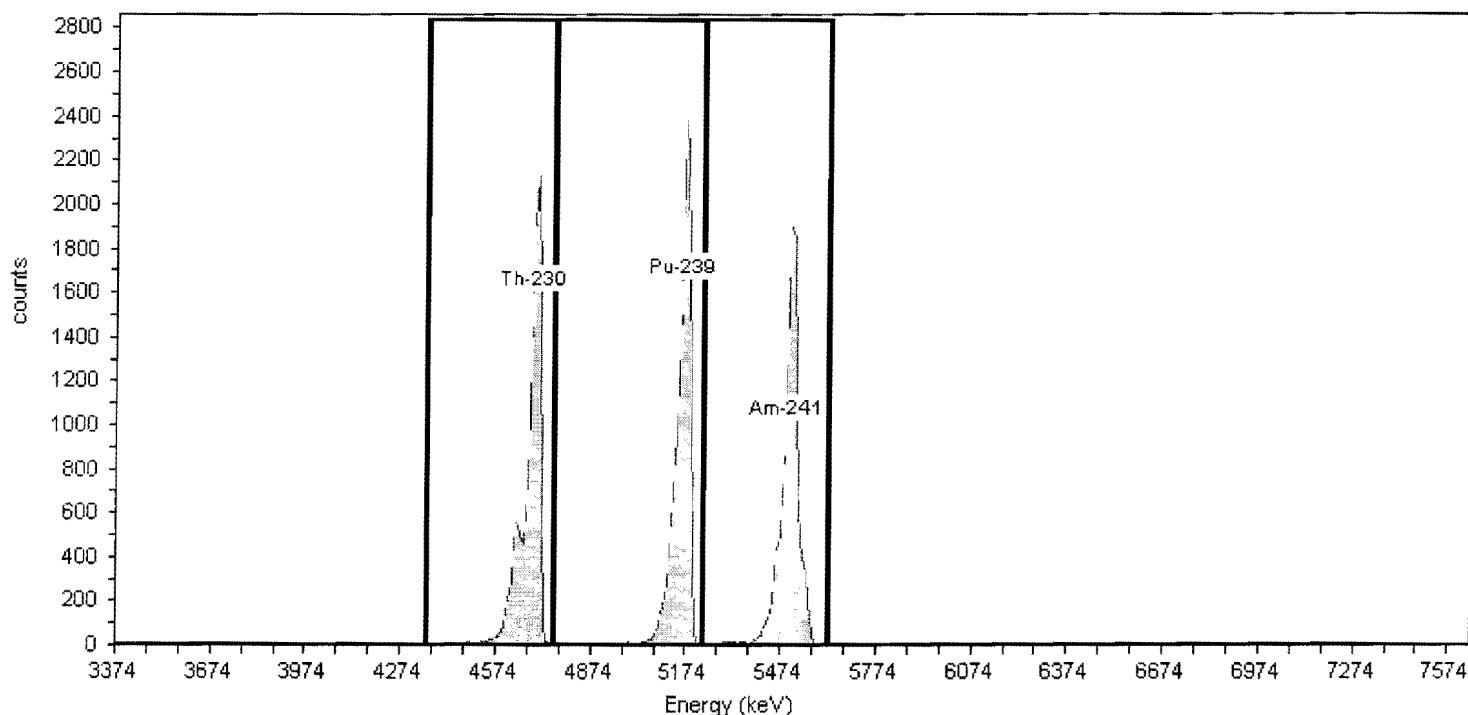
Certificate ID: 82239-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV70 , SN: 48-158FF1
Acquisition Start Date: 6/21/2011 11:56:05AM
Live Time: 140.00 min.
Real Time: 140.45 min.
Efficiency: 27.63% +/- 0.39% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,271.00	94.79
Pu-239	240	5.16	186	249	14,176.00	101.26
Am-241	284	5.49	249	303	13,029.00	93.06

Calibration

Name: June2011A_AV70_ICV
Description:
Detector: AV70

Calibration Date: 6/22/2011 2:20:23AM
Analyst: 60040

Source Info

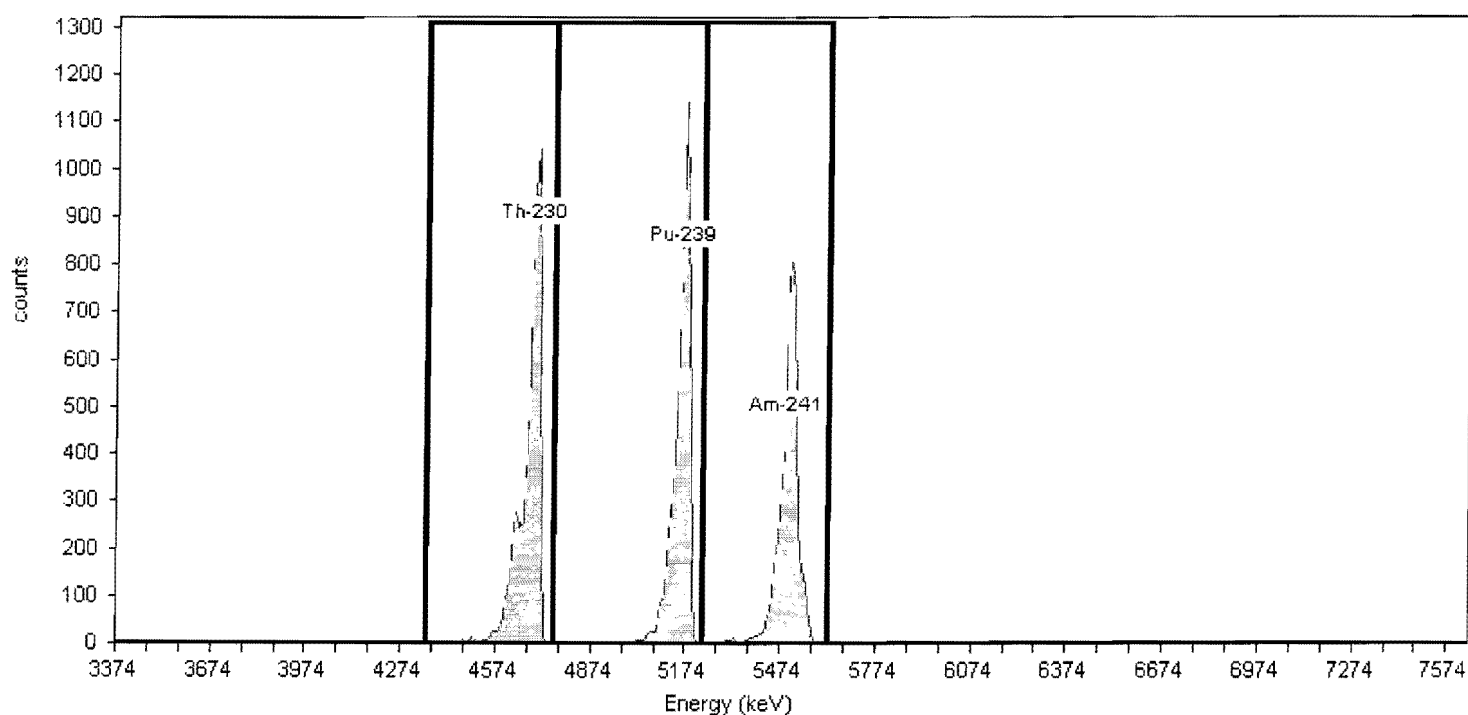
Certificate ID: 82238-334
Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV70 , SN: 48-158FF1
Acquisition Start Date: 6/22/2011 1:19:08AM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 27.00% +/- 0.46% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,822.00	113.70
Pu-239	240	5.16	186	249	6,643.00	110.72
Am-241	284	5.49	249	303	5,767.00	96.12

Calibration

Name: May2011_AV71
Description:
Detector: AV71

Calibration Date: 6/2/2011 11:17:45AM
Analyst: 60040

Source Info

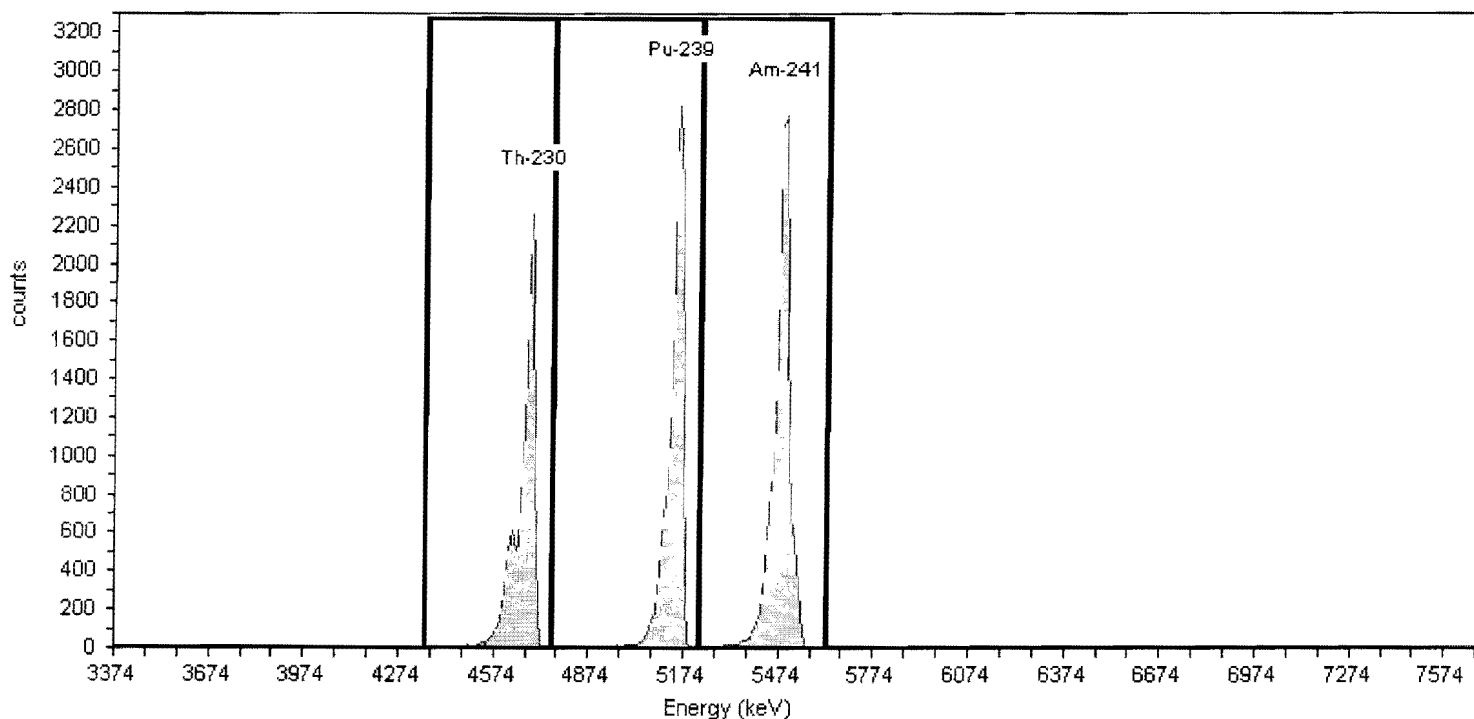
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV71 , SN: 48-158EE6
Acquisition Start Date: 6/2/2011 8:30:47AM
Live Time: 140.00 min.
Real Time: 140.09 min.
Efficiency: 27.41% +/- 0.31% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,313.00	102.24
Pu-239	240	5.16	186	249	16,812.00	120.09
Am-241	284	5.49	249	303	18,982.00	135.59

Calibration

Name: June2011_AV71_ICV
Description:
Detector: AV71

Calibration Date: 6/2/2011 6:59:06PM
Analyst: 60040

Source Info

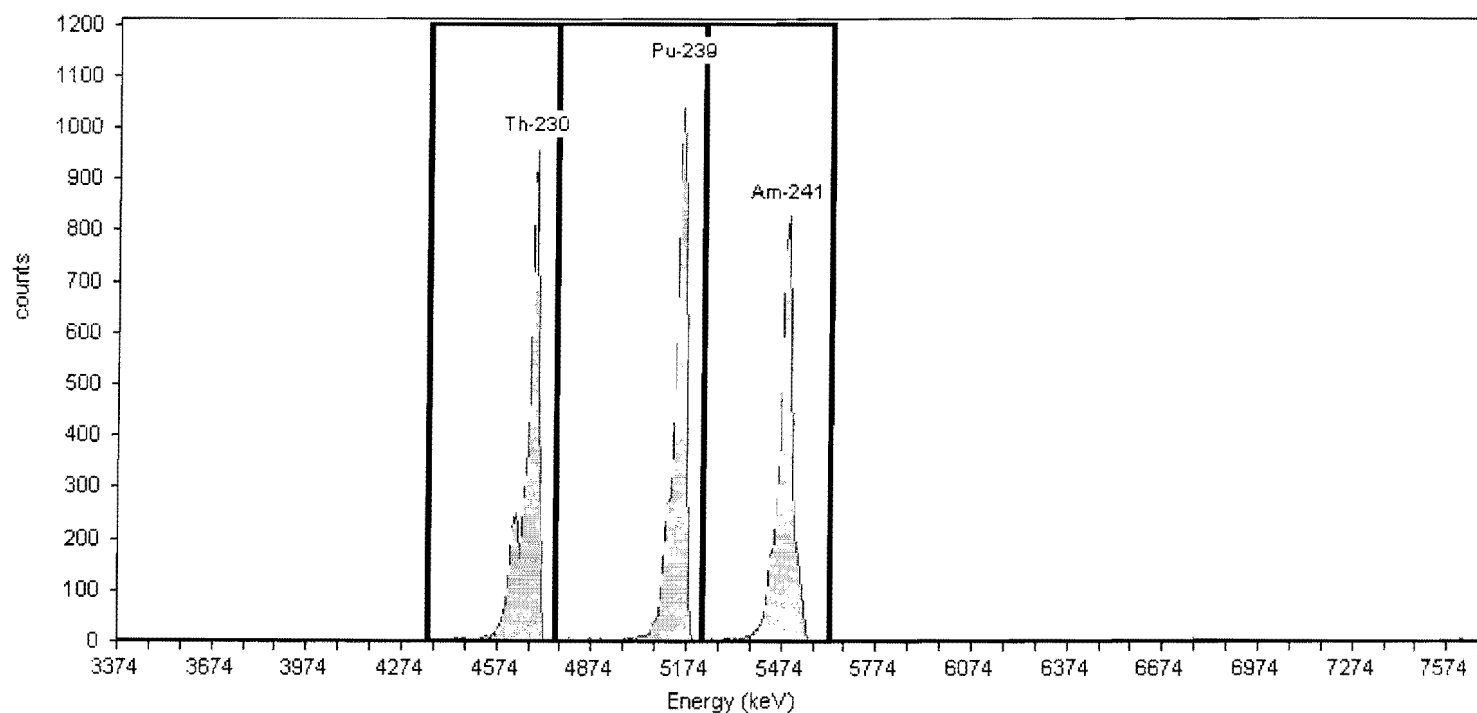
Certificate ID: 82239-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV71, SN: 48-158EE6
Acquisition Start Date: 6/2/2011 5:53:09PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.35% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,746.00	95.77
Pu-239	240	5.16	186	249	5,997.00	99.95
Am-241	284	5.49	249	303	5,428.00	90.47

Calibration

Name: May2011_AV72
Description:
Detector: AV72

Calibration Date: 6/2/2011 11:17:59AM
Analyst: 60040

Source Info

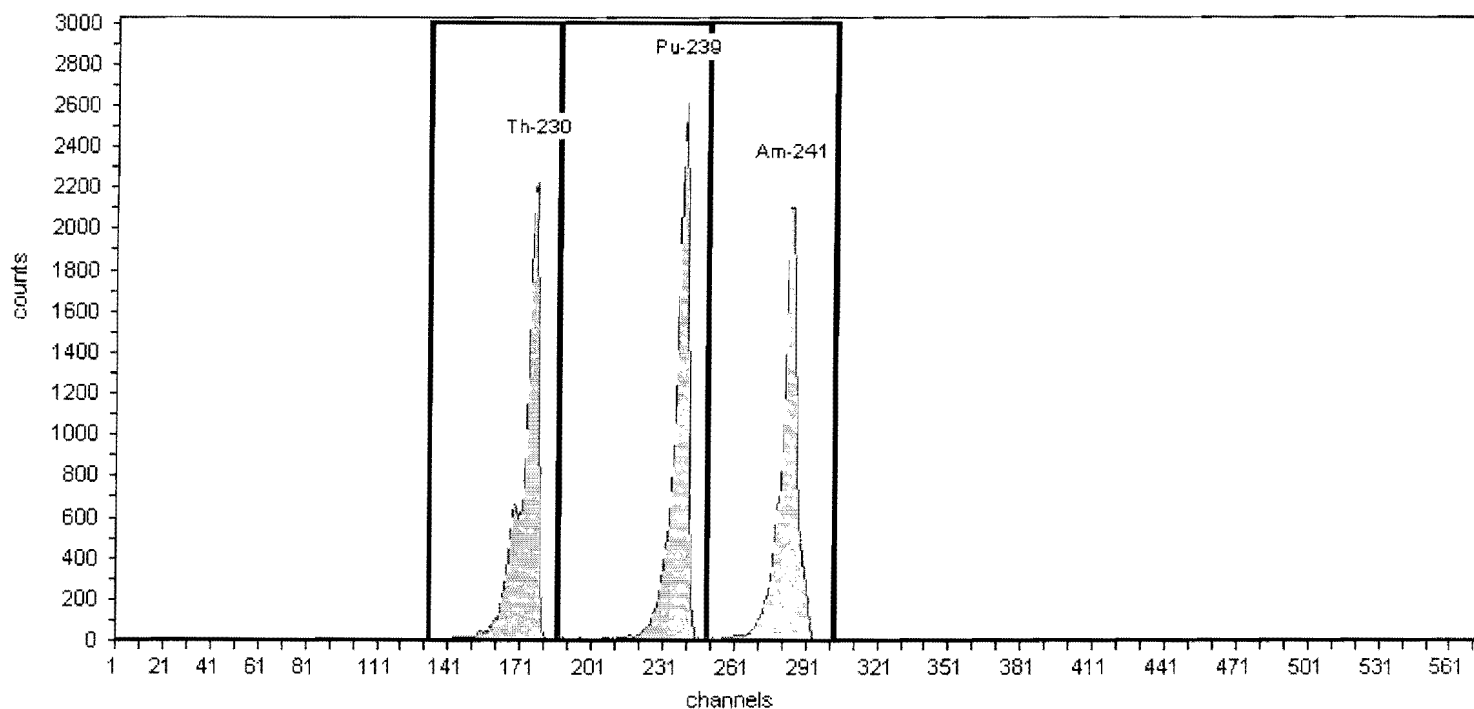
Certificate ID: 82241-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV72 , SN:
Acquisition Start Date: 6/2/2011 8:31:21AM
Live Time: 140.00 min.
Real Time: 140.09 min.
Efficiency: 28.92% +/- 0.35% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,043.00	114.59
Pu-239	240	5.16	186	249	16,690.00	119.21
Am-241	284	5.49	249	303	16,009.00	114.35

Name: June2011_AV72_ICV
Description:
Detector: AV72

Calibration

Calibration Date: 6/2/2011 6:59:09PM
Analyst: 60040

Certificate ID: 82240-334
Prepared by: Analytics

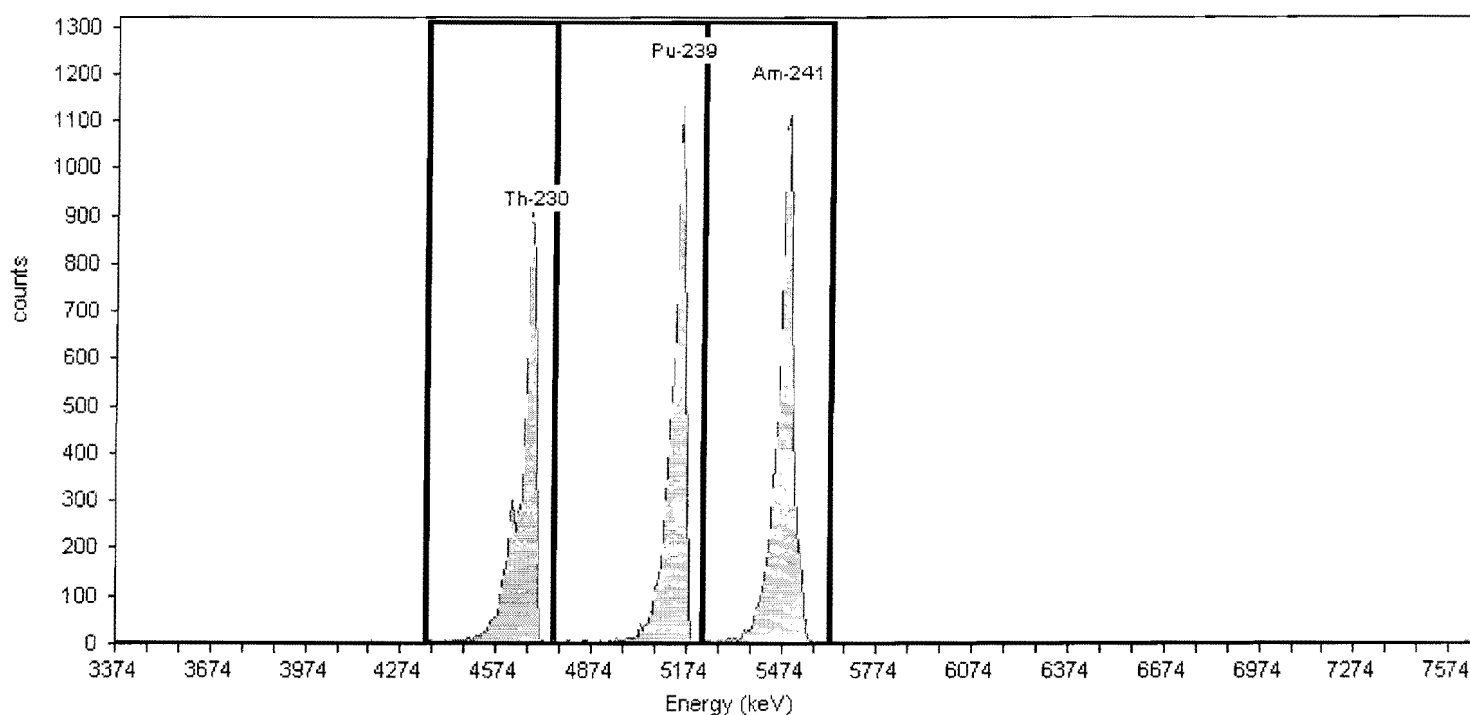
Source Info

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV72 , SN:
Acquisition Start Date: 6/2/2011 5:53:23PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 28.76% +/- 0.44% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,532.00	108.87
Pu-239	240	5.16	186	249	7,534.00	125.57
Am-241	284	5.49	249	303	8,472.00	141.20

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
3:01:55PM 12/16/2011

Calibration

Name: Dec2011_AV73
Description:
Detector: AV73

Calibration Date: 12/16/2011 2:11:57PM
Analyst: 60040

Source Info

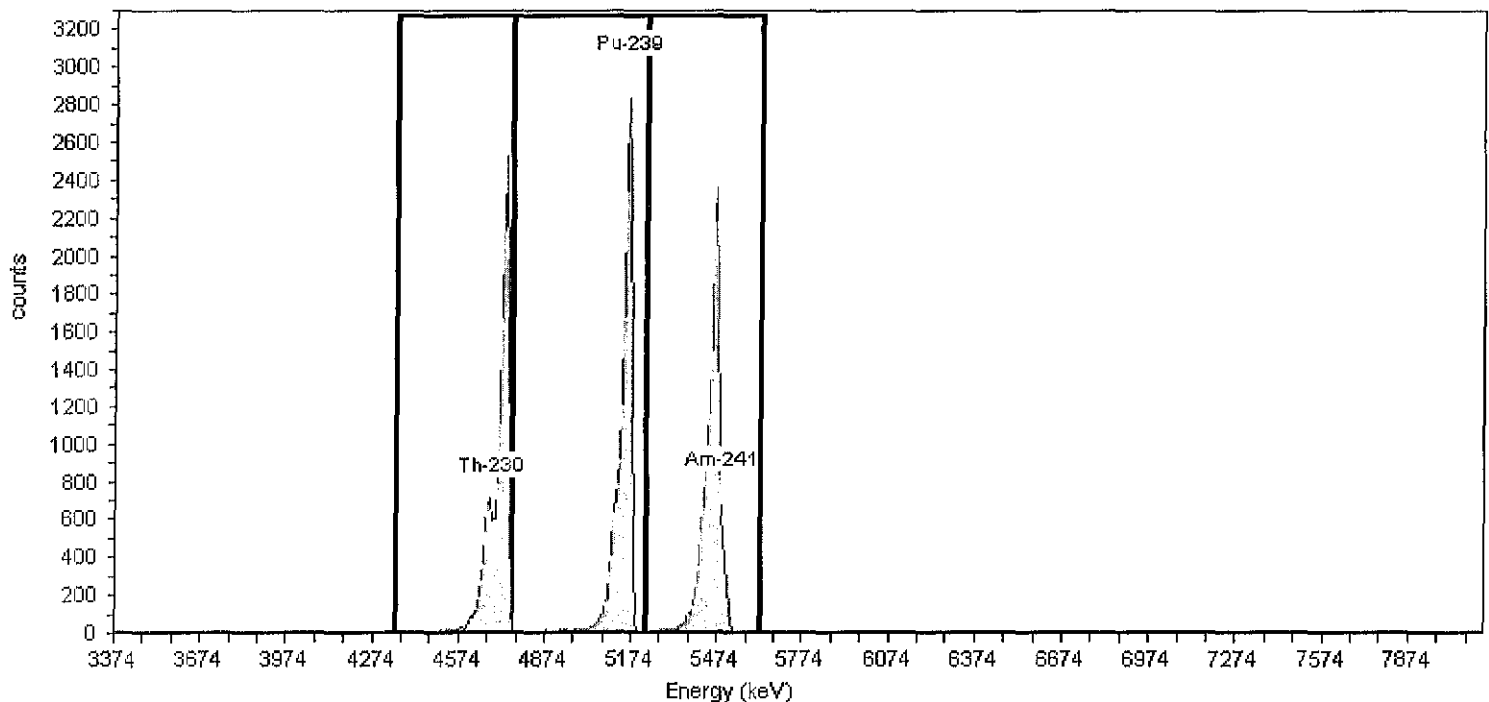
Certificate ID: 82241-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV73, SN: 49-155N4
Acquisition Start Date: 12/12/2011 8:12:18PM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 27.86% +/- 0.34% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,295.00	109.25
Pu-239	240	5.16	186	249	16,257.00	116.12
Am-241	284	5.49	249	303	15,399.00	109.99

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
3:02:00PM 12/16/2011

Name: Dec2011_AV73_ICVa
Description:
Detector: AV73

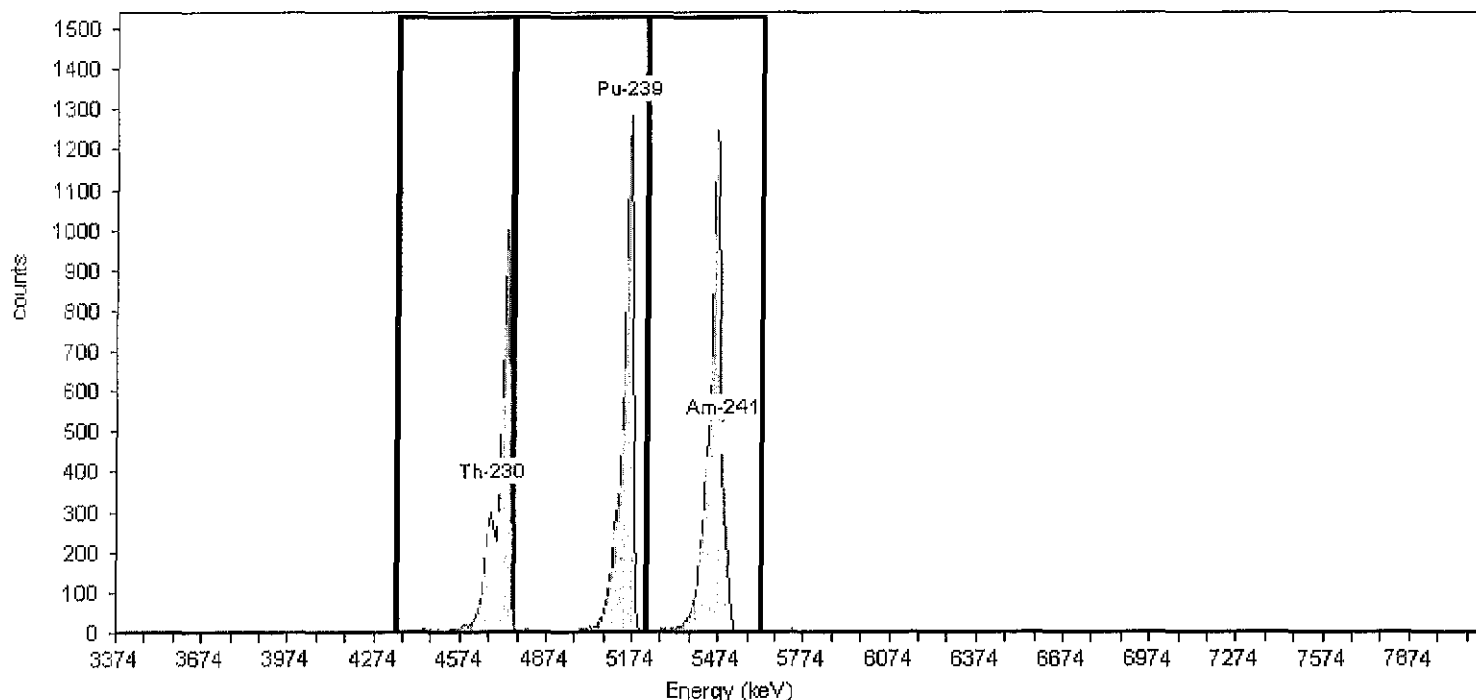
Calibration Date: 12/16/2011 2:12:35PM
Analyst: 60040

Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Detector: AV73, SN: 49-155N4
Acquisition Start Date: 12/12/2011 10:42:20PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 28.27% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,286.00	104.77
Pu-239	240	5.16	186	249	7,533.00	125.55
Am-241	284	5.49	249	303	8,328.00	138.80

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
3:02:16PM 12/16/2011

Name: Dec2011_AV74b
Description:
Detector: AV74

Calibration Date: 12/13/2011 12:09:06PM
Analyst: 60040

Source Info

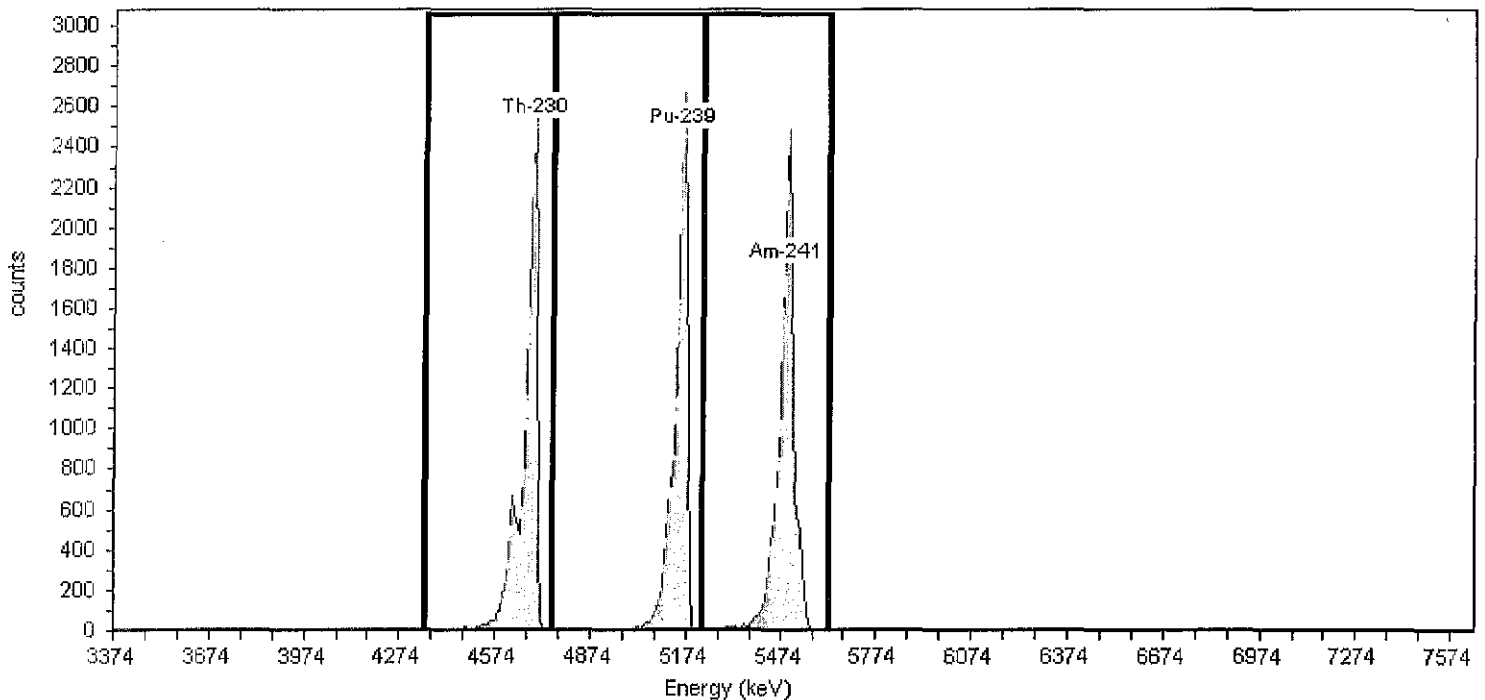
Certificate ID: 82242-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV74, SN: 50-051C6
Acquisition Start Date: 12/13/2011 9:47:59AM
Live Time: 140.00 min.
Real Time: 140.02 min.
Efficiency: 27.38% +/- 0.34% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,164.00	108.31
Pu-239	240	5.16	186	249	14,754.00	105.39
Am-241	284	5.49	249	303	16,382.00	117.01

Calibration

Name: May2011_AV75
Description:
Detector: AV75

Calibration Date: 6/2/2011 11:18:19AM
Analyst: 60040

Source Info

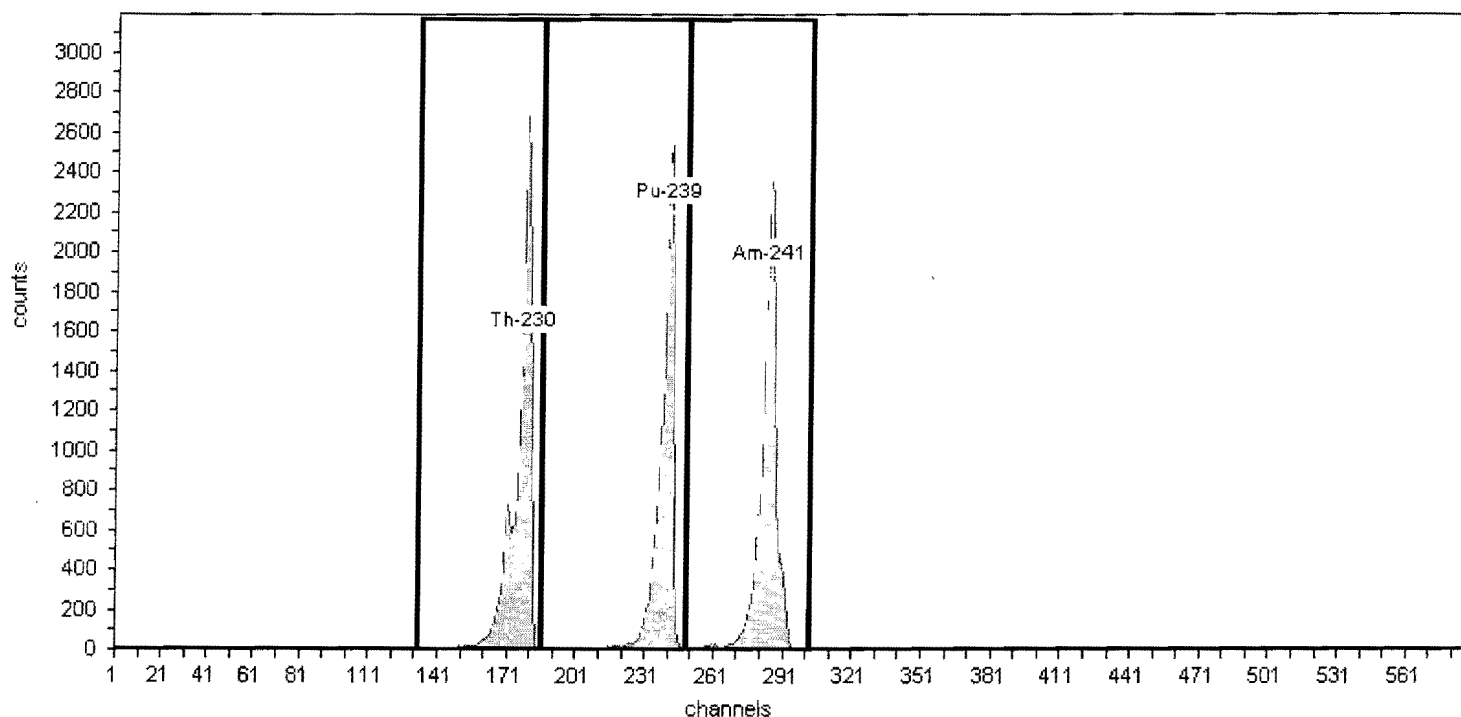
Certificate ID: 82244-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV75 , SN: 46-033P6
Acquisition Start Date: 6/2/2011 8:31:55AM
Live Time: 140.00 min.
Real Time: 140.05 min.
Efficiency: 26.42% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,306.00	116.47
Pu-239	240	5.16	186	249	14,842.00	106.01
Am-241	284	5.49	249	303	15,377.00	109.84

Calibration

Name: June2011_AV75_ICV
Description:
Detector: AV75

Calibration Date: 6/2/2011 5:28:13PM
Analyst: 60040

Source Info

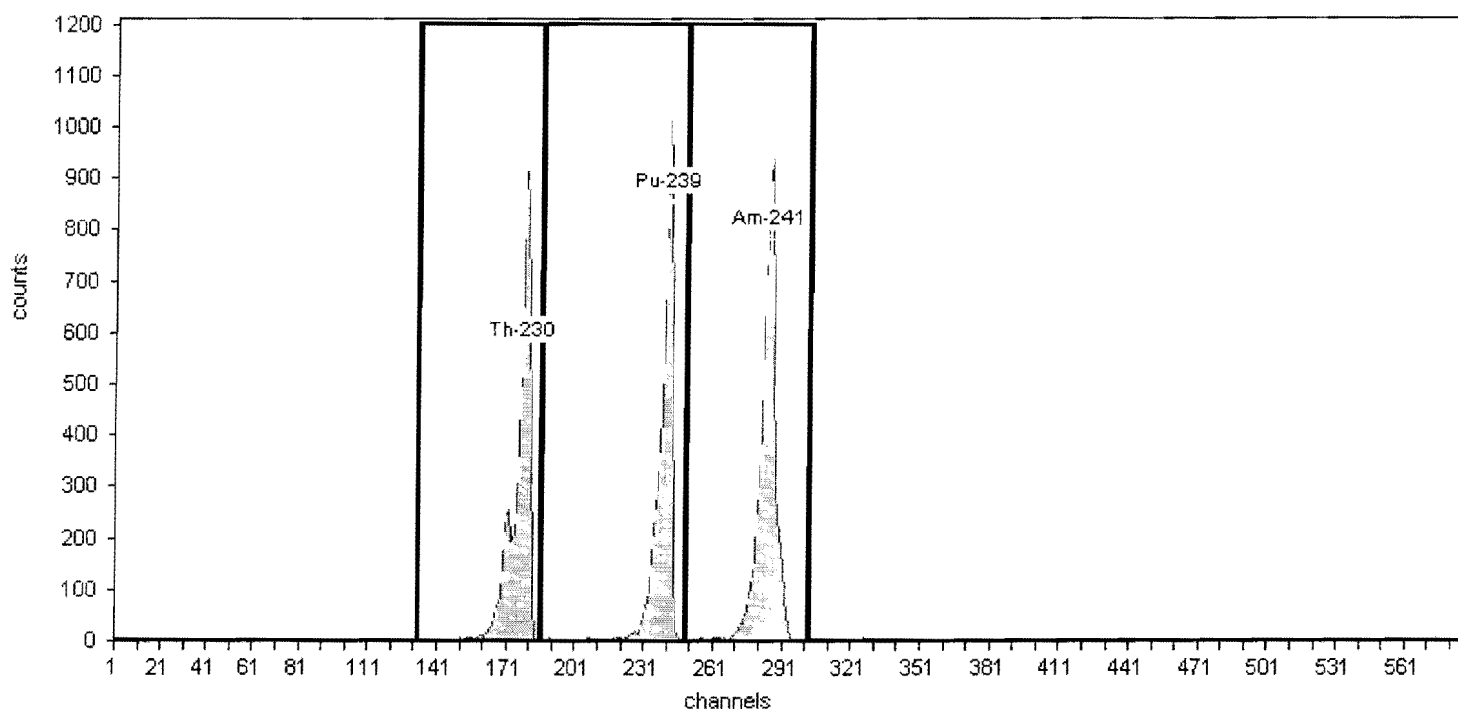
Certificate ID: 82243-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV75 , SN: 46-033P6
Acquisition Start Date: 6/2/2011 12:24:38PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.46% +/- 0.46% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,550.00	92.50
Pu-239	240	5.16	186	249	5,576.00	92.93
Am-241	284	5.49	249	303	6,239.00	103.98

Alpha-Spectroscopy Calibration Report

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
3:02:22PM 12/16/2011

Calibration

Name: Dec2011_AV76_ICV
Description:
Detector: AV76

Calibration Date: 12/15/2011 4:07:23AM
Analyst: 60040

Source Info

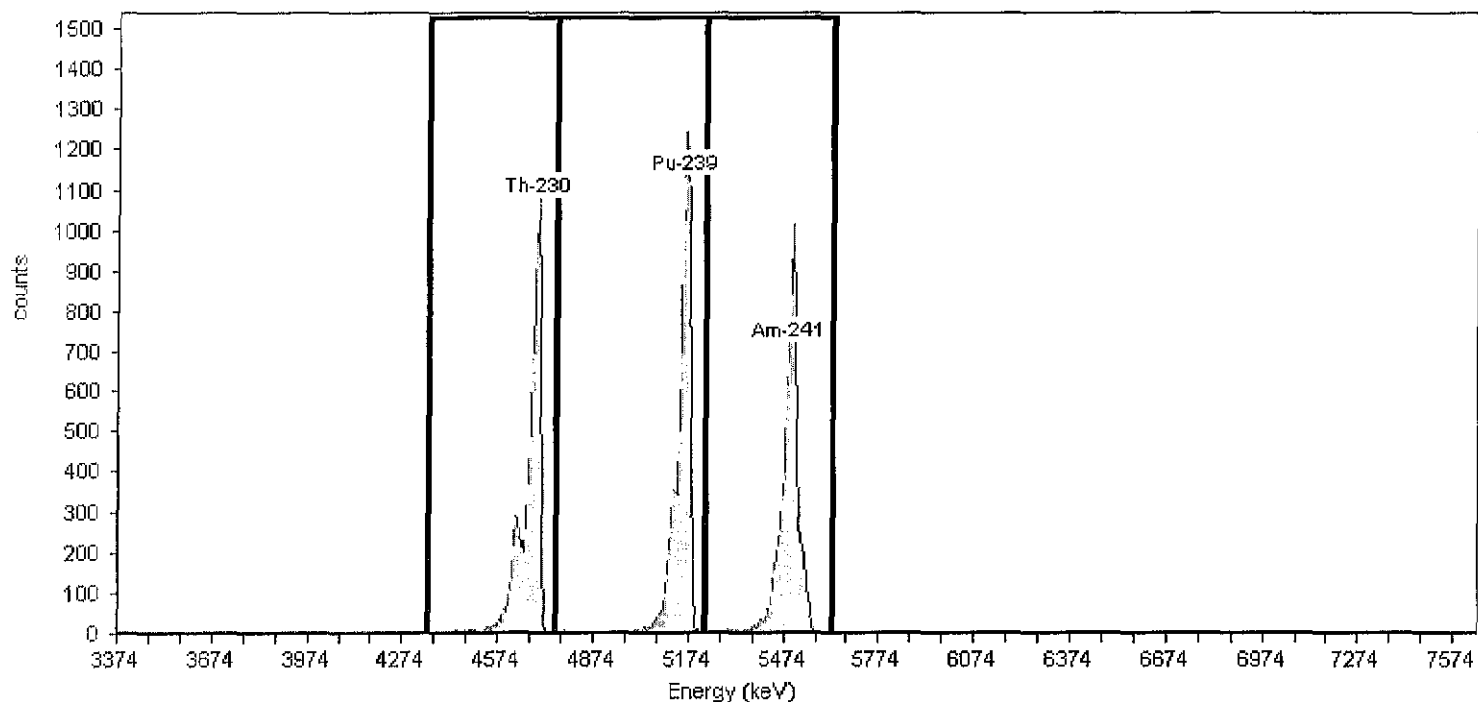
Certificate ID: 82241-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV76, SN: 49-155N6
Acquisition Start Date: 12/15/2011 3:07:21AM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 13.20% +/- 0.30% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,610.00	110.17
Pu-239	240	5.16	186	249	6,773.00	112.88
Am-241	284	5.49	249	303	6,419.00	106.98

Calibration

Name: May2011_AV77
Description:
Detector: AV77

Calibration Date: 6/2/2011 11:18:32AM
Analyst: 60040

Source Info

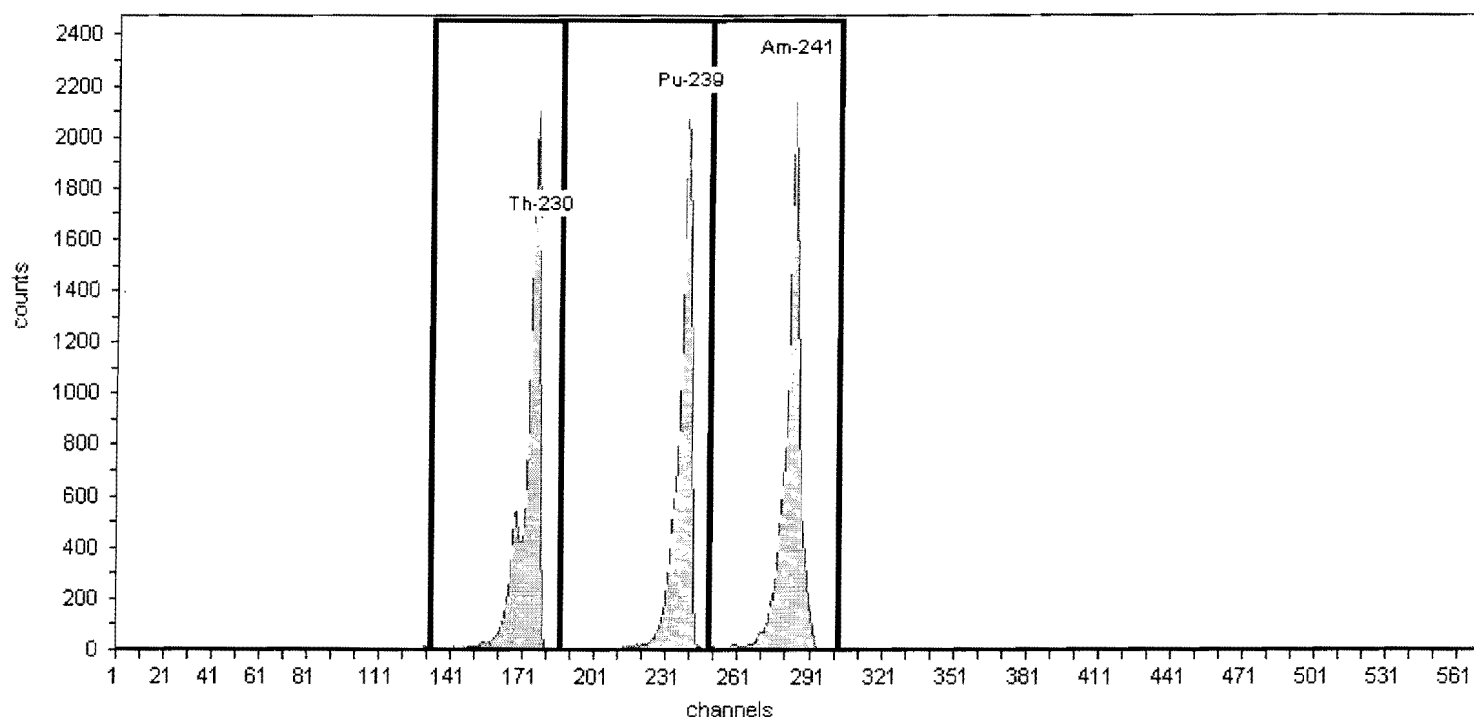
Certificate ID: 82246-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV77 , SN: 49-155N7
Acquisition Start Date: 6/2/2011 8:31:57AM
Live Time: 140.00 min.
Real Time: 140.05 min.
Efficiency: 26.64% +/- 0.39% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	12,445.00	88.89
Pu-239	240	5.16	186	249	11,893.00	84.95
Am-241	284	5.49	249	303	13,527.00	96.62

Calibration

Name: June2011_AV77_ICV
Description:
Detector: AV77

Calibration Date: 6/2/2011 6:58:56PM
Analyst: 60040

Source Info

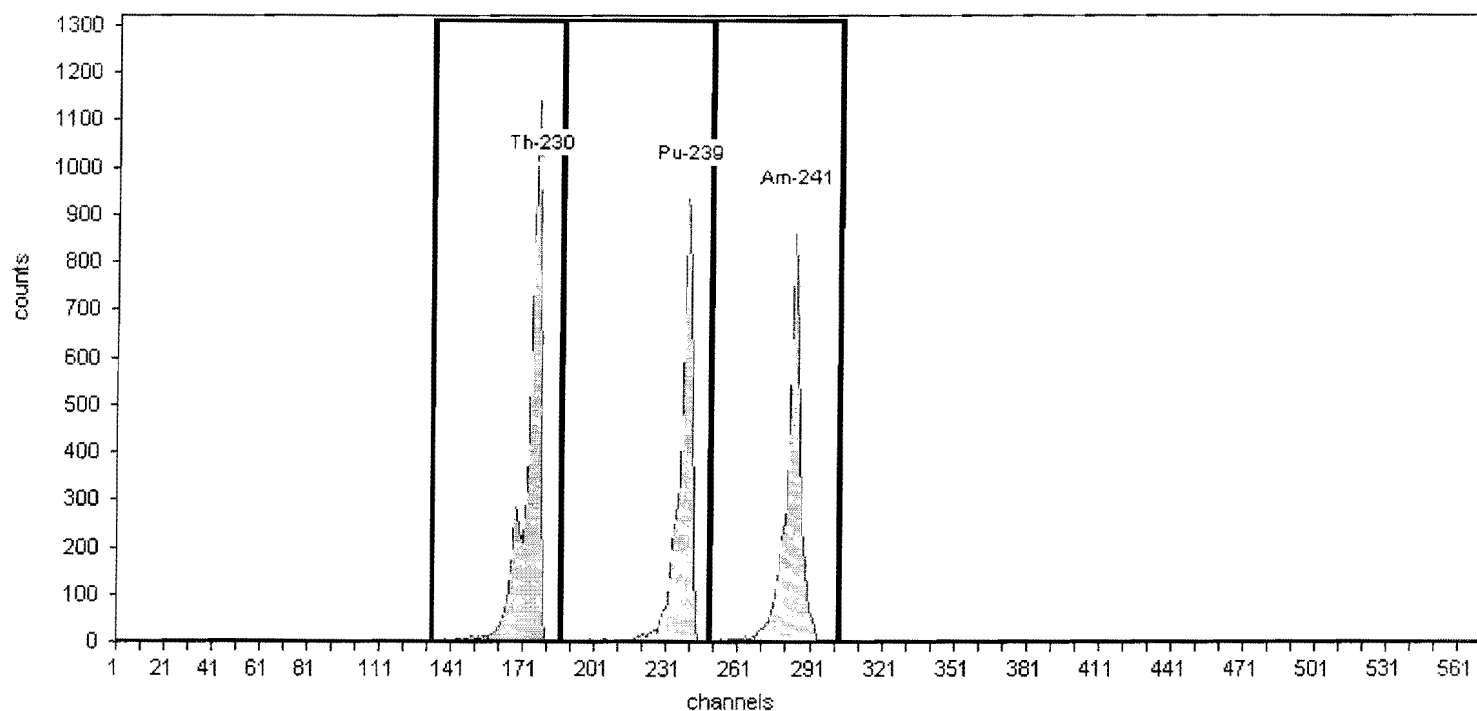
Certificate ID: 82245-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV77 , SN: 49-155N7
Acquisition Start Date: 6/2/2011 5:48:21PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 27.42% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,678.00	111.30
Pu-239	240	5.16	186	249	5,361.00	89.35
Am-241	284	5.49	249	303	5,425.00	90.42

Name: May2011_AV78
Description:
Detector: AV78

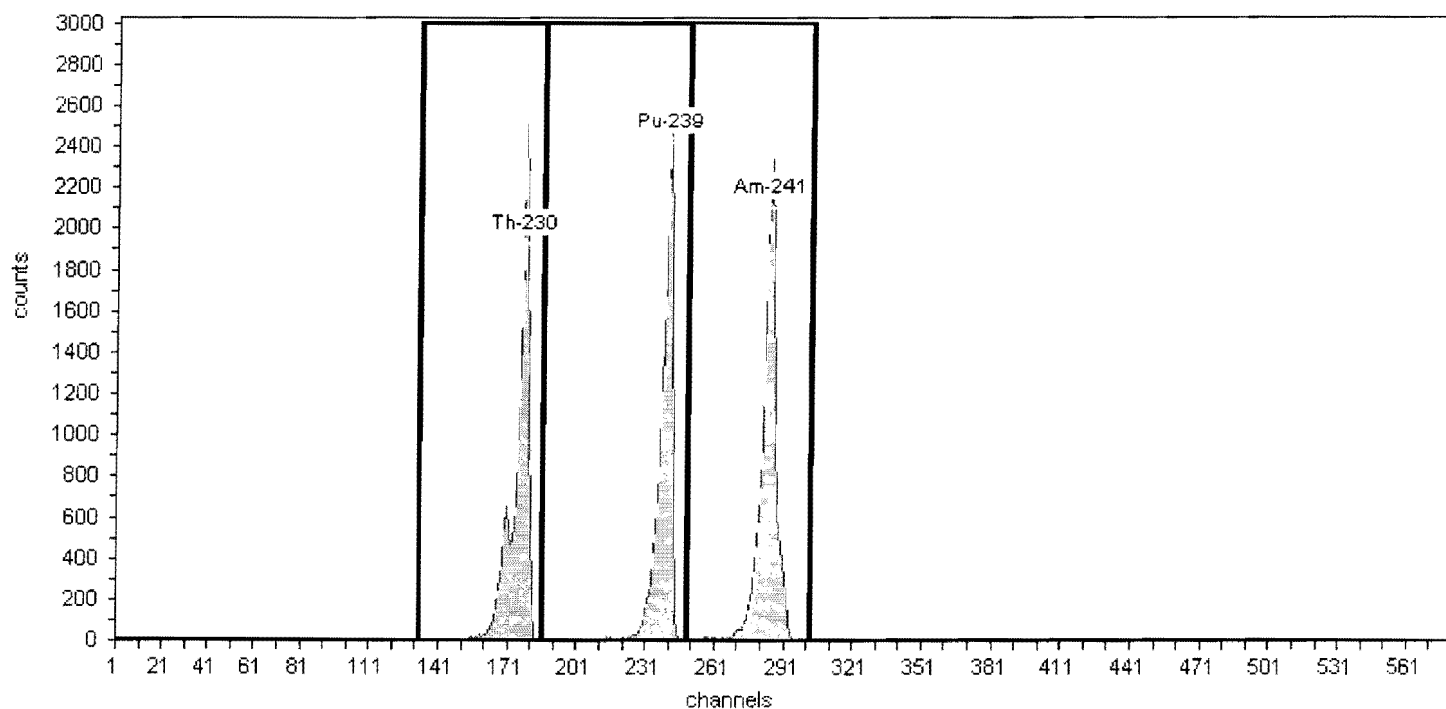
Calibration Date: 6/2/2011 11:18:45AM
Analyst: 60040

Certificate ID: 82247-334
Prepared by: Analytics

Certification Date: 6/10/2010 12:00:00PM
Description:

Detector: AV78 , SN: 46-033FF4
Acquisition Start Date: 6/2/2011 8:32:37AM
Live Time: 140.00 min.
Real Time: 140.06 min.
Efficiency: 27.67% +/- 0.36% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,300.00	102.14
Pu-239	240	5.16	186	249	13,607.00	97.19
Am-241	284	5.49	249	303	14,616.00	104.40

Calibration

Name: June2011_AV78_ICV
Description:
Detector: AV78

Calibration Date: 6/2/2011 6:59:12PM
Analyst: 60040

Source Info

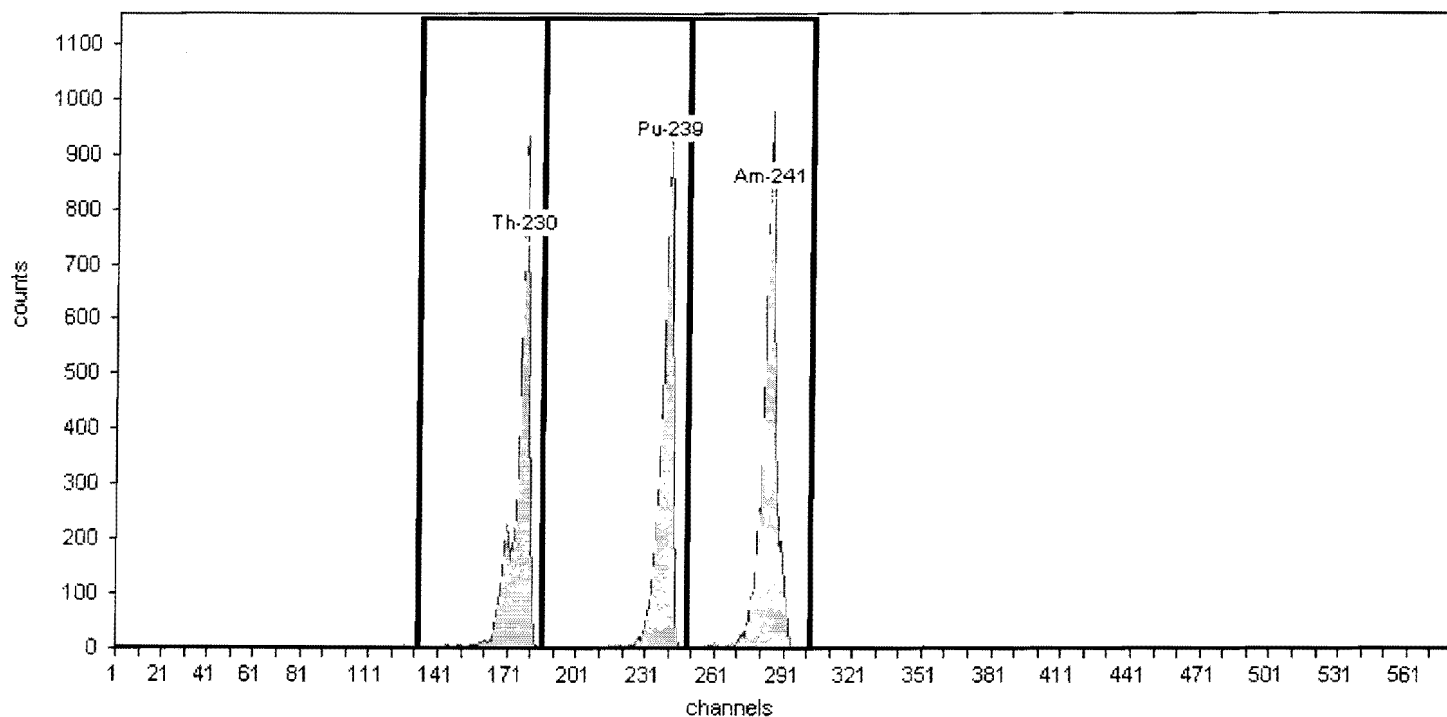
Certificate ID: 82246-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV78 , SN: 46-033FF4
Acquisition Start Date: 6/2/2011 5:54:07PM
Live Time: 60.00 min.
Real Time: 60.02 min.
Efficiency: 26.90% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,352.00	89.20
Pu-239	240	5.16	186	249	5,231.00	87.18
Am-241	284	5.49	249	303	5,807.00	96.78

Calibration

Name: June2011_AV79c
Description:
Detector: AV79

Calibration Date: 6/29/2011 3:57:04PM
Analyst: 60040

Source Info

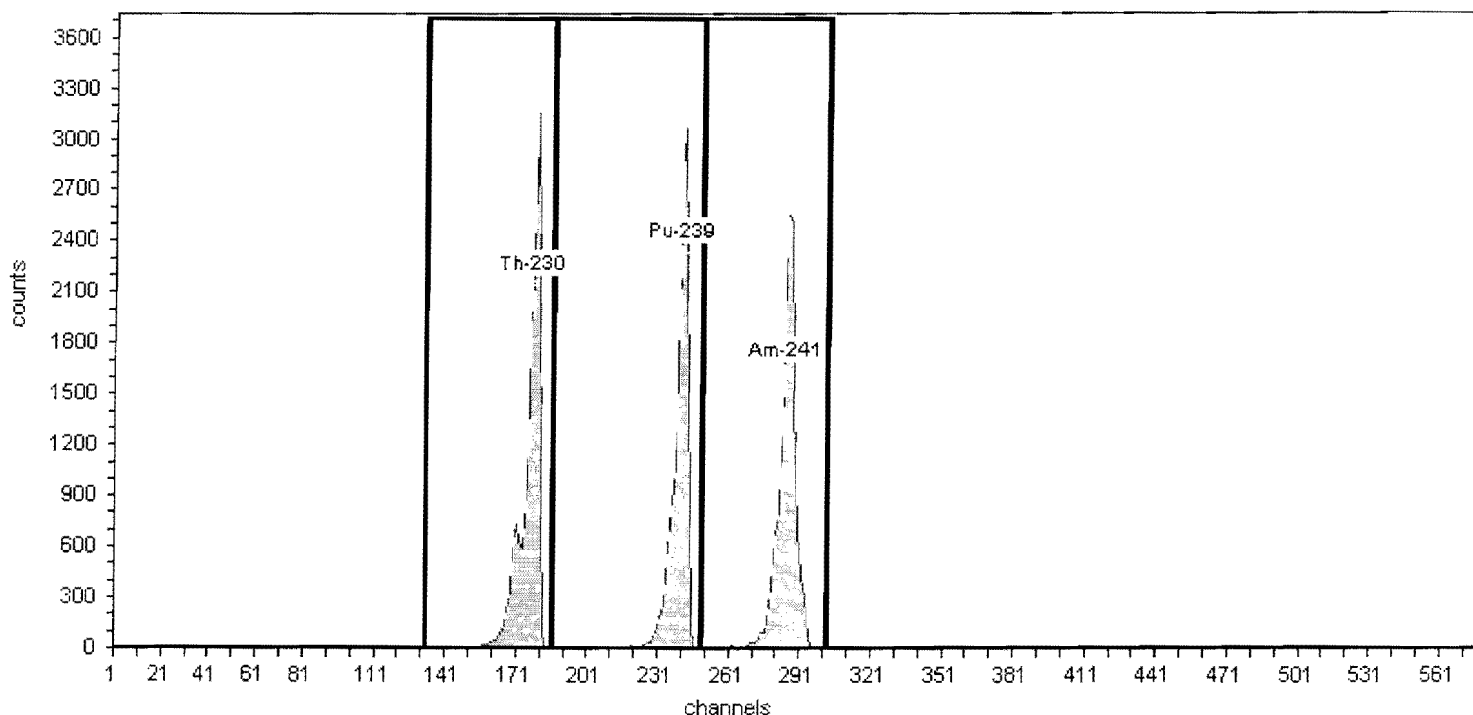
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV79 , SN: 46-033Q5
Acquisition Start Date: 6/29/2011 1:27:48PM
Live Time: 140.00 min.
Real Time: 140.03 min.
Efficiency: 28.34% +/- 0.31% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	17,973.00	128.38
Pu-239	240	5.16	186	249	17,095.00	122.11
Am-241	284	5.49	249	303	17,421.00	124.44

Calibration

Name: June2011_AV79c_ICV
Description:
Detector: AV79

Calibration Date: 6/29/2011 5:16:27PM
Analyst: 60040

Source Info

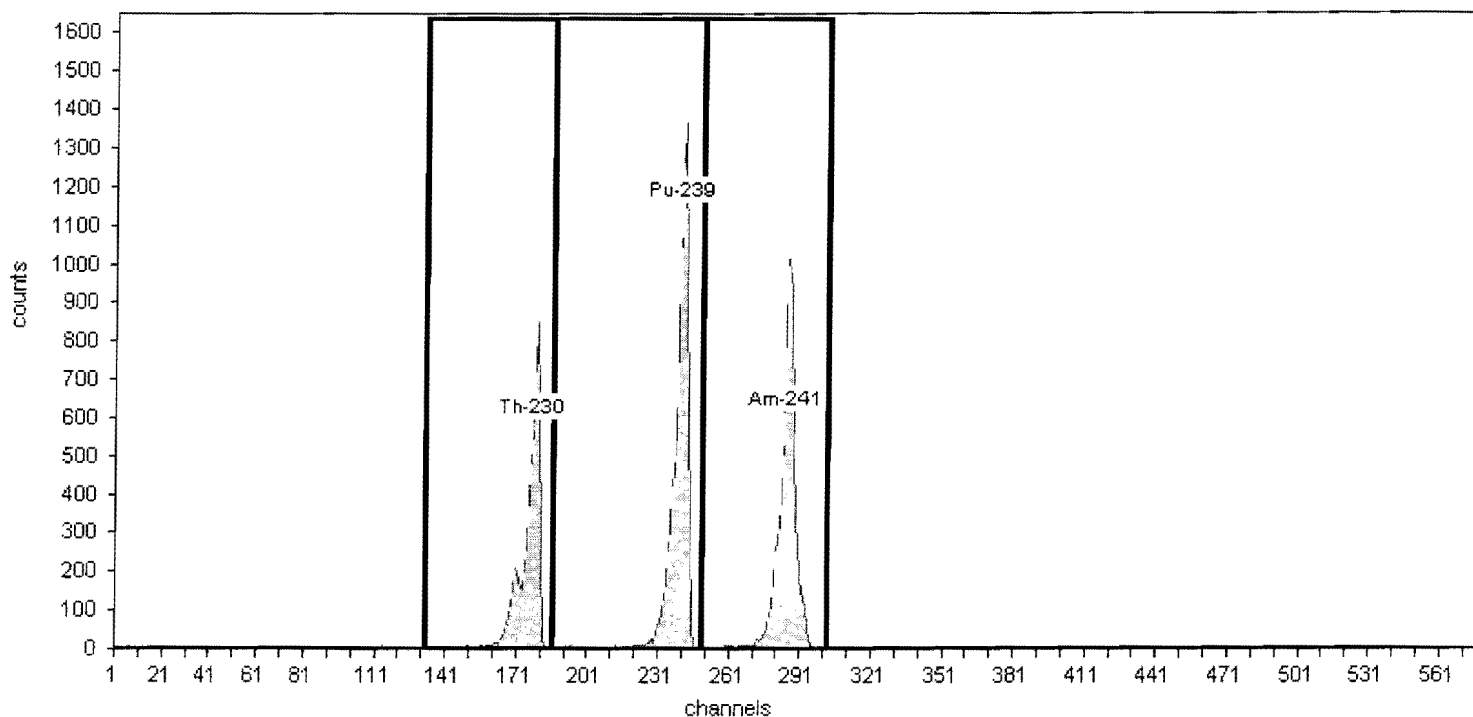
Certificate ID: 63509A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV79 , SN: 46-033Q5
Acquisition Start Date: 6/29/2011 4:12:00PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.03% +/- 0.40% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	4,934.00	82.23
Pu-239	240	5.16	186	249	7,738.00	128.97
Am-241	284	5.49	249	303	6,347.00	105.78

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibrations
Alpha Vision
February 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)		
AV1 Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass		
AV2 Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass		
AV3 June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
AV4 June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
AV6 June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
AV7 June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
AV8 June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
AV9 Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass		
Feb2012_AV9a_ICV	2/22/2012 8:32:32 PM	82236-334	0.2761	Pass	99.4615	Pass
AV10 Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass		
Feb2012_AV10a_ICV	2/23/2012 11:15:43 AM	82237-334	0.2717	Pass	100.292	Pass
AV11 Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass		
AV12 Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass		
Feb2012_AV12a_ICV	2/22/2012 8:32:35 PM	82238-334	0.2707	Pass	100.940	Pass
AV13 June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
AV14 Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass		
AV15 June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV16</i>				
Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
Feb2012_AV16a_ICV	2/22/2012 8:32:38 PM	82243-334	0.2707	Pass 97.7705 Pass
<i>AV17</i>				
June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass
<i>AV18</i>				
Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
Feb2012_AV18a_ICV	2/22/2012 8:32:42 PM	82247-334	0.2566	Pass 95.0864 Pass
<i>AV19</i>				
Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i>				
June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i>				
June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i>				
June2011_AV23	6/2/2011 8:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i>				
Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i>				
June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i>				
June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i>				
June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i>				
February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
Feb2012_AV46_ICV	2/24/2012 12:25:10 PM	82236-334	0.2768	Pass 101.742 Pass
<i>AV47</i>				
June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i>				
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass		
Feb2012_AV50_ICV	2/24/2012 12:25:26 PM	82240-334	0.2783	Pass	98.6252	Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass		
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
<i>AV56</i> Dec2011_AV56	12/15/2011 9:36:08 AM	82238-334	0.2691	Pass		
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass		
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass		
Feb2012_AV58_ICV	2/24/2012 12:25:49 PM	63507-334	0.2851	Pass	93.6999	Fail
Feb2012_AV58a_ICV	2/24/2012 3:16:31 PM	82232-334	0.2863	Pass	101.213	Pass
Feb2012_AV58b_ICV	2/24/2012 4:28:08 PM	82232-334	0.2853	Pass	100.844	Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass		
Feb2012_AV59_ICV	2/24/2012 12:26:03 PM	63508A-334	0.2697	Pass	96.5361	Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV63</i>				
Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass
Feb2012_AV63_ICV	2/23/2012 5:15:45 PM	82234-334	0.2798	Pass 104.191 Pass
<i>AV64</i>				
May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass
<i>AV65</i>				
Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass
Feb2012_AV65_ICV	2/23/2012 5:15:50 PM	82236-334	0.2714	Pass 95.5197 Pass
<i>AV66</i>				
Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass
<i>AV67</i>				
May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
<i>AV69</i>				
June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass
<i>AV70</i>				
June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass
<i>AV71</i>				
May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass
<i>AV72</i>				
May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass
<i>AV73</i>				
Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass
<i>AV74</i>				
Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass
<i>AV75</i>				
May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass
<i>AV77</i>				
May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass
<i>AV78</i>				
May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass
<i>AV79</i>				
June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
<i>AV120</i> June2011_AV120	6/10/2011 2:58:12 PM	63507-334	0.2673	Pass		
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass		
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass		
Feb2012_AV131_ICV	2/24/2012 12:26:24 PM	82245-334	0.2767	Pass	101.234	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
Feb2012_AV133_ICV	2/24/2012 3:16:36 PM	82247-334	0.2639	Pass 99.4605 Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 8 of 8

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV1</i>	6/1/2011 2:07:17 PM	63506-334	0.2689	Pass		
	6/1/2011 4:06:00 PM	63509A-334	0.2635	Pass	98.017	Pass
<i>AV3</i>	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
	6/1/2011 4:06:14 PM	63507-334	0.2659	Pass	99.539	Pass
<i>AV4</i>	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
	6/1/2011 4:06:27 PM	63508A-334	0.2631	Pass	98.209	Pass
<i>AV6</i>	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
	6/1/2011 4:06:40 PM	82232-334	0.2848	Pass	101.88	Pass
<i>AV7</i>	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
	6/1/2011 4:06:58 PM	82233-334	0.2732	Pass	98.157	Pass
<i>AV8</i>	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
	6/1/2011 4:07:14 PM	82234-334	0.2798	Pass	99.955	Pass
<i>AV9</i>	6/1/2011 2:10:02 PM	82236-334	0.2743	Pass		
	6/1/2011 4:07:30 PM	82235-334	0.2766	Pass	100.82	Pass
<i>AV10</i>	6/1/2011 2:10:22 PM	82237-334	0.2625	Pass		
	6/1/2011 4:07:43 PM	82236-334	0.2723	Pass	103.70	Pass
<i>AV11</i>	6/10/2011 2:02:03 PM	82238-334	0.2759	Pass		
	6/10/2011 3:55:36 PM	82237-334	0.2712	Pass	98.291	Pass
<i>AV12</i>	6/1/2011 2:12:35 PM	82239-334	0.2713	Pass		
	6/1/2011 4:08:49 PM	82238-334	0.2741	Pass	101.04	Pass
<i>AV13</i>	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
	6/1/2011 4:09:02 PM	82239-334	0.2747	Pass	98.276	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV14</i>	6/10/2011 2:02:15 PM	82241-334	0.2799	Pass		
	6/10/2011 3:55:45 PM	82240-334	0.2727	Pass	97.425	Pass
<i>AV15</i>	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		
	6/1/2011 4:09:33 PM	82241-334	0.2708	Pass	99.161	Pass
<i>AV16</i>	6/1/2011 2:13:39 PM	82243-334	0.2692	Pass		
	6/1/2011 4:09:45 PM	82242-334	0.2732	Pass	101.48	Pass
<i>AV17</i>	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass		
	6/10/2011 3:55:50 PM	82243-334	0.2607	Pass	99.547	Pass
<i>AV18</i>	6/1/2011 2:12:48 PM	82245-334	0.2640	Pass		
	6/1/2011 4:10:09 PM	82244-334	0.2576	Pass	97.578	Pass
<i>AV19</i>	6/10/2011 2:48:01 PM	82246-334	0.2592	Pass		
	6/20/2011 11:48:18 AM	82245-334	0.2695	Pass	103.95	Pass
<i>AV20</i>	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass		
	6/1/2011 4:10:40 PM	82246-334	0.2675	Pass	99.056	Pass
<i>AV21</i>	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass		
	6/29/2011 5:11:24 PM	63507-334	0.2611	Pass	100.59	Pass
<i>AV22</i>	6/10/2011 4:38:28 PM	63507-334	0.2595	Pass		
	6/20/2011 3:03:26 PM	63506-334	0.2514	Pass	96.881	Pass
<i>AV23</i>	6/2/2011 6:09:19 AM	63508A-334	0.2563	Pass		
	6/2/2011 5:26:58 PM	63507-334	0.2560	Pass	99.882	Pass
<i>AV24</i>	6/2/2011 6:09:22 AM	63509A-334	0.2639	Pass		
	6/2/2011 5:27:05 PM	63508A-334	0.2616	Pass	99.111	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV43</i>	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass		
	6/20/2011 4:09:28 AM	63509A-334	0.2684	Pass	96.334	Pass
<i>AV44</i>	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass		
	6/20/2011 12:55:44 PM	82232-334	0.2760	Pass	101.91	Pass
<i>AV45</i>	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass		
	6/2/2011 5:27:08 PM	82233-334	0.2743	Pass	97.568	Pass
<i>AV46</i>	6/2/2011 6:09:37 AM	82235-334	0.2842	Pass		
	6/2/2011 5:27:12 PM	82234-334	0.2875	Pass	101.13	Pass
<i>AV47</i>	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass		
	6/20/2011 12:55:48 PM	82235-334	0.2785	Pass	103.49	Pass
<i>AV48</i>	6/20/2011 8:44:03 AM	82237-334	0.2671	Pass		
	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	101.82	Pass
<i>AV49</i>	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
	6/2/2011 5:27:16 PM	82237-334	0.2745	Pass	96.349	Pass
<i>AV50</i>	6/20/2011 8:44:13 AM	82239-334	0.2730	Pass		
	6/20/2011 12:55:56 PM	82238-334	0.2754	Pass	100.88	Pass
<i>AV51</i>	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
	6/2/2011 5:27:20 PM	82239-334	0.2704	Pass	97.595	Pass
<i>AV52</i>	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
	6/2/2011 5:27:24 PM	82240-334	0.2893	Pass	100.78	Pass
<i>AV54</i>	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
	6/2/2011 5:27:29 PM	82242-334	0.2763	Pass	101.63	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV55</i>	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
	6/20/2011 12:56:00 PM	82243-334	0.2693	Pass	100.32	Pass
<i>AV57</i>	6/2/2011 6:10:07 AM	82246-334	0.2733	Pass		
	6/2/2011 5:27:35 PM	82245-334	0.2745	Pass	100.46	Pass
<i>AV58</i>	6/2/2011 6:10:11 AM	82247-334	0.2842	Pass		
	6/2/2011 5:27:39 PM	82246-334	0.2740	Pass	96.420	Pass
<i>AV59</i>	6/29/2011 3:56:50 PM	63509A-334	0.2722	Pass		
	6/29/2011 5:11:40 PM	63508A-334	0.2694	Pass	98.981	Pass
<i>AV60</i>	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
	6/2/2011 5:27:47 PM	63506-334	0.2570	Pass	97.082	Pass
<i>AV61</i>	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
	6/20/2011 3:32:40 PM	63507-334	0.2635	Pass	98.951	Pass
<i>AV62</i>	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		
	6/2/2011 6:59:03 PM	63508A-334	0.2697	Pass	99.053	Pass
<i>AV63</i>	6/2/2011 11:16:12 AM	82232-334	0.2767	Pass		
	6/2/2011 5:27:53 PM	63509A-334	0.2637	Pass	95.302	Pass
<i>AV64</i>	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass		
	6/2/2011 5:27:57 PM	82232-334	0.2867	Pass	101.23	Pass
<i>AV65</i>	6/2/2011 11:16:39 AM	82234-334	0.2798	Pass		
	6/2/2011 6:58:45 PM	82233-334	0.2773	Pass	99.094	Pass
<i>AV66</i>	6/2/2011 11:16:51 AM	82235-334	0.2808	Pass		
	6/2/2011 6:58:50 PM	82234-334	0.2803	Pass	99.816	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV67</i>	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass		
	6/2/2011 5:28:01 PM	82235-334	0.2955	Pass	100.85	Pass
<i>AV68</i>	6/2/2011 11:17:18 AM	82237-334	0.2658	Pass		
	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass	104.12	Pass
<i>AV69</i>	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass		
	6/23/2011 1:18:22 PM	82237-334	0.2651	Pass	96.439	Pass
<i>AV70</i>	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass		
	6/22/2011 2:20:23 AM	82238-334	0.2700	Pass	97.724	Pass
<i>AV71</i>	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass		
	6/2/2011 6:59:06 PM	82239-334	0.2735	Pass	99.757	Pass
<i>AV72</i>	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass		
	6/2/2011 6:59:09 PM	82240-334	0.2876	Pass	99.447	Pass
<i>AV73</i>	6/20/2011 2:14:44 PM	82242-334	0.2887	Pass		
	6/20/2011 3:32:43 PM	82241-334	0.2772	Pass	96.029	Pass
<i>AV74</i>	6/21/2011 2:25:05 PM	82243-334	0.2715	Pass		
	6/22/2011 2:21:05 AM	82242-334	0.2759	Pass	101.65	Pass
<i>AV75</i>	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass		
	6/2/2011 5:28:13 PM	82243-334	0.2646	Pass	100.16	Pass
<i>AV77</i>	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass		
	6/2/2011 6:58:56 PM	82245-334	0.2742	Pass	102.93	Pass
<i>AV78</i>	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass		
	6/2/2011 6:59:12 PM	82246-334	0.2690	Pass	97.223	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV79</i>	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass		
	6/29/2011 5:16:27 PM	63509A-334	0.2703	Pass	95.357	Pass
<i>AV80</i>	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass		
	6/10/2011 5:01:49 PM	63506-334	0.2530	Pass	98.103	Pass
<i>AV82</i>	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass		
	6/28/2011 9:28:02 PM	63508A-334	0.2631	Pass	98.329	Pass
<i>AV83</i>	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass		
	6/28/2011 9:29:04 PM	63509A-334	0.2700	Pass	97.024	Pass
<i>AV84</i>	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass		
	6/28/2011 9:30:12 PM	82232-334	0.2822	Pass	103.00	Pass
<i>AV85</i>	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass		
	6/28/2011 9:31:17 PM	82233-334	0.2784	Pass	97.612	Pass
<i>AV86</i>	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass		
	6/28/2011 9:32:01 PM	82234-334	0.2800	Pass	99.596	Pass
<i>AV87</i>	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass		
	6/22/2011 2:21:15 AM	82235-334	0.2987	Pass	101.42	Pass
<i>AV88</i>	6/28/2011 9:33:11 PM	82237-334	0.2657	Pass		
	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	104.76	Pass
<i>AV89</i>	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass		
	6/2/2011 6:58:53 PM	82237-334	0.2724	Pass	100.97	Pass
<i>AV90</i>	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass		
	6/28/2011 9:34:38 PM	82238-334	0.2804	Pass	101.83	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV92</i>	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass		
	6/28/2011 9:35:31 PM	82240-334	0.2758	Pass	99.357	Pass
<i>AV93</i>	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass		
	6/10/2011 5:05:28 PM	82241-334	0.2694	Pass	97.178	Pass
<i>AV94</i>	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass		
	6/29/2011 5:16:31 PM	82246-334	0.2690	Pass	97.805	Pass
<i>AV95</i>	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass		
	7/1/2011 9:11:14 AM	82243-334	0.2666	Pass	100.11	Pass
<i>AV96</i>	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass		
	6/22/2011 2:21:15 AM	82244-334	0.2710	Pass	98.792	Pass
<i>AV97</i>	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass		
	6/28/2011 9:40:49 PM	82245-334	0.2753	Pass	101.41	Pass
<i>AV98</i>	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass		
	6/28/2011 9:41:29 PM	82246-334	0.2744	Pass	97.774	Pass
<i>AV99</i>	6/29/2011 3:57:13 PM	82233-334	0.2698	Pass		
	6/29/2011 5:16:35 PM	82232-334	0.2786	Pass	103.27	Pass
<i>AV100</i>	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass		
	6/10/2011 2:57:02 PM	63506-334	0.2576	Pass	97.938	Pass
<i>AV101</i>	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass		
	6/10/2011 2:42:00 PM	63507-334	0.2644	Pass	101.90	Pass
<i>AV102</i>	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass		
	6/10/2011 2:42:43 PM	63508A-334	0.2635	Pass	98.782	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV103</i>	6/29/2011 3:57:18 PM	82237-334	0.2644	Pass		
	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	102.81	Pass
<i>AV104</i>	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass		
	6/10/2011 2:46:11 PM	82232-334	0.2737	Pass	100.94	Pass
<i>AV105</i>	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass		
	6/10/2011 2:48:49 PM	82233-334	0.2562	Pass	98.471	Pass
<i>AV106</i>	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass		
	6/10/2011 2:49:46 PM	82234-334	0.2796	Pass	98.873	Pass
<i>AV107</i>	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass		
	6/10/2011 2:50:11 PM	82235-334	0.2786	Pass	99.167	Pass
<i>AV108</i>	6/10/2011 2:50:25 PM	82237-334	0.2880	Pass		
	6/10/2011 2:50:39 PM	82236-334	0.2848	Pass	98.912	Pass
<i>AV109</i>	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass		
	6/10/2011 2:51:04 PM	82237-334	0.2699	Pass	102.16	Pass
<i>AV110</i>	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass		
	6/10/2011 2:51:31 PM	82238-334	0.2723	Pass	98.639	Pass
<i>AV111</i>	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass		
	6/10/2011 2:51:58 PM	82239-334	0.2698	Pass	98.397	Pass
<i>AV112</i>	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass		
	6/10/2011 2:52:23 PM	82240-334	0.2662	Pass	98.990	Pass
<i>AV113</i>	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass		
	6/30/2011 10:18:11 AM	82246-334	0.2733	Pass	97.694	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV114</i>	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass		
	6/10/2011 2:54:10 PM	82242-334	0.2759	Pass	103.28	Pass
<i>AV115</i>	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
	6/10/2011 2:57:44 PM	82243-334	0.2721	Pass	100.29	Pass
<i>AV116</i>	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
	6/27/2011 10:38:43 PM	82244-334	0.2729	Pass	97.394	Pass
<i>AV117</i>	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
	6/10/2011 2:55:11 PM	82245-334	0.2656	Pass	102.23	Pass
<i>AV118</i>	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
	6/10/2011 2:55:36 PM	82246-334	0.2681	Pass	98.996	Pass
<i>AV119</i>	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
	6/29/2011 5:16:45 PM	82233-334	0.2724	Pass	98.002	Pass
<i>AV120</i>	6/10/2011 2:56:12 PM	63507-334	0.2673	Pass		
	6/10/2011 2:56:27 PM	63506-334	0.2588	Pass	96.816	Pass
<i>AV121</i>	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
	6/10/2011 2:58:22 PM	63507-334	0.2663	Pass	99.376	Pass
<i>AV122</i>	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
	6/10/2011 2:58:47 PM	63508A-334	0.2595	Pass	98.546	Pass
<i>AV123</i>	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
	6/22/2011 3:45:08 AM	82241-334	0.2847	Pass	104.01	Pass
<i>AV124</i>	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
	6/22/2011 2:21:19 AM	82232-334	0.2722	Pass	102.70	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI25</i>	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
	6/22/2011 2:21:37 AM	82233-334	0.2671	Pass	97.276	Pass
<i>AVI26</i>	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
	6/10/2011 3:00:12 PM	82234-334	0.2754	Pass	100.00	Pass
<i>AVI27</i>	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
	6/23/2011 8:58:08 AM	82235-334	0.2802	Pass	101.68	Pass
<i>AVI28</i>	6/3/2011 3:29:09 PM	82237-334	0.2615	Pass		
	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass	104.65	Pass
<i>AVI30</i>	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
	6/10/2011 3:01:20 PM	82238-334	0.2696	Pass	100.39	Pass
<i>AVI31</i>	6/3/2011 3:29:24 PM	82240-334	0.2766	Pass		
	6/10/2011 3:01:46 PM	82239-334	0.2724	Pass	98.466	Pass
<i>AVI32</i>	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass		
	6/30/2011 12:41:22 PM	82246-334	0.2649	Pass	97.648	Pass
<i>AVI33</i>	6/30/2011 8:32:09 PM	82234-334	0.2707	Pass		
	7/1/2011 9:11:19 AM	82233-334	0.2695	Pass	99.548	Pass
<i>AVI34</i>	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass		
	6/10/2011 3:02:44 PM	82242-334	0.2790	Pass	98.713	Pass
<i>AVI35</i>	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass		
	6/10/2011 3:02:54 PM	82243-334	0.2675	Pass	101.88	Pass
<i>AVI36</i>	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass		
	6/10/2011 3:03:17 PM	82244-334	0.2643	Pass	97.639	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV137</i>	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass		
	6/10/2011 3:03:29 PM	82245-334	0.2844	Pass	103.57	Pass
<i>AV138</i>	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass		
	6/10/2011 3:03:43 PM	82246-334	0.2609	Pass	98.539	Pass
<i>AV139</i>	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass		
	6/29/2011 5:16:50 PM	82234-334	0.2747	Pass	101.26	Pass
<i>AV140</i>	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass		
	6/10/2011 3:04:11 PM	63506-334	0.2506	Pass	98.005	Pass
<i>AV141</i>	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass		
	6/10/2011 3:04:21 PM	63507-334	0.2577	Pass	99.845	Pass
<i>AV142</i>	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass		
	6/10/2011 3:04:32 PM	63508A-334	0.2620	Pass	99.586	Pass
<i>AV143</i>	6/10/2011 3:04:43 PM	82232-334	0.2740	Pass		
	6/10/2011 3:05:29 PM	63509A-334	0.2649	Pass	96.698	Pass
<i>AV144</i>	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass		
	6/10/2011 3:05:38 PM	82232-334	0.2825	Pass	103.75	Pass
<i>AV145</i>	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass		
	6/10/2011 3:05:47 PM	82233-334	0.2679	Pass	97.443	Pass
<i>AV146</i>	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass		
	6/10/2011 3:05:57 PM	82234-334	0.2795	Pass	101.70	Pass

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV147</i>	6/14/2011 9:47:31 AM	82236-334	0.2858	Pass		
	6/14/2011 9:48:52 AM	82247-334	0.2876	Pass	100.65	Pass
<i>AV148</i>	6/21/2011 2:32:02 PM	82237-334	0.2655	Pass		
	6/21/2011 2:32:43 PM	82236-334	0.2752	Pass	103.63	Pass
<i>AV149</i>	6/21/2011 2:34:00 PM	82238-334	0.2822	Pass		
	6/21/2011 2:34:33 PM	82237-334	0.2743	Pass	97.212	Pass
<i>AV151</i>	6/21/2011 2:36:24 PM	82240-334	0.2779	Pass		
	6/21/2011 2:36:47 PM	82239-334	0.2757	Pass	99.212	Pass
<i>AV152</i>	6/21/2011 2:37:11 PM	82241-334	0.2700	Pass		
	6/21/2011 2:37:32 PM	82240-334	0.2698	Pass	99.948	Pass
<i>AV153</i>	6/30/2011 9:05:44 AM	63508A-334	0.2610	Pass		
	6/30/2011 10:17:32 AM	63507-334	0.2585	Pass	99.026	Pass
<i>AV154</i>	6/21/2011 2:39:31 PM	82243-334	0.2680	Pass		
	6/21/2011 2:40:03 PM	82242-334	0.2722	Pass	101.56	Pass
<i>AV155</i>	6/27/2011 9:21:16 PM	82244-334	0.2651	Pass		
	6/27/2011 9:22:09 PM	82243-334	0.2628	Pass	99.134	Pass
<i>AV156</i>	6/27/2011 9:22:55 PM	82245-334	0.2721	Pass		
	6/27/2011 9:23:40 PM	82244-334	0.2640	Pass	97.019	Pass
<i>AV157</i>	6/27/2011 9:24:40 PM	82246-334	0.2630	Pass		
	6/27/2011 9:25:17 PM	82245-334	0.2703	Pass	102.74	Pass
<i>AV158</i>	6/30/2011 11:40:49 AM	82235-334	0.2758	Pass		
	6/30/2011 12:51:15 PM	82234-334	0.2756	Pass	99.948	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI59</i>	6/30/2011 9:06:12 AM	82236-334	0.2701	Pass		
	6/30/2011 9:06:45 AM	82235-334	0.2750	Pass	101.83	Pass
<i>AVI60</i>	6/30/2011 9:07:03 AM	82237-334	0.2630	Pass		
	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	100.98	Pass
<i>AVI61</i>	6/27/2011 9:29:26 PM	63508A-334	0.2652	Pass		
	6/27/2011 9:29:59 PM	63507-334	0.2604	Pass	98.212	Pass
<i>AVI62</i>	6/23/2011 11:26:56 AM	63509A-334	0.2637	Pass		
	6/23/2011 1:44:04 PM	63508A-334	0.2643	Pass	100.20	Pass
<i>AVI63</i>	6/15/2011 1:14:12 AM	82232-334	0.2782	Pass		
	6/27/2011 9:30:57 PM	63509A-334	0.2748	Pass	98.774	Pass
<i>AVI64</i>	6/30/2011 9:07:48 AM	82241-334	0.2661	Pass		
	6/30/2011 9:08:11 AM	82240-334	0.2702	Pass	101.52	Pass
<i>AVI65</i>	6/15/2011 1:14:21 AM	82234-334	0.2869	Pass		
	6/27/2011 9:32:32 PM	82233-334	0.2796	Pass	97.467	Pass
<i>AVI66</i>	6/15/2011 1:14:26 AM	82235-334	0.2773	Pass		
	6/27/2011 9:33:19 PM	82234-334	0.2771	Pass	99.922	Pass
<i>AVI67</i>	6/15/2011 1:14:30 AM	82236-334	0.2723	Pass		
	6/27/2011 9:34:00 PM	82235-334	0.2755	Pass	101.17	Pass
<i>AVI68</i>	6/15/2011 1:14:34 AM	82237-334	0.2627	Pass		
	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	102.85	Pass
<i>AVI69</i>	6/15/2011 1:14:37 AM	82238-334	0.2711	Pass		
	6/27/2011 9:35:26 PM	82237-334	0.2674	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV170</i>	6/15/2011 1:14:41 AM	82239-334	0.2783	Pass		
	6/27/2011 9:36:10 PM	82238-334	0.2688	Pass	96.606	Pass
<i>AV171</i>	6/15/2011 1:14:45 AM	82240-334	0.2709	Pass		
	6/27/2011 9:37:06 PM	82239-334	0.2813	Pass	103.84	Pass
<i>AV172</i>	6/15/2011 1:14:49 AM	82241-334	0.2699	Pass		
	6/27/2011 9:37:46 PM	82240-334	0.2705	Pass	100.22	Pass
<i>AV173</i>	6/15/2011 1:14:52 AM	82242-334	0.2830	Pass		
	6/27/2011 9:38:28 PM	82241-334	0.2716	Pass	95.991	Pass
<i>AV174</i>	6/15/2011 1:14:56 AM	82243-334	0.2679	Pass		
	6/27/2011 9:39:06 PM	82242-334	0.2743	Pass	102.42	Pass
<i>AV175</i>	6/15/2011 1:15:00 AM	82244-334	0.2675	Pass		
	6/27/2011 9:39:52 PM	82243-334	0.2720	Pass	101.67	Pass
<i>AV176</i>	6/15/2011 2:15:31 AM	82245-334	0.2726	Pass		
	6/27/2011 9:40:38 PM	82244-334	0.2661	Pass	97.631	Pass
<i>AV177</i>	6/15/2011 1:15:04 AM	82246-334	0.2651	Pass		
	6/15/2011 4:19:56 AM	82245-334	0.2751	Pass	103.75	Pass
<i>AV178</i>	6/15/2011 1:15:07 AM	82247-334	0.2746	Pass		
	6/27/2011 9:41:21 PM	82246-334	0.2711	Pass	98.745	Pass
<i>AV179</i>	6/30/2011 9:08:46 AM	82237-334	0.2742	Pass		
	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	104.51	Pass
<i>AV180</i>	6/15/2011 1:15:15 AM	63507-334	0.2625	Pass		
	6/27/2011 9:43:59 PM	63506-334	0.2532	Pass	96.455	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV181</i>	6/15/2011 1:15:18 AM	63508A-334	0.2611	Pass		
	6/27/2011 9:44:46 PM	63507-334	0.2587	Pass	99.069	Pass
<i>AV182</i>	6/27/2011 9:45:31 PM	63509A-334	0.2629	Pass		
	6/27/2011 9:46:14 PM	63508A-334	0.2625	Pass	99.822	Pass
<i>AV183</i>	6/20/2011 10:52:50 PM	82232-334	0.2795	Pass		
	6/27/2011 9:46:57 PM	63509A-334	0.2671	Pass	95.537	Pass
<i>AV184</i>	6/20/2011 10:52:55 PM	82233-334	0.2772	Pass		
	6/27/2011 9:47:46 PM	82232-334	0.2799	Pass	100.95	Pass
<i>AV185</i>	6/20/2011 10:52:58 PM	82234-334	0.2823	Pass		
	6/27/2011 9:48:33 PM	82233-334	0.2741	Pass	97.113	Pass
<i>AV186</i>	6/20/2011 10:53:06 PM	82235-334	0.2741	Pass		
	6/27/2011 9:49:22 PM	82234-334	0.2744	Pass	100.12	Pass
<i>AV187</i>	6/20/2011 10:53:09 PM	82236-334	0.2672	Pass		
	6/27/2011 9:50:09 PM	82235-334	0.2741	Pass	102.59	Pass
<i>AV188</i>	6/20/2011 10:53:13 PM	82237-334	0.2820	Pass		
	6/27/2011 9:50:56 PM	82236-334	0.2799	Pass	99.240	Pass
<i>AV189</i>	6/20/2011 10:53:16 PM	82238-334	0.2769	Pass		
	6/27/2011 9:51:48 PM	82237-334	0.2684	Pass	96.927	Pass
<i>AV190</i>	6/21/2011 1:27:18 AM	82239-334	0.2710	Pass		
	6/27/2011 9:52:36 PM	82238-334	0.2739	Pass	101.05	Pass
<i>AV191</i>	6/20/2011 10:53:19 PM	82240-334	0.2794	Pass		
	6/21/2011 4:20:11 AM	82239-334	0.2769	Pass	99.115	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV192</i>	6/20/2011 10:53:23 PM	82241-334	0.2797	Pass		
	6/27/2011 9:53:23 PM	82240-334	0.2797	Pass	100.02	Pass
<i>AV193</i>	6/20/2011 10:53:26 PM	82242-334	0.2736	Pass		
	6/27/2011 9:54:02 PM	82241-334	0.2750	Pass	100.50	Pass
<i>AV194</i>	6/20/2011 10:53:29 PM	82243-334	0.2734	Pass		
	6/27/2011 9:54:56 PM	82242-334	0.2776	Pass	101.56	Pass
<i>AV195</i>	6/20/2011 10:53:33 PM	82244-334	0.2644	Pass		
	6/27/2011 9:55:43 PM	82243-334	0.2668	Pass	100.90	Pass
<i>AV196</i>	6/20/2011 10:53:37 PM	82245-334	0.2839	Pass		
	6/27/2011 9:56:30 PM	82244-334	0.2753	Pass	96.985	Pass
<i>AV197</i>	6/24/2011 2:40:07 AM	82246-334	0.2672	Pass		
	6/27/2011 9:57:47 PM	82245-334	0.2763	Pass	103.37	Pass
<i>AV198</i>	6/24/2011 2:22:48 PM	82247-334	0.2725	Pass		
	6/24/2011 3:24:45 PM	82246-334	0.2672	Pass	98.027	Pass
<i>AV199</i>	6/30/2011 9:09:28 AM	82238-334	0.2684	Pass		
	6/30/2011 10:17:40 AM	82237-334	0.2638	Pass	98.291	Pass
<i>AV200</i>	6/20/2011 10:53:47 PM	63507-334	0.2618	Pass		
	6/27/2011 10:00:20 PM	63506-334	0.2543	Pass	97.155	Pass
<i>AV201</i>	6/20/2011 10:53:53 PM	63508A-334	0.2654	Pass		
	6/27/2011 10:01:08 PM	63507-334	0.2735	Pass	103.06	Pass
<i>AV202</i>	6/27/2011 10:01:51 PM	63509A-334	0.2648	Pass		
	6/27/2011 10:02:25 PM	63508A-334	0.2613	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV203</i>	6/21/2011 3:19:59 PM	82232-334	0.2768	Pass		
	6/21/2011 3:21:44 PM	63509A-334	0.2646	Pass	95.582	Pass
<i>AV204</i>	6/27/2011 10:03:31 PM	82233-334	0.2705	Pass		
	6/27/2011 10:04:08 PM	82232-334	0.2736	Pass	101.16	Pass
<i>AV205</i>	6/21/2011 3:29:26 PM	82234-334	0.2783	Pass		
	6/27/2011 10:04:59 PM	82233-334	0.2722	Pass	97.818	Pass
<i>AV206</i>	6/27/2011 10:05:51 PM	82235-334	0.2796	Pass		
	6/27/2011 10:06:38 PM	82234-334	0.2837	Pass	101.48	Pass
<i>AV207</i>	6/27/2011 10:07:21 PM	82236-334	0.2735	Pass		
	6/27/2011 10:08:05 PM	82235-334	0.2759	Pass	100.87	Pass
<i>AV208</i>	6/27/2011 10:08:56 PM	82237-334	0.2765	Pass		
	6/27/2011 10:09:30 PM	82236-334	0.2800	Pass	101.26	Pass
<i>AV209</i>	6/27/2011 10:10:06 PM	82238-334	0.2812	Pass		
	6/27/2011 10:10:39 PM	82237-334	0.2680	Pass	95.309	Pass
<i>AV210</i>	6/21/2011 9:13:09 AM	82239-334	0.2718	Pass		
	6/27/2011 10:11:34 PM	82238-334	0.2722	Pass	100.16	Pass
<i>AV211</i>	6/27/2011 10:12:37 PM	82240-334	0.2684	Pass		
	6/21/2011 10:55:13 AM	82239-334	0.2688	Pass	100.13	Pass
<i>AV212</i>	6/27/2011 10:13:23 PM	82241-334	0.2851	Pass		
	6/27/2011 10:13:58 PM	82240-334	0.2891	Pass	101.41	Pass
<i>AV213</i>	6/23/2011 11:27:18 AM	82242-334	0.2707	Pass		
	6/23/2011 1:44:14 PM	82241-334	0.2712	Pass	100.17	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV214</i>	6/27/2011 10:15:18 PM	82243-334	0.2701	Pass		
	6/27/2011 10:15:54 PM	82242-334	0.2728	Pass	100.98	Pass
<i>AV215</i>	6/27/2011 10:16:46 PM	82244-334	0.2907	Pass		
	6/27/2011 10:17:26 PM	82243-334	0.2768	Pass	95.222	Pass
<i>AV216</i>	6/27/2011 10:18:14 PM	82245-334	0.2815	Pass		
	6/27/2011 10:18:50 PM	82244-334	0.2736	Pass	97.176	Pass
<i>AV217</i>	7/1/2011 10:10:06 AM	82246-334	0.2656	Pass		
	7/1/2011 10:10:22 AM	82245-334	0.2746	Pass	103.39	Pass
<i>AV218</i>	6/24/2011 1:51:29 PM	82247-334	0.2743	Pass		
	6/24/2011 5:16:09 PM	82246-334	0.2696	Pass	98.287	Pass
<i>AV219</i>	6/30/2011 9:09:52 AM	82240-334	0.2749	Pass		
	6/30/2011 9:10:10 AM	82238-334	0.2711	Pass	98.608	Pass
<i>AV220</i>	6/27/2011 10:21:49 PM	63507-334	0.2632	Pass		
	6/27/2011 10:22:24 PM	63506-334	0.2579	Pass	97.981	Pass
<i>AV221</i>	6/27/2011 10:23:08 PM	63508A-334	0.2621	Pass		
	6/27/2011 10:23:43 PM	63507-334	0.2617	Pass	99.836	Pass
<i>AV222</i>	6/27/2011 10:24:23 PM	63509A-334	0.2675	Pass		
	6/27/2011 10:25:09 PM	63508A-334	0.2634	Pass	98.476	Pass
<i>AV223</i>	6/23/2011 11:28:00 AM	82232-334	0.2800	Pass		
	6/23/2011 1:44:18 PM	63509A-334	0.2682	Pass	95.794	Pass
<i>AV224</i>	6/23/2011 11:28:25 AM	82233-334	0.2755	Pass		
	6/23/2011 1:44:22 PM	82232-334	0.2798	Pass	101.55	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV225</i>	6/24/2011 2:40:10 AM	82234-334	0.2791	Pass		
	6/27/2011 10:26:27 PM	82233-334	0.2753	Pass	98.623	Pass
<i>AV226</i>	6/24/2011 2:40:15 AM	82235-334	0.2729	Pass		
	6/27/2011 10:27:06 PM	82234-334	0.2800	Pass	102.61	Pass
<i>AV227</i>	6/25/2011 10:39:33 AM	82236-334	0.2783	Pass		
	6/25/2011 1:18:30 PM	82235-334	0.2773	Pass	99.651	Pass
<i>AV228</i>	6/28/2011 9:07:26 AM	82237-334	0.2755	Pass		
	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	103.94	Pass
<i>AV229</i>	6/25/2011 10:39:43 AM	82238-334	0.2781	Pass		
	6/25/2011 1:18:41 PM	82237-334	0.2735	Pass	98.336	Pass
<i>AV230</i>	6/25/2011 10:39:47 AM	82239-334	0.2844	Pass		
	6/25/2011 1:19:16 PM	82238-334	0.2812	Pass	98.851	Pass
<i>AV231</i>	6/25/2011 10:50:22 AM	82240-334	0.2784	Pass		
	6/25/2011 1:19:42 PM	82239-334	0.2758	Pass	99.090	Pass
<i>AV232</i>	6/25/2011 10:58:31 AM	82241-334	0.2758	Pass		
	6/25/2011 1:19:51 PM	82240-334	0.2812	Pass	101.96	Pass
<i>AV233</i>	6/25/2011 10:58:37 AM	82242-334	0.2668	Pass		
	6/25/2011 1:20:13 PM	82241-334	0.2705	Pass	101.37	Pass
<i>AV234</i>	6/28/2011 9:08:33 AM	82243-334	0.2710	Pass		
	6/28/2011 9:08:49 AM	82242-334	0.2714	Pass	100.13	Pass
<i>AV235</i>	6/25/2011 11:19:40 AM	82244-334	0.2686	Pass		
	6/25/2011 1:21:34 PM	82243-334	0.2694	Pass	100.30	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV236</i>	6/25/2011 11:19:44 AM	82245-334	0.2759	Pass		
	6/25/2011 1:22:02 PM	82244-334	0.2647	Pass	95.960	Pass
<i>AV237</i>	6/25/2011 11:19:48 AM	82246-334	0.2679	Pass		
	6/25/2011 1:22:14 PM	82245-334	0.2783	Pass	103.89	Pass
<i>AV238</i>	6/25/2011 11:19:52 AM	82247-334	0.2740	Pass		
	6/25/2011 1:22:47 PM	82246-334	0.2642	Pass	96.404	Pass
<i>AV239</i>	6/29/2011 4:17:46 PM	82241-334	0.2816	Pass		
	6/29/2011 5:24:20 PM	82239-334	0.2770	Pass	98.355	Pass
<i>AV240</i>	6/28/2011 9:06:33 AM	63507-334	0.2675	Pass		
	6/25/2011 1:23:31 PM	63506-334	0.2636	Pass	98.508	Pass
<i>AV241</i>	6/25/2011 11:47:42 AM	63508A-334	0.2600	Pass		
	6/25/2011 1:23:51 PM	63507-334	0.2602	Pass	100.06	Pass
<i>AV242</i>	6/25/2011 11:47:57 AM	63509A-334	0.2680	Pass		
	6/25/2011 1:24:10 PM	63508A-334	0.2667	Pass	99.534	Pass
<i>AV243</i>	6/25/2011 9:28:07 AM	82232-334	0.2795	Pass		
	6/25/2011 1:24:52 PM	63509A-334	0.2676	Pass	95.760	Pass
<i>AV244</i>	6/25/2011 12:07:09 PM	82233-334	0.2858	Pass		
	6/25/2011 1:25:04 PM	82232-334	0.2904	Pass	101.61	Pass
<i>AV245</i>	6/25/2011 12:07:13 PM	82234-334	0.2856	Pass		
	6/25/2011 1:25:24 PM	82233-334	0.2793	Pass	97.792	Pass
<i>AV246</i>	6/25/2011 12:07:17 PM	82235-334	0.2981	Pass		
	6/25/2011 1:25:53 PM	82234-334	0.2968	Pass	99.576	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV247</i>	6/28/2011 9:04:33 AM	82236-334	0.2721	Pass		
	6/28/2011 9:04:52 AM	82235-334	0.2774	Pass	101.94	Pass
<i>AV248</i>	6/28/2011 9:09:30 AM	82237-334	0.2651	Pass		
	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	101.77	Pass
<i>AV249</i>	6/28/2011 9:10:11 AM	82238-334	0.2852	Pass		
	6/28/2011 9:10:27 AM	82237-334	0.2781	Pass	97.510	Pass
<i>AV250</i>	6/28/2011 9:10:53 AM	82239-334	0.2800	Pass		
	6/28/2011 9:11:12 AM	82238-334	0.2820	Pass	100.71	Pass

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Alpha Vision Yearly Calibrations Updated 2/22/12

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
Dec2011a_AV22_ICV	12/8/2011 2:38:54 PM	82236-334	0.2670	Pass 99.6280 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV48</i>						
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass		
June2011_AV48_ICV	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	98.9875	Pass
<i>AV88</i>						
May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass		
June2011_AV88_ICV	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	101.747	Pass
<i>AV103</i>						
June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass		
June2011_AV103a_ICVb	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	99.8524	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
June2011_AV68_ICV	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass 101.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV128</i>				
June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
June2011_AV128_ICV	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass 101.685 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov</i>	<i>(+/-5%)</i>
<i>AV160</i>					
June2011A_AV160	2/21/2012 3:02:57 PM	82237-334	0.2708	Pass	
June2011A_AV160_ICV	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	98.0720 Pass
<i>AV168</i>					
June2011_AV168	2/21/2012 3:03:27 PM	82237-334	0.2704	Pass	
June2011_AV168_ICV	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	99.9393 Pass
<i>AV179</i>					
June2011B_AV179	2/21/2012 3:03:50 PM	82237-334	0.2821	Pass	
June2011_AV179b_ICV	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	101.588 Pass
<i>AV228</i>					
June2011A_AV228	2/21/2012 3:04:50 PM	82237-334	0.2834	Pass	
June2011A_AV228_ICV	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	101.035 Pass
<i>AV248</i>					
June2011_AV248	2/21/2012 3:05:18 PM	82237-334	0.2726	Pass	
June2011_AV248_ICV	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	98.9835 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV205</i>				
Dec2011_AV205	2/21/2012 3:04:20 PM	82237-334	0.2688	Pass
Dec2011_AV205_ICV	12/16/2011 3:08:08 AM	82236-334	0.2684	Pass 99.8398 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Calibration

Name: June2011_AV110
Description:
Detector: AV110

Calibration Date: 6/10/2011 2:51:15PM
Analyst: 60040

Source Info

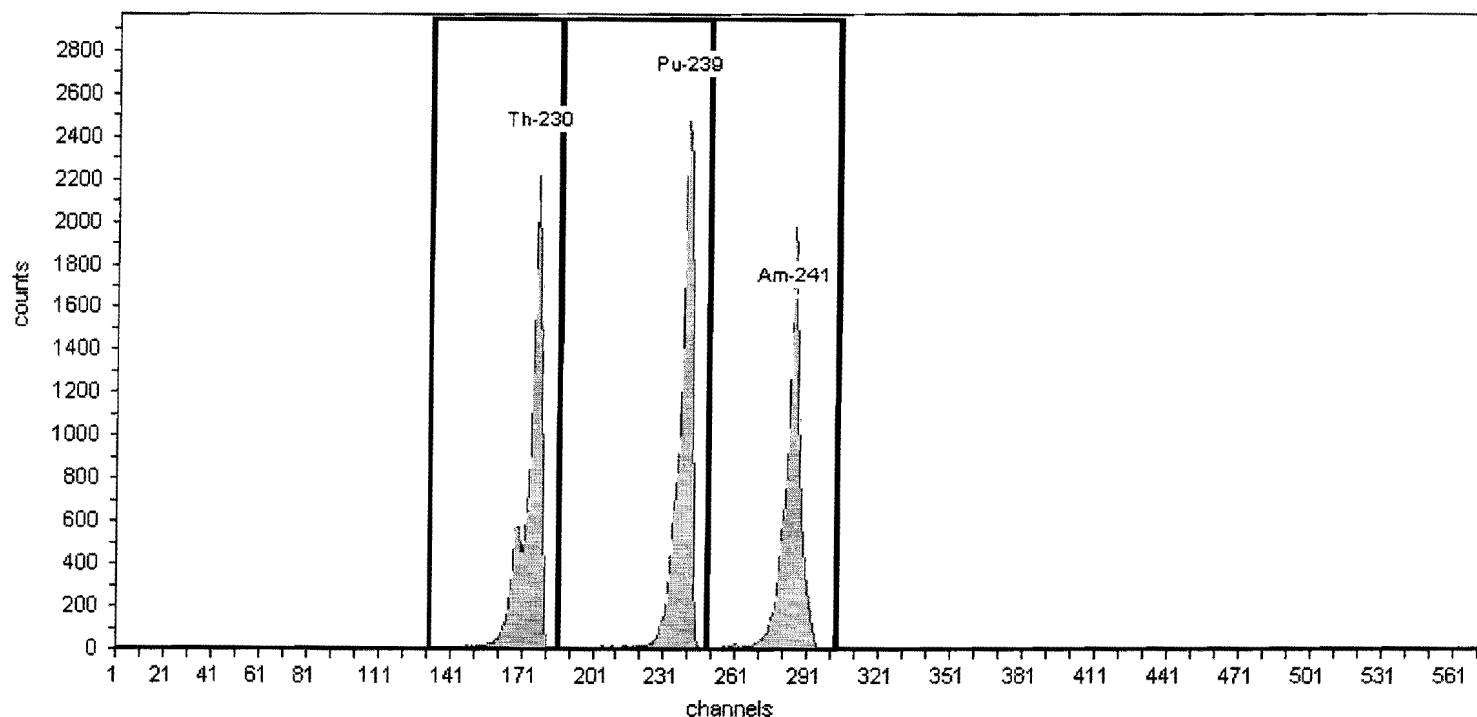
Certificate ID: 82239-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV110 , SN: 49-034G5
Acquisition Start Date: 6/6/2011 8:27:23AM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 27.61% +/- 0.39% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,327.00	95.19
Pu-239	240	5.16	186	249	14,197.00	101.41
Am-241	284	5.49	249	303	12,925.00	92.32

Calibration

Name: June2011_AV110_ICV
Description:
Detector: AV110

Calibration Date: 6/10/2011 2:51:31PM
Analyst: 60040

Source Info

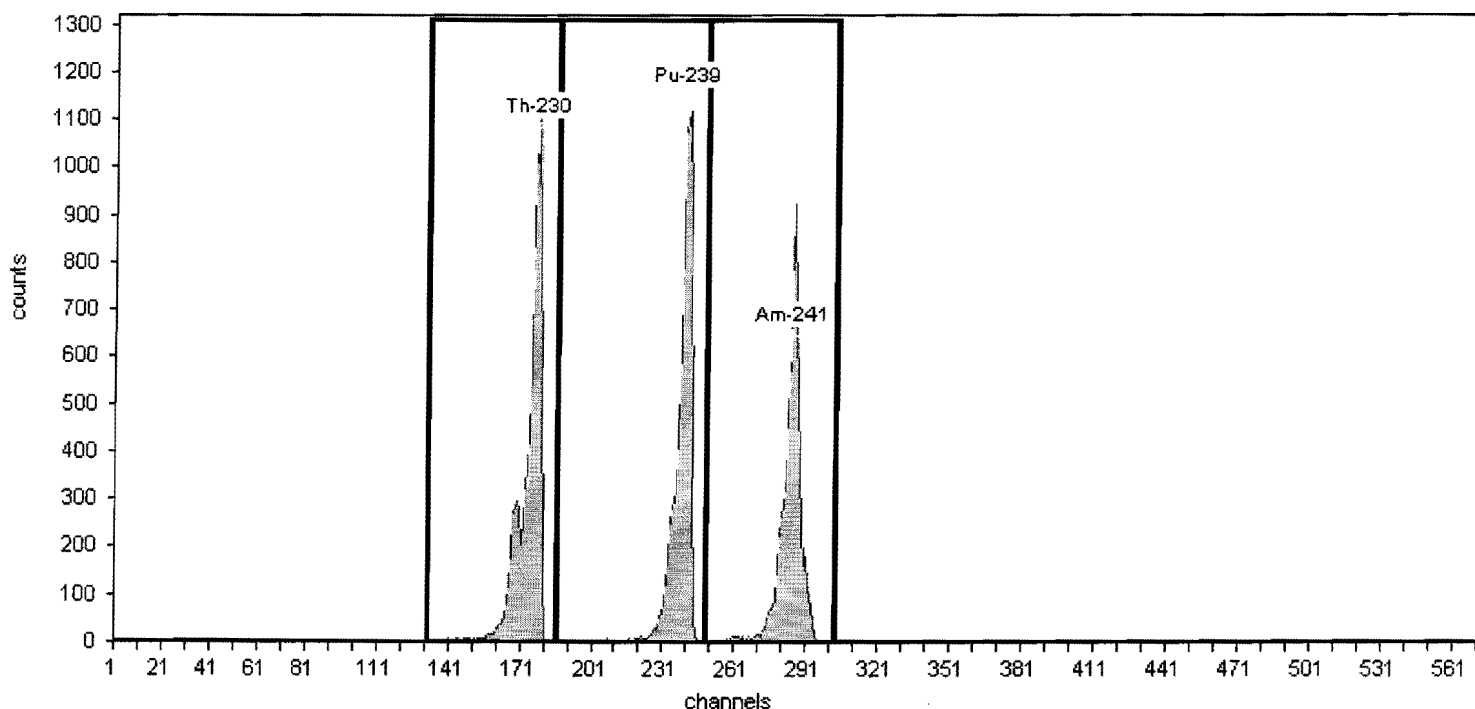
Certificate ID: 82238-334
Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM
Description:

Acquisition

Detector: AV110 , SN: 49-034G5
Acquisition Start Date: 6/6/2011 1:16:05PM
Live Time: 60.00 min.
Real Time: 60.05 min.
Efficiency: 27.23% +/- 0.46% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,808.00	113.47
Pu-239	240	5.16	186	249	6,669.00	111.15
Am-241	284	5.49	249	303	5,937.00	98.95

Calibration

Name: June2011_AV111
Description:
Detector: AV111

Calibration Date: 6/10/2011 2:51:42PM
Analyst: 60040

Source Info

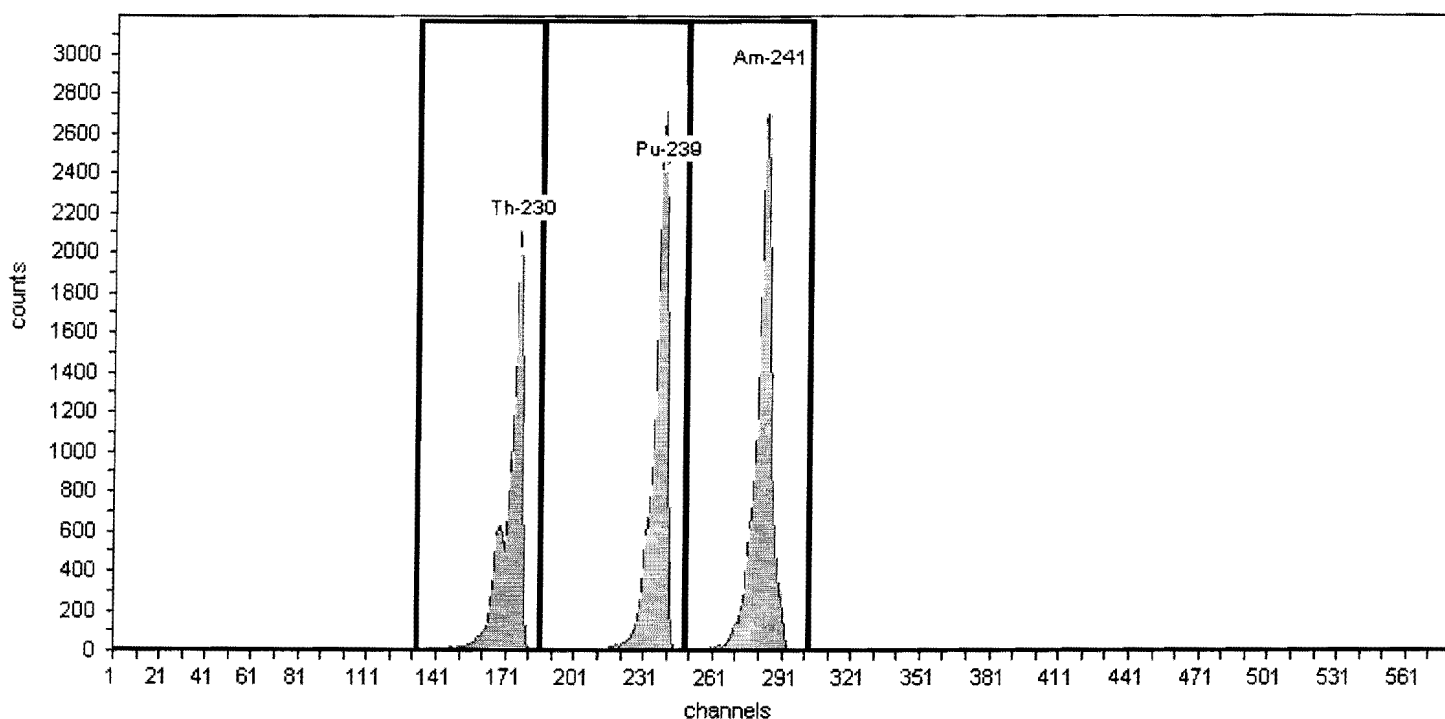
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV111, SN: 49-037E6
Acquisition Start Date: 6/6/2011 8:27:26AM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 27.42% +/- 0.31% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,225.00	101.61
Pu-239	240	5.16	186	249	16,637.00	118.84
Am-241	284	5.49	249	303	19,224.00	137.31

Calibration

Name: June2011_AV111_ICV
Description:
Detector: AV111

Calibration Date: 6/10/2011 2:51:58PM
Analyst: 60040

Source Info

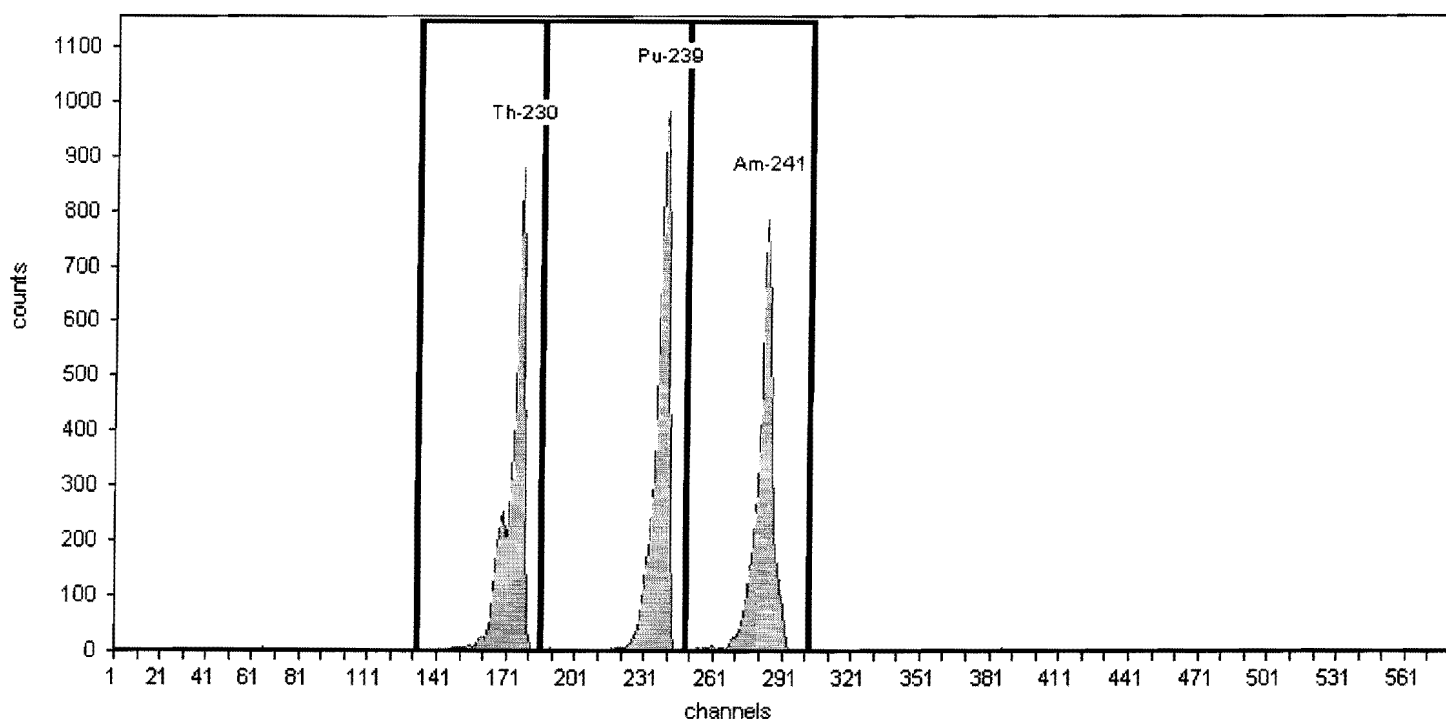
Certificate ID: 82239-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV111, SN: 49-037E6
Acquisition Start Date: 6/6/2011 1:16:20PM
Live Time: 60.00 min.
Real Time: 60.05 min.
Efficiency: 26.98% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,673.00	94.55
Pu-239	240	5.16	186	249	5,924.00	98.73
Am-241	284	5.49	249	303	5,341.00	89.02

Calibration

Name: June2011_AV112
Description:
Detector: AV112

Calibration Date: 6/10/2011 2:52:10PM
Analyst: 60040

Source Info

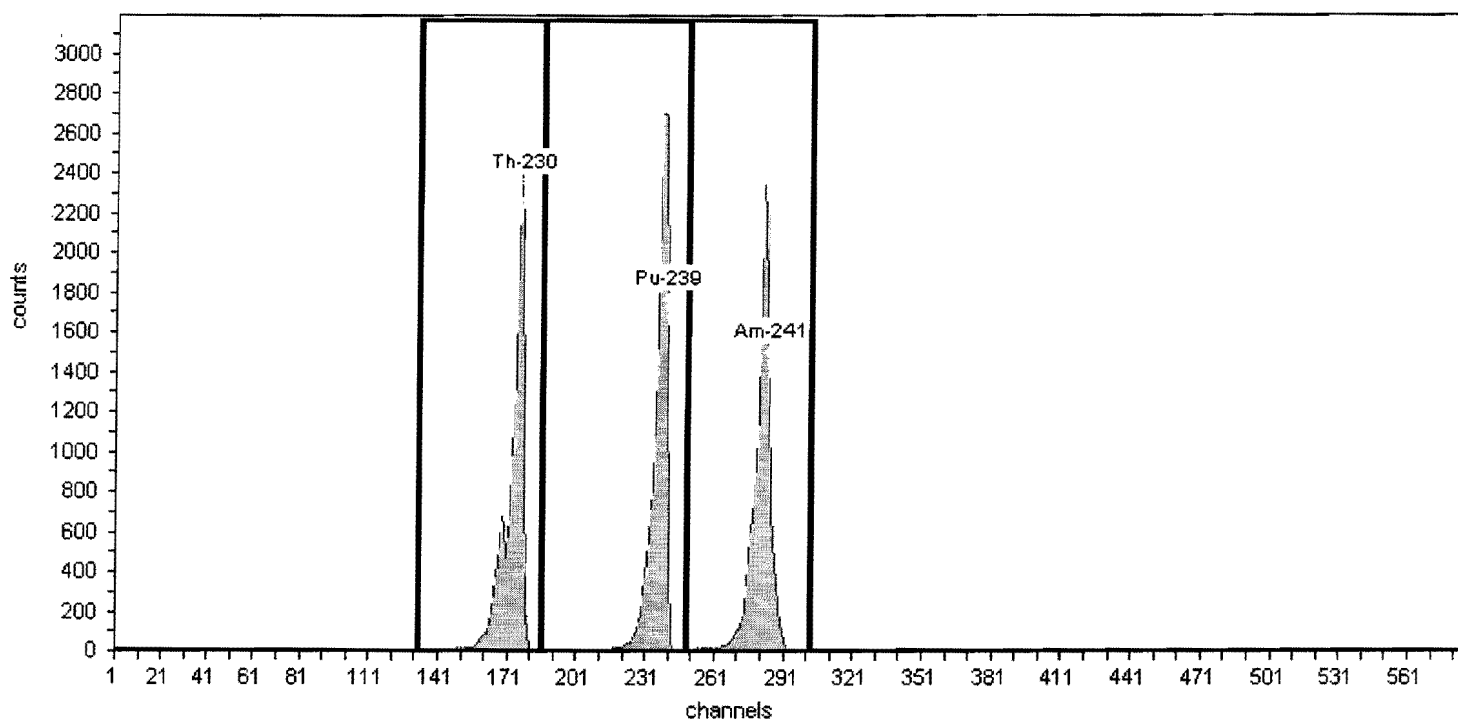
Certificate ID: 82241-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV112, SN: 49-037G7
Acquisition Start Date: 6/6/2011 8:27:47AM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 26.89% +/- 0.33% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,830.00	105.93
Pu-239	240	5.16	186	249	15,538.00	110.99
Am-241	284	5.49	249	303	14,942.00	106.73

Calibration

Name: June2011_AV112_ICV
Description:
Detector: AV112

Calibration Date: 6/10/2011 2:52:23PM
Analyst: 60040

Source Info

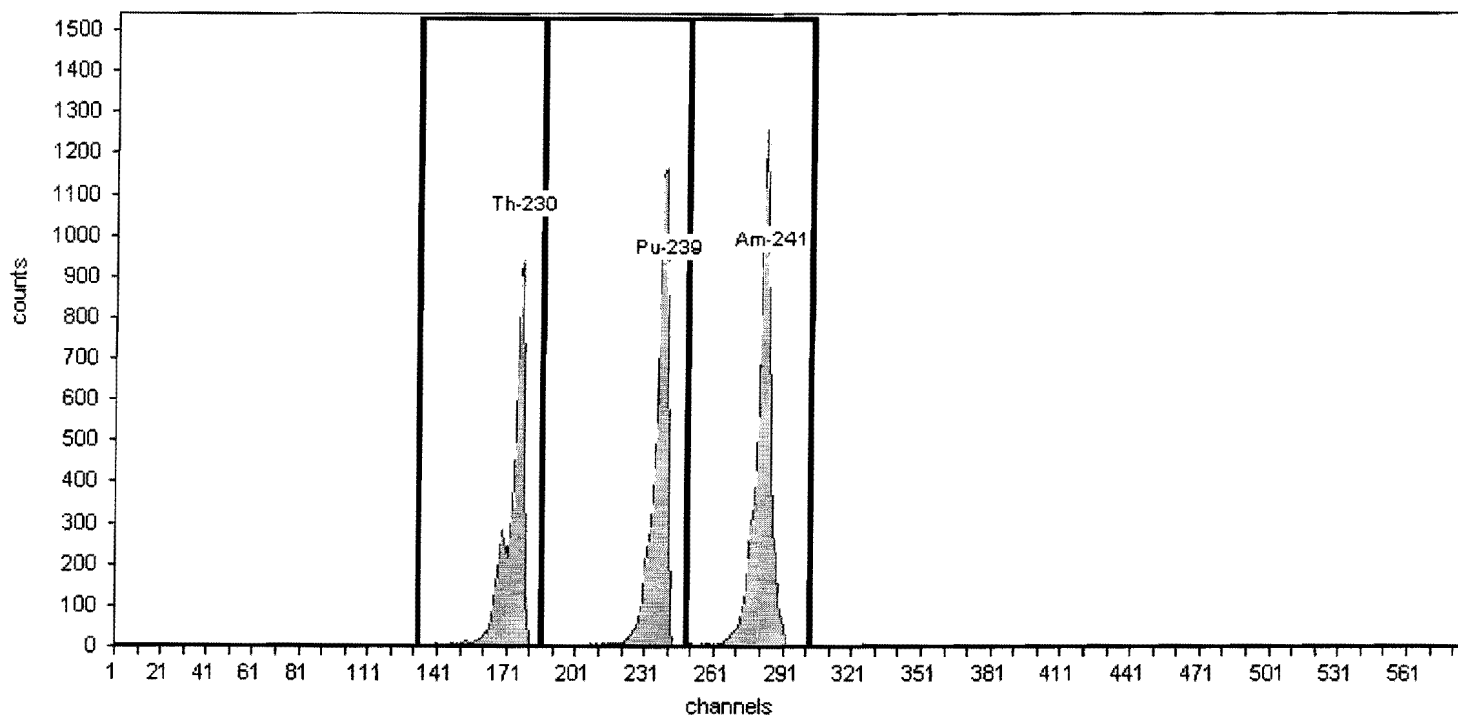
Certificate ID: 82240-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV112 , SN: 49-037G7
Acquisition Start Date: 6/6/2011 1:16:35PM
Live Time: 60.00 min.
Real Time: 60.05 min.
Efficiency: 26.62% +/- 0.42% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,008.00	100.13
Pu-239	240	5.16	186	249	6,918.00	115.30
Am-241	284	5.49	249	303	7,921.00	132.02

Calibration

Name: June2011_AV113a
Description:
Detector: AV113

Calibration Date: 6/29/2011 8:19:17PM
Analyst: 60040

Source Info

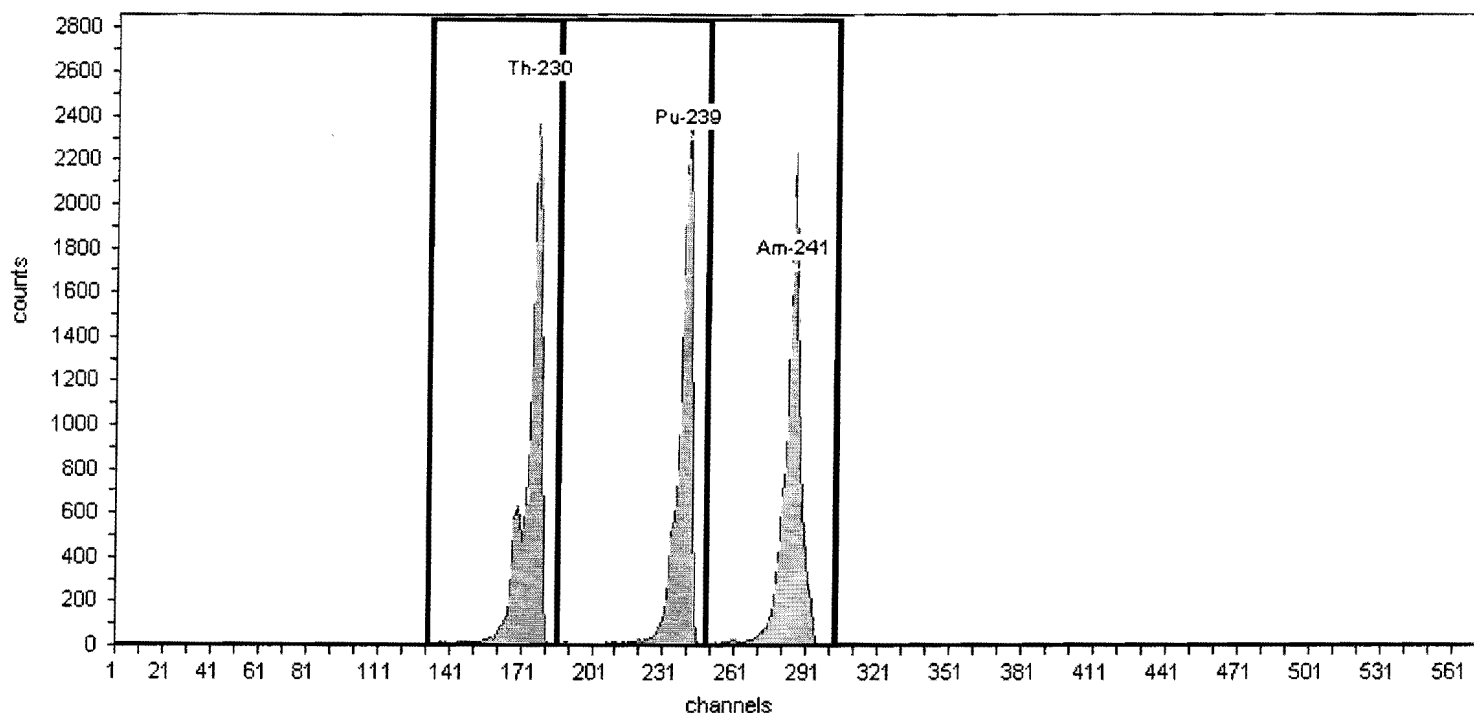
Certificate ID: 82247-334
Prepared by: Analytics

Certification Date: 6/10/2010 12:00:00PM
Description:

Acquisition

Detector: AV113, SN: 49-037X5
Acquisition Start Date: 6/29/2011 4:14:18PM
Live Time: 140.00 min.
Real Time: 140.01 min.
Efficiency: 27.97% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

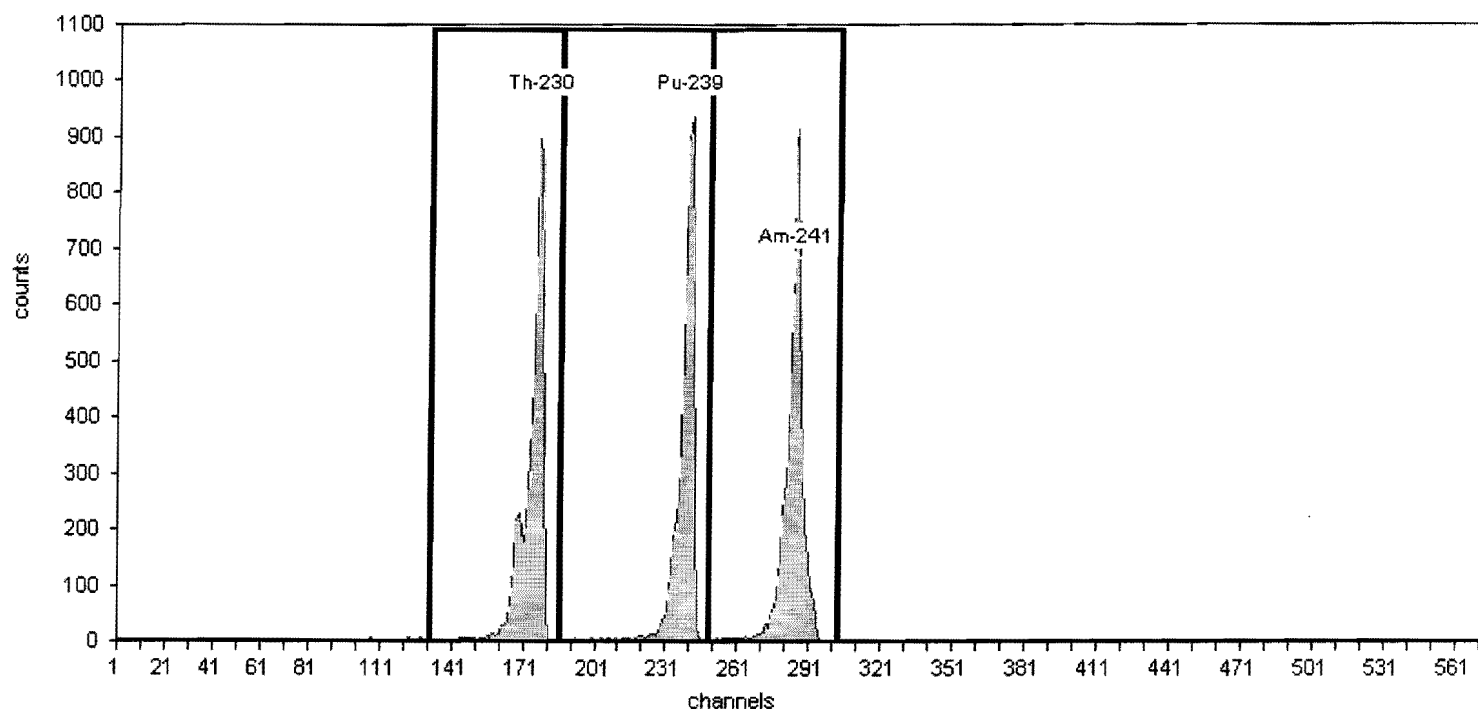
Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	14,724.00	105.17
Pu-239	240	5.16	186	249	13,497.00	96.41
Am-241	284	5.49	249	303	14,739.00	105.28

Calibration	
Name: June2011_AV113a_ICV	Calibration Date: 6/30/2011 10:18:11AM
Description:	Analyst: 60040
Detector: AV113	

Source Info	
Certificate ID: 82246-334	Certification Date: 6/9/2010 12:00:00PM
Prepared by: Analytics	Description:

Acquisition	
Detector: AV113 , SN: 49-037X5	Energy Calibration Equation:
Acquisition Start Date: 6/30/2011 9:02:26AM	Gain = 7.4575 keV / Ch
Live Time: 60.00 min.	Offset = 3,366.95 keV
Real Time: 60.01 min.	Quadratic = 0.0000 keV / Ch ²
Efficiency: 27.33% +/- 0.51% TPU(2 sigma)	



General Analysis	
Method: Manual (ROI)	Initial Calibration: No
Algorithm: Linear	Shelf: 1

Nuclide Activity Summary						
Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,480.00	91.33
Pu-239	240	5.16	186	249	5,234.00	87.23
Am-241	284	5.49	249	303	5,931.00	98.85

Calibration

Name: June2011_AV114
Description:
Detector: AV114

Calibration Date: 6/10/2011 2:53:57PM
Analyst: 60040

Source Info

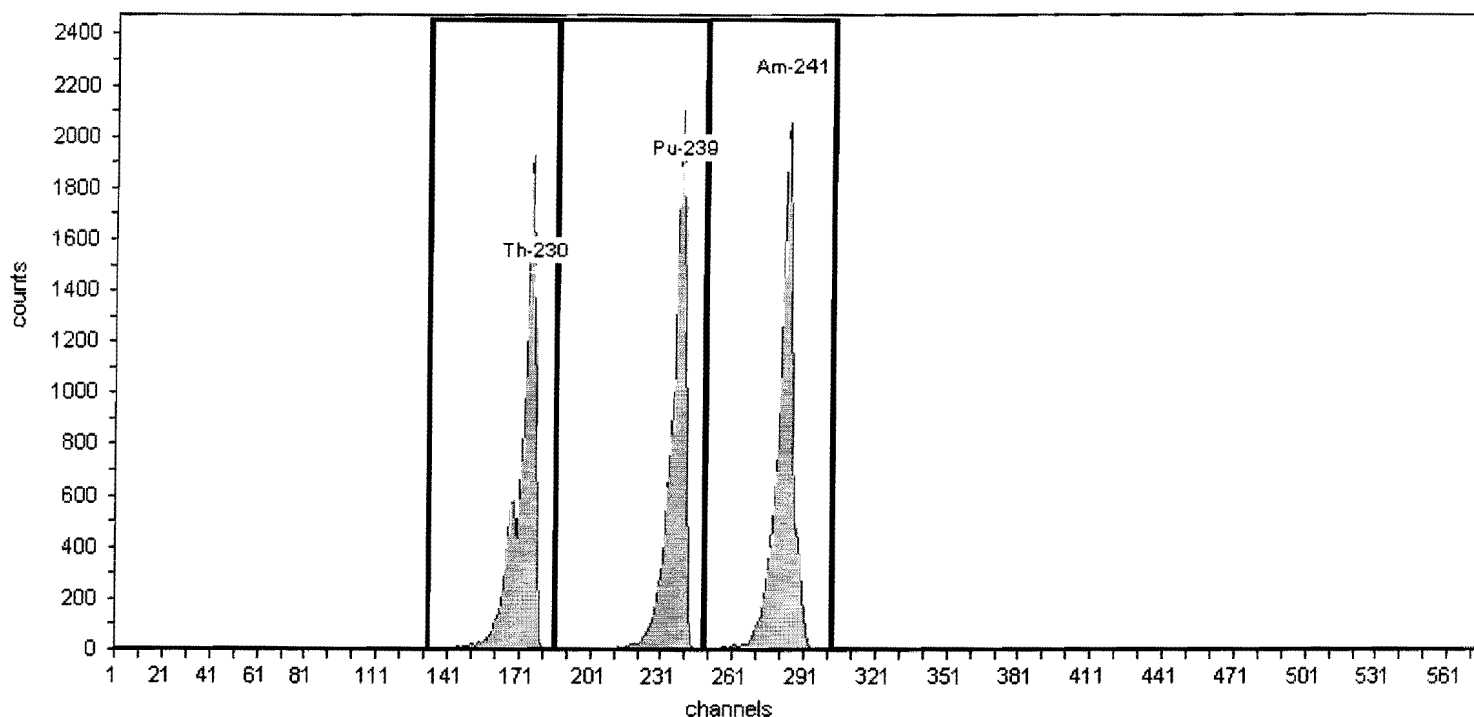
Certificate ID: 82243-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV114 , SN: 49-037E7
Acquisition Start Date: 6/6/2011 8:28:19AM
Live Time: 140.00 min.
Real Time: 140.12 min.
Efficiency: 26.72% +/- 0.35% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,166.00	94.04
Pu-239	240	5.16	186	249	13,356.00	95.40
Am-241	284	5.49	249	303	14,367.00	102.62

Calibration

Name: June2011_AV114_ICV
Description:
Detector: AV114

Calibration Date: 6/10/2011 2:54:10PM
Analyst: 60040

Source Info

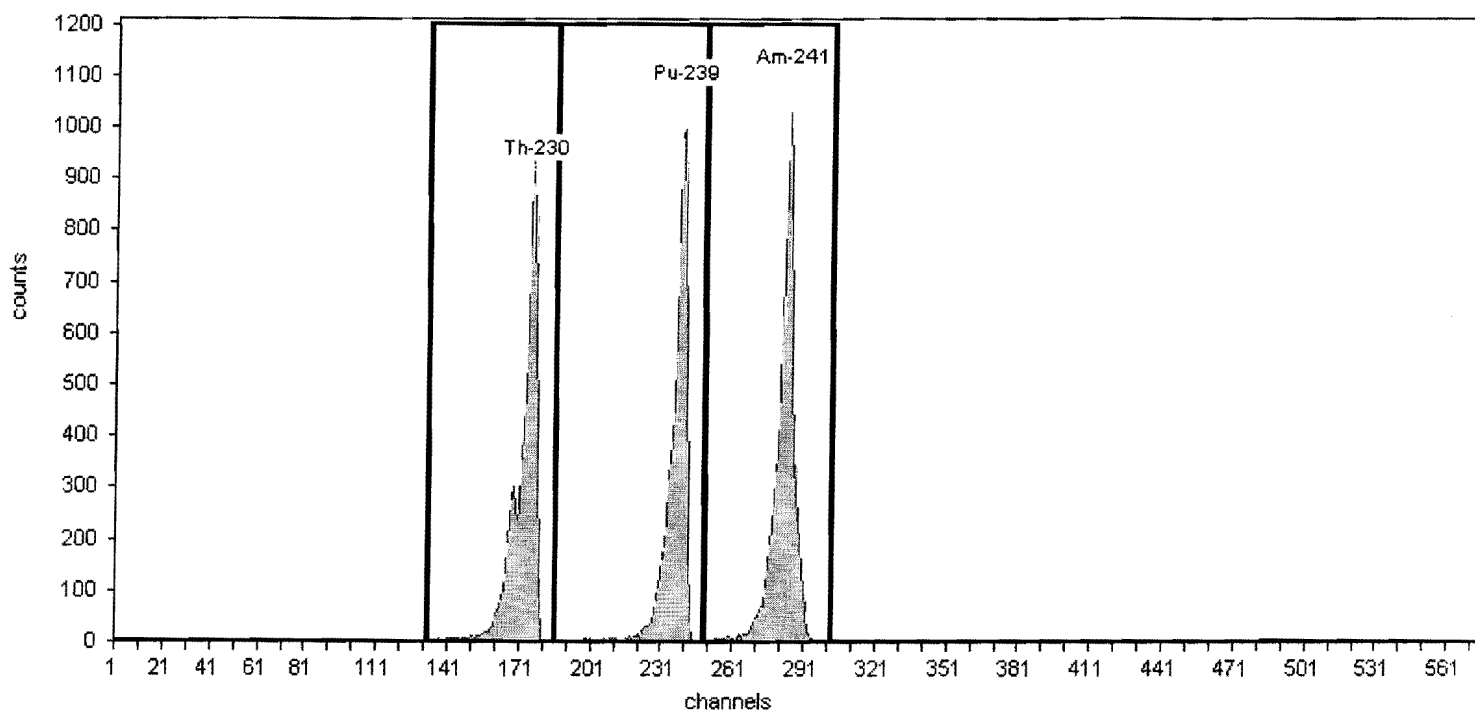
Certificate ID: 82242-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV114, SN: 49-037E7
Acquisition Start Date: 6/6/2011 1:17:19PM
Live Time: 60.00 min.
Real Time: 60.05 min.
Efficiency: 27.59% +/- 0.45% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,525.00	108.75
Pu-239	240	5.16	186	249	6,250.00	104.17
Am-241	284	5.49	249	303	7,231.00	120.52

Calibration

Name: June2011_AV115
Description:
Detector: AV115

Calibration Date: 6/10/2011 2:57:31PM
Analyst: 60040

Source Info

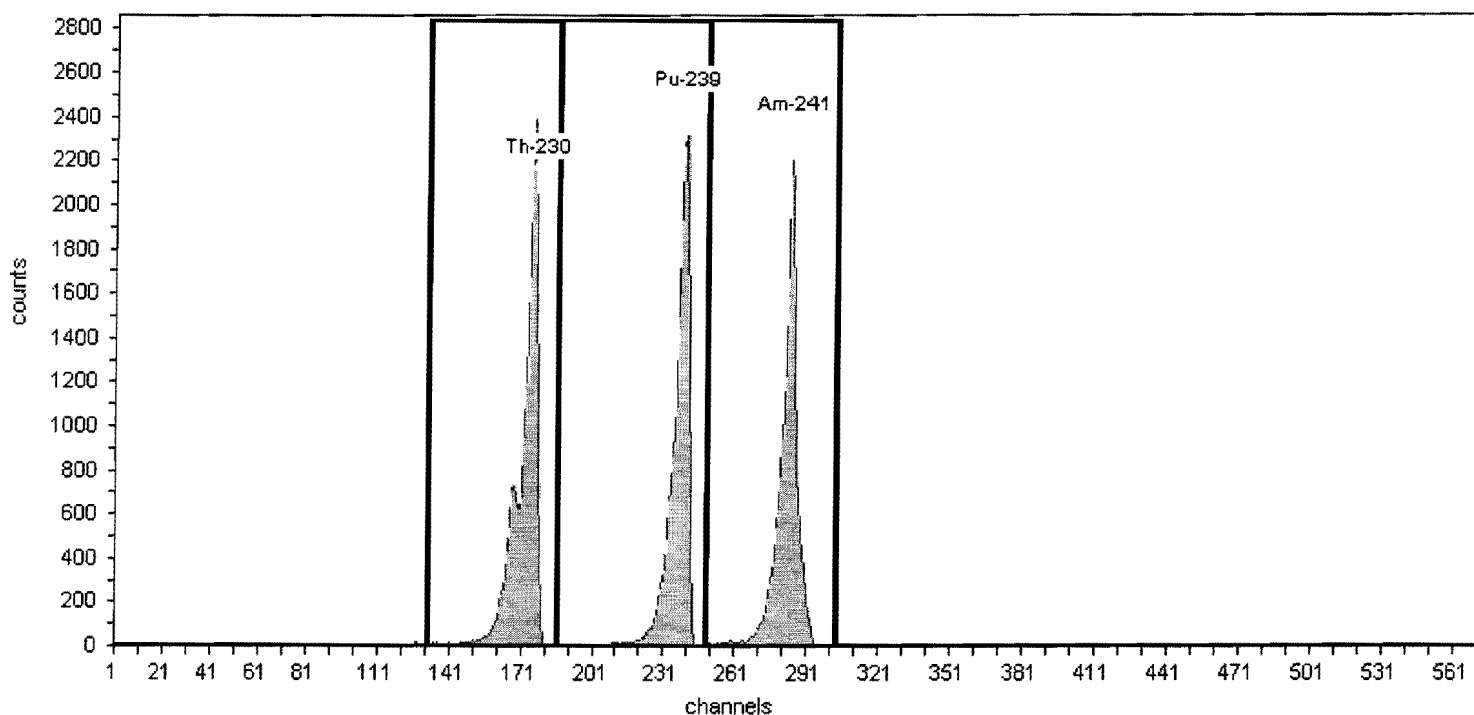
Certificate ID: 82244-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV115, SN: 49-037E4
Acquisition Start Date: 6/6/2011 8:28:20AM
Live Time: 140.00 min.
Real Time: 145.89 min.
Efficiency: 27.13% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,882.00	120.59
Pu-239	240	5.16	186	249	15,330.00	109.50
Am-241	284	5.49	249	303	15,558.00	111.13

Calibration

Name: June2011_AV115_ICV
Description:
Detector: AV115

Calibration Date: 6/10/2011 2:57:44PM
Analyst: 60040

Source Info

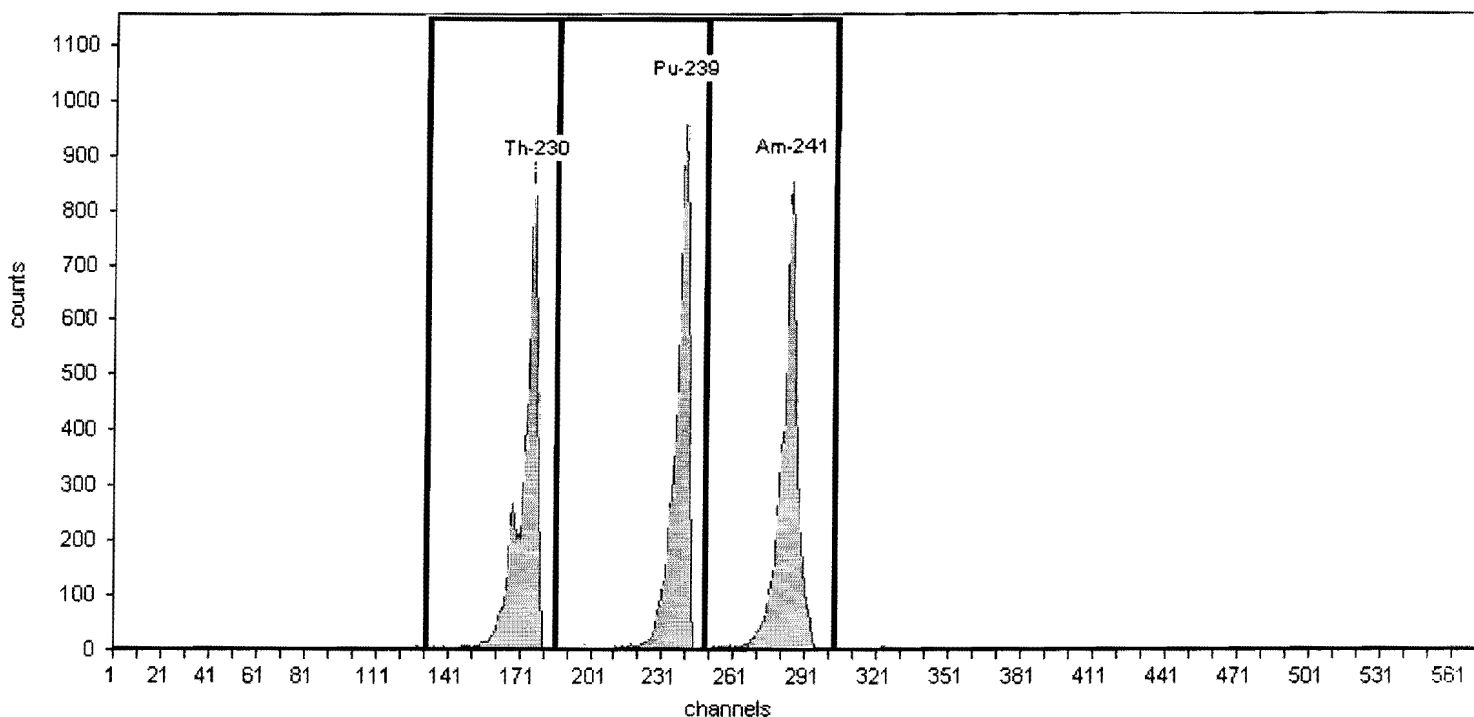
Certificate ID: 82243-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV115, SN: 49-037E4
Acquisition Start Date: 6/6/2011 1:17:21PM
Live Time: 60.00 min.
Real Time: 61.08 min.
Efficiency: 27.21% +/- 0.47% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,760.00	96.00
Pu-239	240	5.16	186	249	5,771.00	96.18
Am-241	284	5.49	249	303	6,319.00	105.32

Calibration

Name: May2011_AV116
Description:
Detector: AV116

Calibration Date: 6/2/2011 11:22:31AM
Analyst: 60040

Source Info

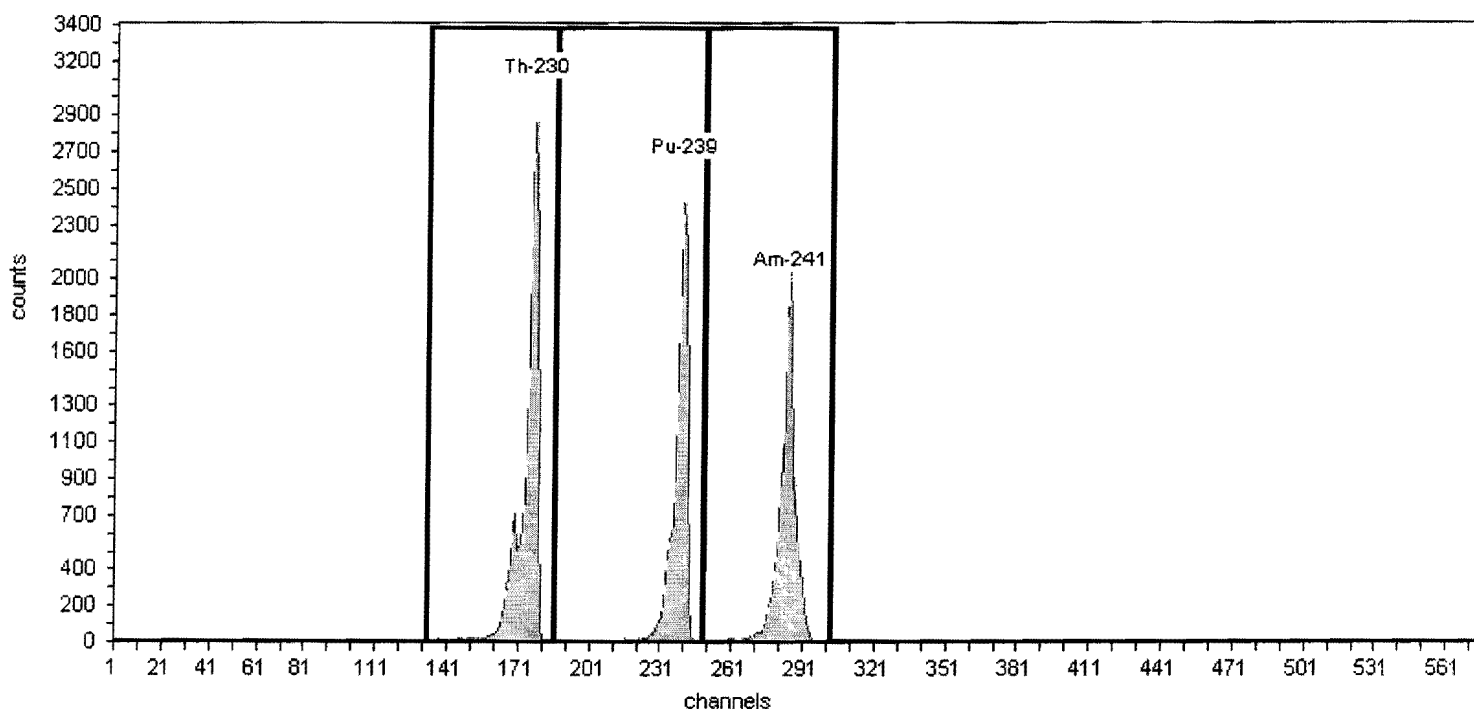
Certificate ID: 82245-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV116 , SN: 49-034G1
Acquisition Start Date: 6/2/2011 8:33:22AM
Live Time: 140.00 min.
Real Time: 140.01 min.
Efficiency: 28.02% +/- 0.39% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	15,833.00	113.09
Pu-239	240	5.16	186	249	12,738.00	90.99
Am-241	284	5.49	249	303	13,067.00	93.34

Calibration

Name: June2011_AV116_ICV
Description:
Detector: AV116

Calibration Date: 6/27/2011 10:38:43PM
Analyst: 60040

Source Info

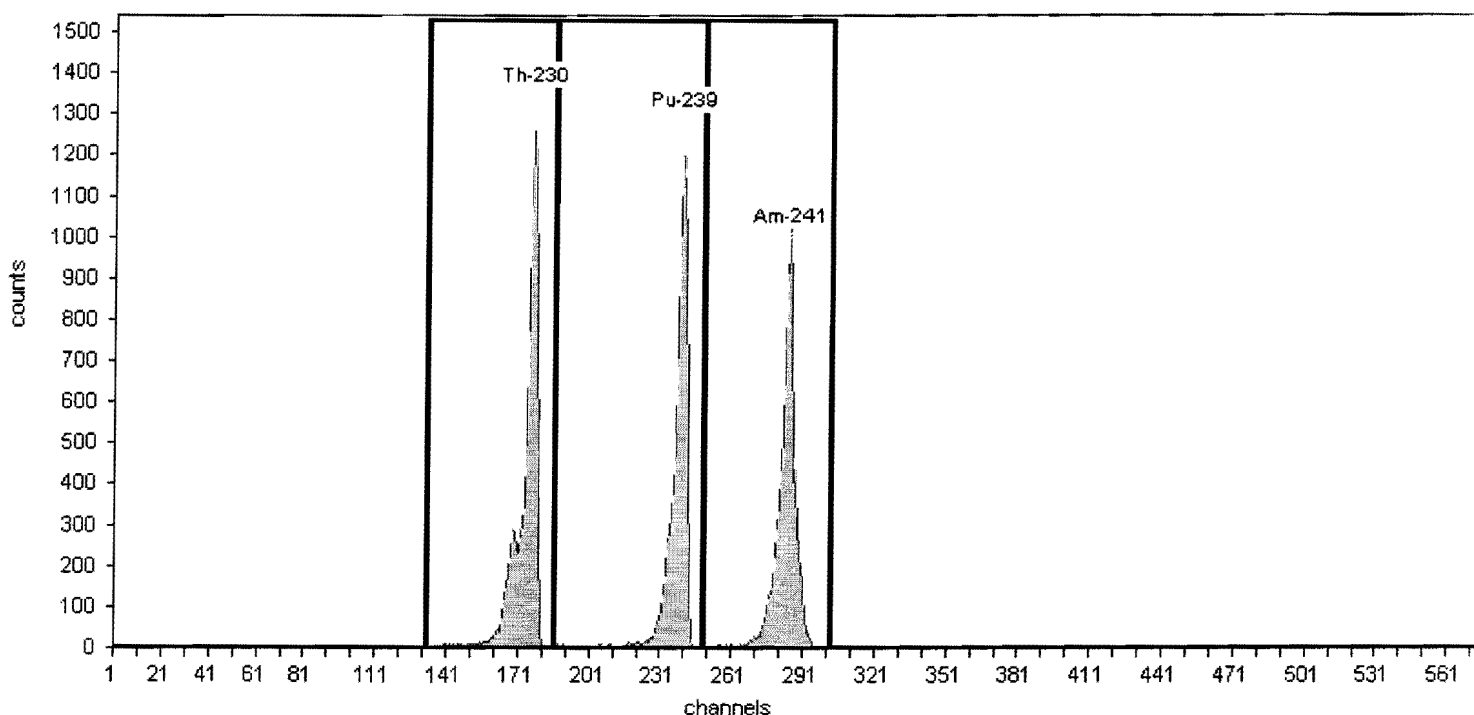
Certificate ID: 82244-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV116 , SN: 49-034G1
Acquisition Start Date: 6/2/2011 12:26:49PM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.29% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,288.00	121.47
Pu-239	240	5.16	186	249	6,563.00	109.38
Am-241	284	5.49	249	303	6,741.00	112.35

Calibration

Name: June2011_AV117
Description:
Detector: AV117

Calibration Date: 6/10/2011 2:54:57PM
Analyst: 60040

Source Info

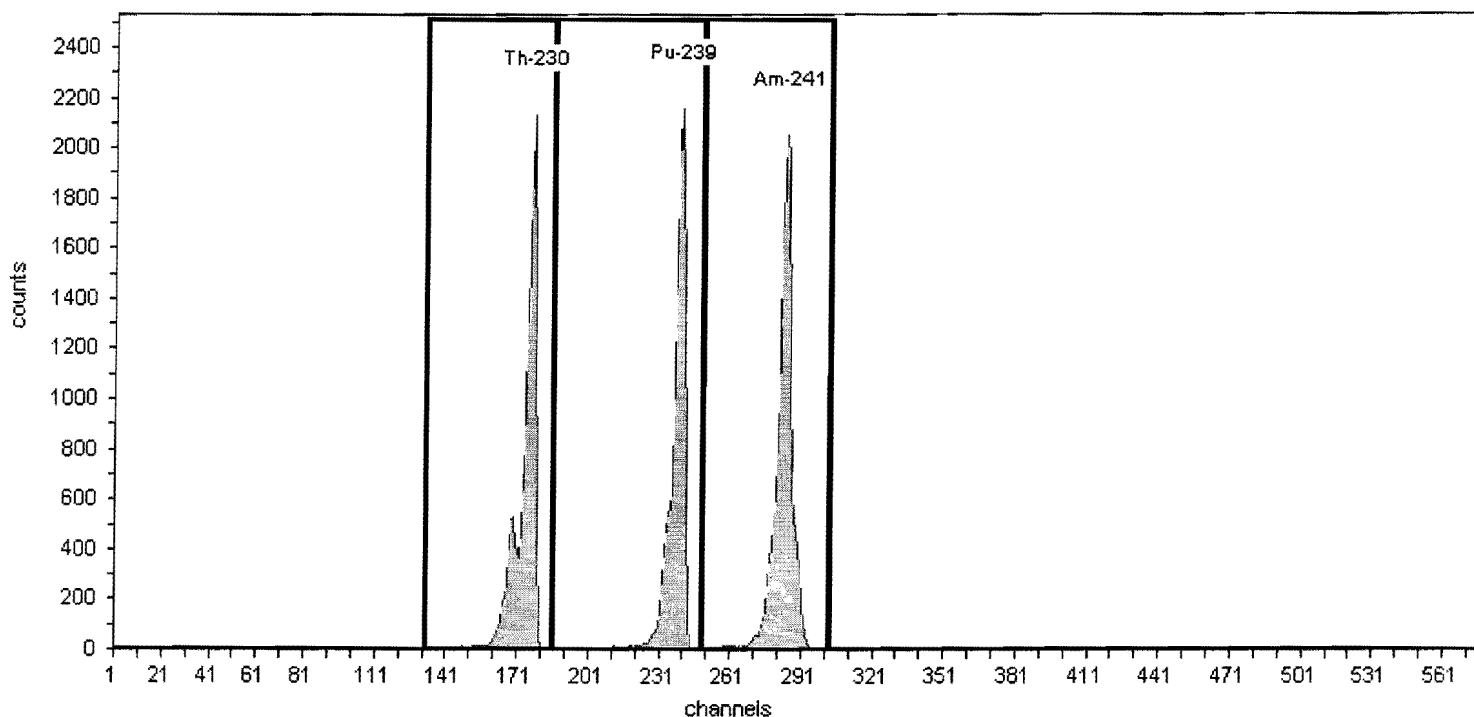
Certificate ID: 82246-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV117, SN: 49-037X4
Acquisition Start Date: 6/6/2011 8:28:48AM
Live Time: 140.00 min.
Real Time: 145.89 min.
Efficiency: 25.98% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	12,189.00	87.06
Pu-239	240	5.16	186	249	11,531.00	82.36
Am-241	284	5.49	249	303	13,206.00	94.33

Calibration

Name: June2011_AV117_ICV
Description:
Detector: AV117

Calibration Date: 6/10/2011 2:55:11PM
Analyst: 60040

Source Info

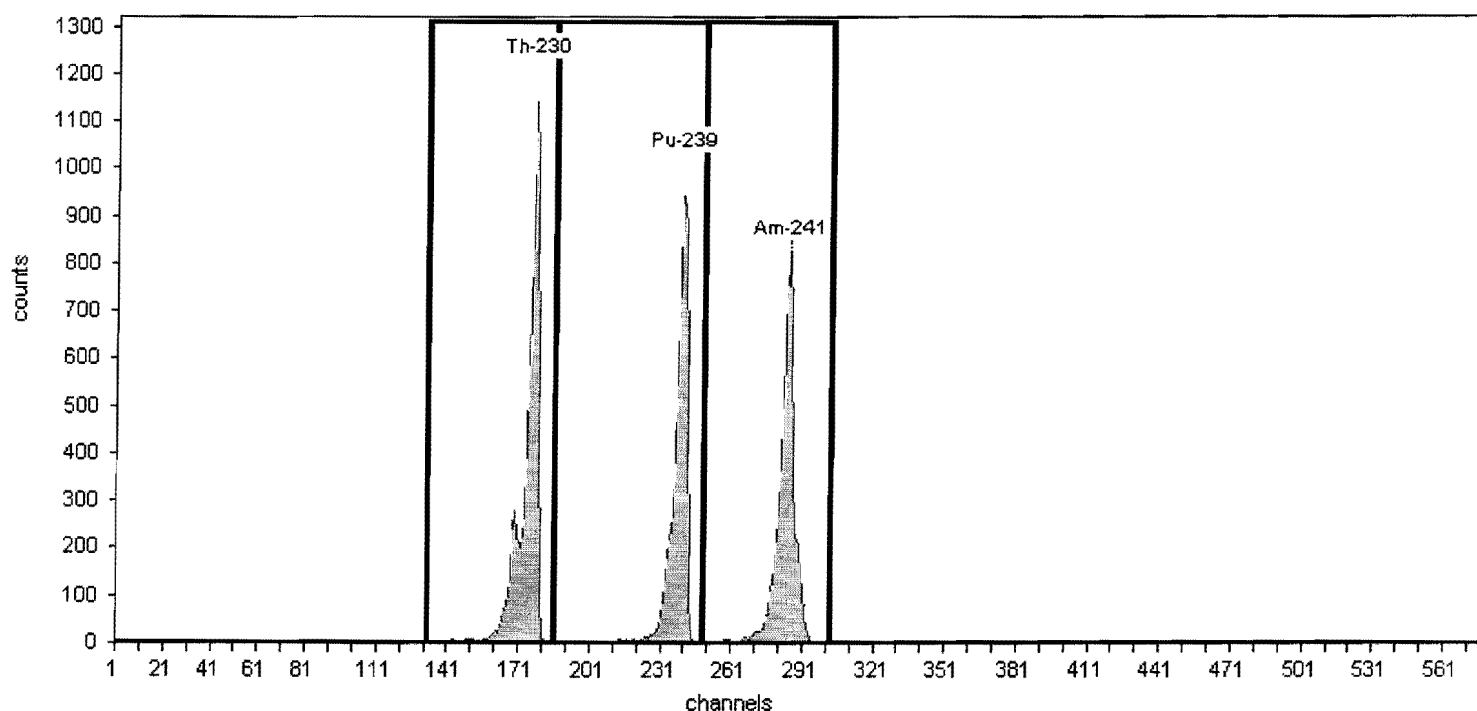
Certificate ID: 82245-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV117 , SN: 49-037X4
Acquisition Start Date: 6/6/2011 1:17:40PM
Live Time: 60.00 min.
Real Time: 61.08 min.
Efficiency: 26.56% +/- 0.49% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,427.00	107.12
Pu-239	240	5.16	186	249	5,175.00	86.25
Am-241	284	5.49	249	303	5,315.00	88.58

Calibration

Name: June2011_AV118
Description:
Detector: AV118

Calibration Date: 6/10/2011 2:55:22PM
Analyst: 60040

Source Info

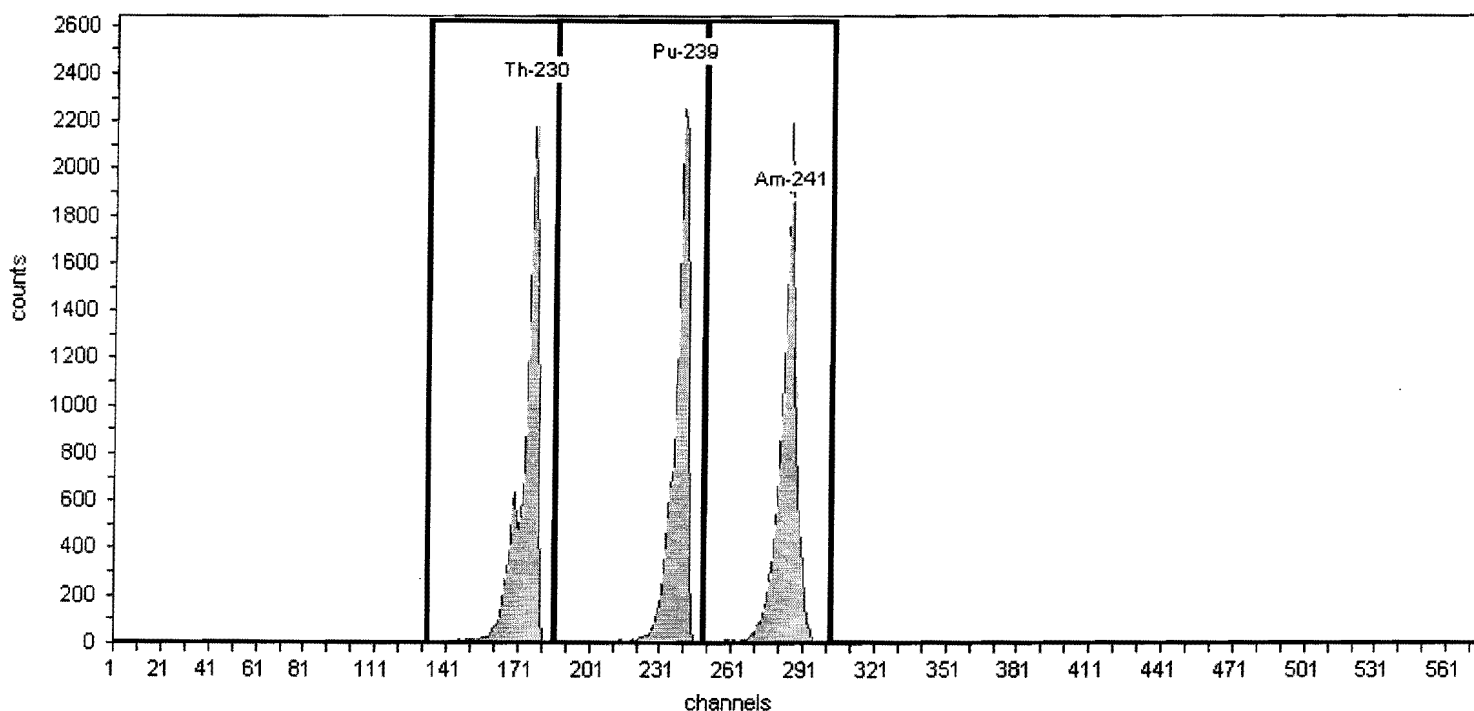
Certificate ID: 82247-334
Prepared by: Analytics

Certification Date: 6/10/2010 12:00:00PM
Description:

Acquisition

Detector: AV118, SN: 49-037F4
Acquisition Start Date: 6/6/2011 8:29:26AM
Live Time: 140.00 min.
Real Time: 145.89 min.
Efficiency: 27.08% +/- 0.36% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,720.00	98.00
Pu-239	240	5.16	186	249	13,401.00	95.72
Am-241	284	5.49	249	303	14,526.00	103.76

Calibration

Name: June2011_AV118_ICV
Description:
Detector: AV118

Calibration Date: 6/10/2011 2:55:36PM
Analyst: 60040

Source Info

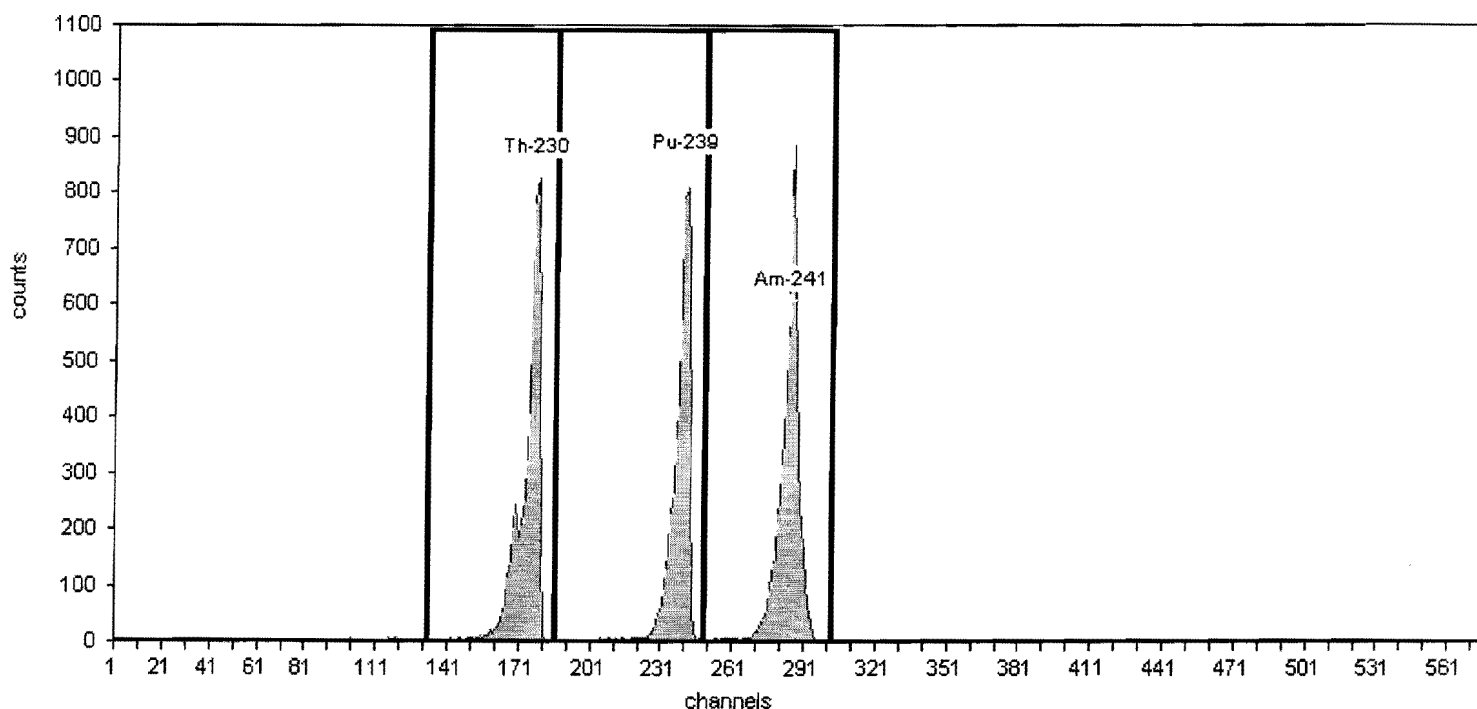
Certificate ID: 82246-334
Prepared by: Analytics

Certification Date: 6/9/2010 12:00:00PM
Description:

Acquisition

Detector: AV118 , SN: 49-037F4
Acquisition Start Date: 6/6/2011 1:18:06PM
Live Time: 60.00 min.
Real Time: 61.08 min.
Efficiency: 26.81% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,403.00	90.05
Pu-239	240	5.16	186	249	5,085.00	84.75
Am-241	284	5.49	249	303	5,842.00	97.37

Calibration

Name: June2011_AV119a
Description:
Detector: AV119

Calibration Date: 6/29/2011 3:57:22PM
Analyst: 60040

Source Info

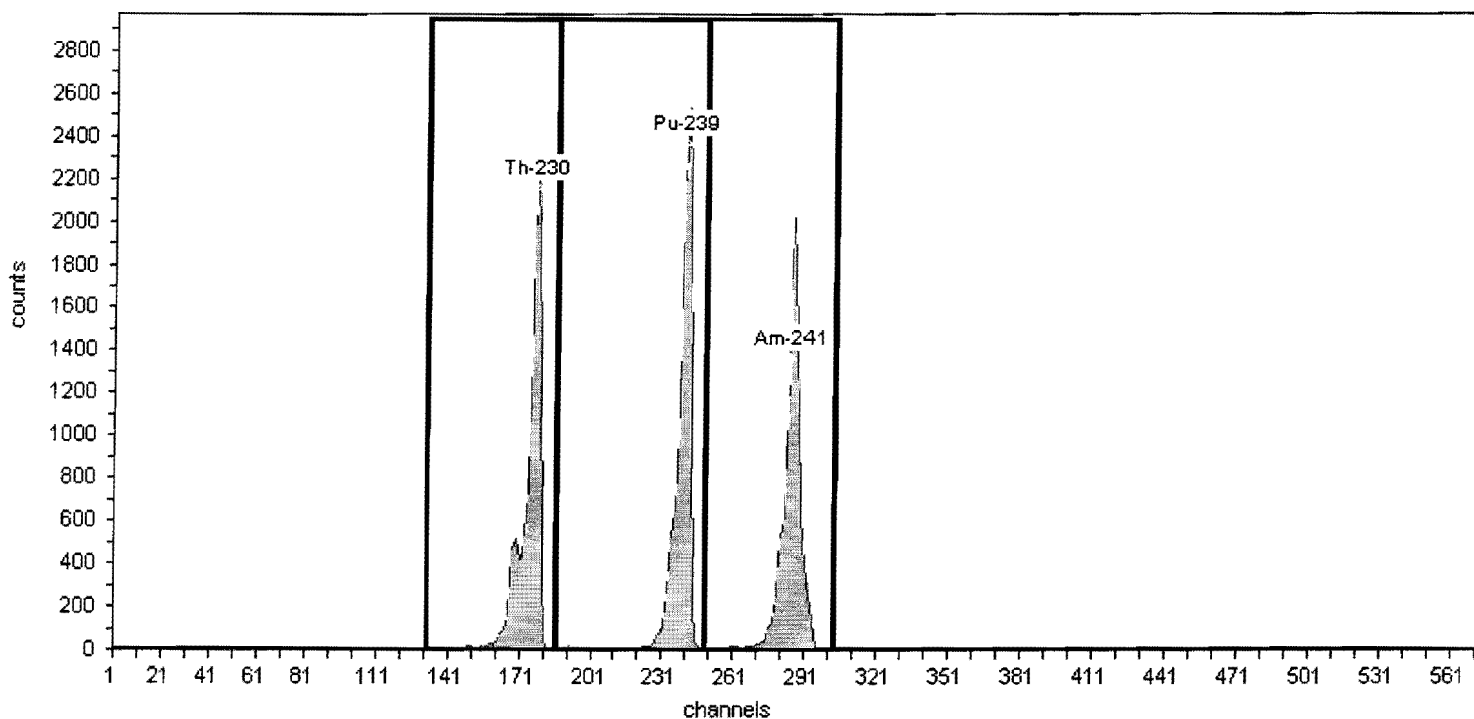
Certificate ID: 82234-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV119 , SN: 49-037G6
Acquisition Start Date: 6/29/2011 1:29:25PM
Live Time: 140.00 min.
Real Time: 140.01 min.
Efficiency: 27.80% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,047.00	93.19
Pu-239	240	5.16	186	249	13,998.00	99.99
Am-241	284	5.49	249	303	13,289.00	94.92

Calibration

Name: June2011_AV119a_ICV
Description:
Detector: AV119

Calibration Date: 6/29/2011 5:16:45PM
Analyst: 60040

Source Info

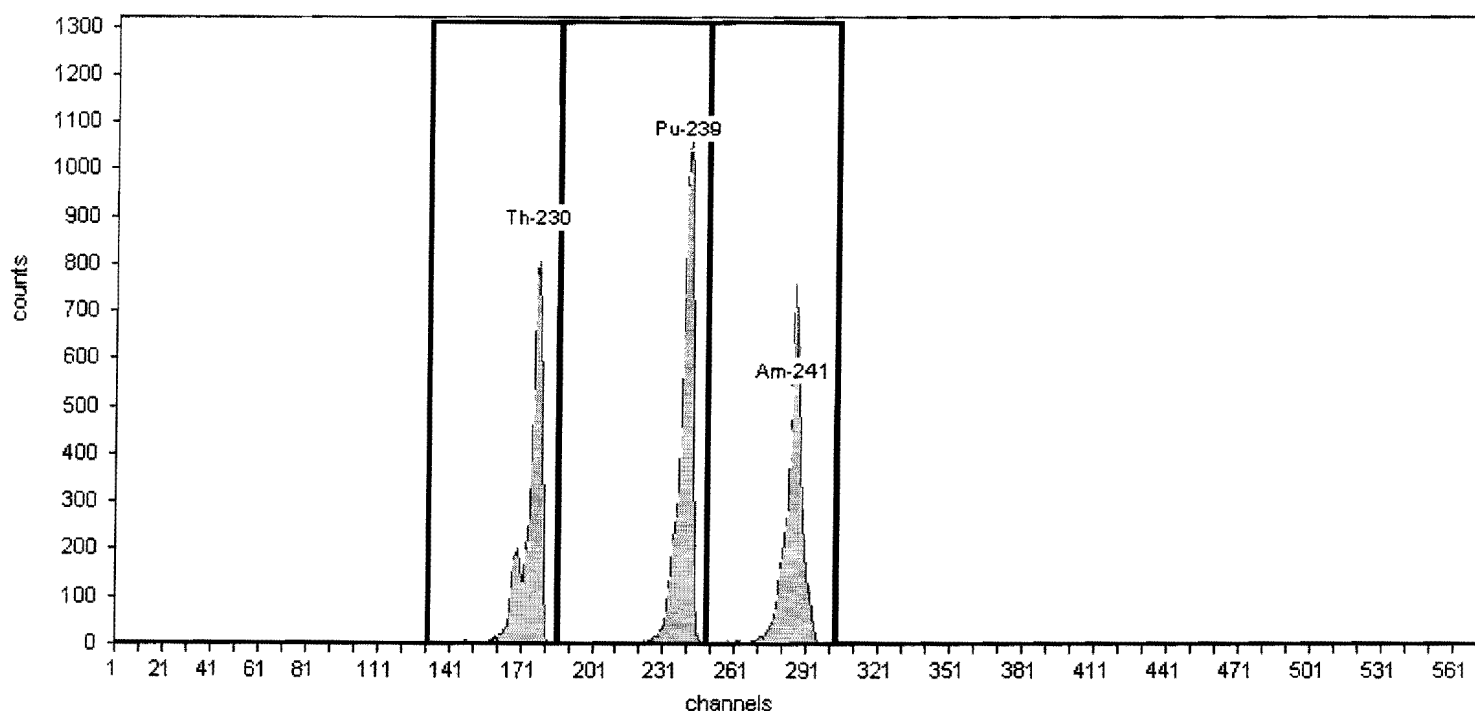
Certificate ID: 82233-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV119 , SN: 49-037G6
Acquisition Start Date: 6/29/2011 4:15:06PM
Live Time: 60.00 min.
Real Time: 60.00 min.
Efficiency: 27.24% +/- 0.51% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	4,778.00	79.63
Pu-239	240	5.16	186	249	6,026.00	100.43
Am-241	284	5.49	249	303	5,008.00	83.47

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**Yearly Calibrations
Alpha Vision
February 2012
AV1-146**

Alpha Spec Calibrations/Verifications

DetectorID	Calibration Date	Source ID	Efficiency (20-32%)	Recov (+/-5%)		
AV1 Dec2011_AV1	12/15/2011 9:30:49 AM	82232-334	0.2769	Pass		
AV2 Dec2011_AV2	12/15/2011 9:31:52 AM	82233-334	0.2696	Pass		
AV3 June2011_AV3	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
AV4 June2011_AV4	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
AV6 June2011_AV6	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
AV7 June2011_AV7	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
AV8 June2011_AV8	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
AV9 Feb2012_AV9a	2/22/2012 5:00:30 PM	82240-334	0.2776	Pass		
Feb2012_AV9a_ICV	2/22/2012 8:32:32 PM	82236-334	0.2761	Pass	99.4615	Pass
AV10 Feb2012_AV10a	2/22/2012 8:32:27 PM	82241-334	0.2709	Pass		
Feb2012_AV10a_ICV	2/23/2012 11:15:43 AM	82237-334	0.2717	Pass	100.292	Pass
AV11 Dec2011_AV11	12/15/2011 1:33:27 PM	82242-334	0.2749	Pass		
AV12 Feb2012_AV12a	2/22/2012 5:00:57 PM	82243-334	0.2682	Pass		
Feb2012_AV12a_ICV	2/22/2012 8:32:35 PM	82238-334	0.2707	Pass	100.940	Pass
AV13 June2011_AV13a	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
AV14 Dec2011_AV14	12/15/2011 9:32:53 AM	82245-334	0.2806	Pass		
AV15 June2011_AV15	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 1 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV16</i>				
Feb2012_AV16a	2/22/2012 5:01:24 PM	82247-334	0.2769	Pass
Feb2012_AV16a_ICV	2/22/2012 8:32:38 PM	82243-334	0.2707	Pass 97.7705 Pass
<i>AV17</i>				
June2011A_AV17	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass
<i>AV18</i>				
Feb2012_AV18a	2/22/2012 5:01:33 PM	82233-334	0.2699	Pass
Feb2012_AV18a_ICV	2/22/2012 8:32:42 PM	82247-334	0.2566	Pass 95.0864 Pass
<i>AV19</i>				
Dec2011_AV19	12/8/2011 9:35:31 AM	82234-334	0.2724	Pass
<i>AV20</i>				
June2011_AV20	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass
<i>AV21</i>				
June2011_AV21b	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
<i>AV23</i>				
June2011_AV23	6/2/2011 8:09:19 AM	63508A-334	0.2563	Pass
<i>AV24</i>				
Dec2011_AV24	12/15/2011 9:33:47 AM	82240-334	0.2717	Pass
<i>AV43</i>				
June2011A_AV43	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass
<i>AV44</i>				
June2011A_AV44	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass
<i>AV45</i>				
June2011_AV45	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass
<i>AV46</i>				
February2012_AV46	2/24/2012 9:01:09 AM	82244-334	0.2721	Pass
Feb2012_AV46_ICV	2/24/2012 12:25:10 PM	82236-334	0.2768	Pass 101.742 Pass
<i>AV47</i>				
June2011A_AV47	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass
<i>AV48</i>				
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 2 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV49</i> June2011_AV49	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass
<i>AV50</i> February2012_AV50	2/24/2012 9:01:31 AM	82232-334	0.2822	Pass
Feb2012_AV50_ICV	2/24/2012 12:25:26 PM	82240-334	0.2783	Pass 98.6252 Pass
<i>AV51</i> June2011_AV51	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass
<i>AV52</i> June2011_AV52	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass
<i>AV53</i> Dec2011_AV53	12/15/2011 9:35:01 AM	82235-334	0.2846	Pass
<i>AV54</i> June2011_AV54	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass
<i>AV55</i> June2011A_AV55	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass
<i>AV56</i> Dec2011_AV56	12/15/2011 9:36:08 AM	82238-334	0.2691	Pass
<i>AV57</i> Dec2011_AV57	12/13/2011 9:33:31 AM	82240-334	0.2792	Pass
<i>AV58</i> February2012_AV58	2/24/2012 9:01:54 AM	82241-334	0.2829	Pass
Feb2012_AV58_ICV	2/24/2012 12:25:49 PM	63507-334	0.2651	Pass 93.6999 Fail
Feb2012_AV58a_ICV	2/24/2012 3:16:31 PM	82232-334	0.2863	Pass 101.213 Pass
Feb2012_AV58b_ICV	2/24/2012 4:28:08 PM	82232-334	0.2853	Pass 100.844 Pass
<i>AV59</i> February2012_AV59	2/24/2012 9:02:17 AM	82242-334	0.2794	Pass
Feb2012_AV59_ICV	2/24/2012 12:26:03 PM	63508A-334	0.2697	Pass 96.5361 Pass
<i>AV60</i> May2011_AV60	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass
<i>AV61</i> June2011_AV61	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass
<i>AV62</i> May2011_AV62	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 3 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV63</i>				
Feb2012_AV63	2/23/2012 4:05:57 PM	82246-334	0.2686	Pass
Feb2012_AV63_ICV	2/23/2012 5:15:45 PM	82234-334	0.2798	Pass 104.191 Pass
<i>AV64</i>				
May2011_AV64	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass
<i>AV65</i>				
Feb2012_AV65	2/23/2012 4:06:15 PM	82232-334	0.2841	Pass
Feb2012_AV65_ICV	2/23/2012 5:15:50 PM	82236-334	0.2714	Pass 95.5197 Pass
<i>AV66</i>				
Dec2011_AV66	12/13/2011 9:35:41 AM	82233-334	0.2772	Pass
<i>AV67</i>				
May2011_AV67	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
<i>AV69</i>				
June2011_AV69	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass
<i>AV70</i>				
June2011_AV70	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass
<i>AV71</i>				
May2011_AV71	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass
<i>AV72</i>				
May2011_AV72	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass
<i>AV73</i>				
Dec2011_AV73	12/16/2011 2:11:57 PM	82241-334	0.2786	Pass
<i>AV74</i>				
Dec2011_AV74b	12/13/2011 12:09:06 PM	82242-334	0.2738	Pass
<i>AV75</i>				
May2011_AV75	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass
<i>AV77</i>				
May2011_AV77	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass
<i>AV78</i>				
May2011_AV78	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass
<i>AV79</i>				
June2011_AV79c	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 4 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV80</i> May2011_AV80	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass
<i>AV81</i> Dec2011_AV81	12/15/2011 12:13:48 PM	82233-334	0.2814	Pass
<i>AV82</i> May2011_AV82	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass
<i>AV83</i> May2011_AV83	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass
<i>AV84</i> May2011_AV84	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass
<i>AV85</i> May2011_AV85	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass
<i>AV86</i> May2011_AV86	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass
<i>AV87</i> June2011_AV87	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass
<i>AV88</i> May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass
<i>AV89</i> May2011_AV89	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass
<i>AV90</i> May2011_AV90	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass
<i>AV92</i> May2011_AV92	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass
<i>AV93</i> May2011_AV93	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass
<i>AV94</i> June2011_AV94a	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass
<i>AV95</i> June2011_AV95b	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass
<i>AV96</i> June2011_AV96	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass
<i>AV97</i> May2011_AV97	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 5 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV98</i> May2011_AV98	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass
<i>AV99</i> Dec2011_AV99a	12/15/2011 1:34:42 PM	82236-334	0.2661	Pass
<i>AV100</i> June2011_AV100	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass
<i>AV101</i> June2011_AV101	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass
<i>AV102</i> June2011_AV102	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass
<i>AV103</i> June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass
<i>AV104</i> June2011_AV104	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass
<i>AV105</i> June2011_AV105	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass
<i>AV106</i> June2011_AV106	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass
<i>AV107</i> June2011_AV107	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass
<i>AV108</i> Dec2011_AV108a	12/15/2011 4:14:23 PM	82246-334	0.2763	Pass
<i>AV109</i> June2011_AV109	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass
<i>AV110</i> June2011_AV110	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass
<i>AV111</i> June2011_AV111	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass
<i>AV112</i> June2011_AV112	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass
<i>AV113</i> June2011_AV113a	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass
<i>AV114</i> June2011_AV114	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 6 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV115</i> June2011_AV115	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
<i>AV116</i> May2011_AV116	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
<i>AV117</i> June2011_AV117	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
<i>AV118</i> June2011_AV118	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
<i>AV119</i> June2011_AV119a	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
<i>AV120</i> June2011_AV120	6/10/2011 2:58:12 PM	63507-334	0.2673	Pass		
<i>AV121</i> June2011_AV121	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
<i>AV122</i> June2011_AV122	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
<i>AV123</i> June2011_AV123a	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
<i>AV124</i> June2011_AV124a	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
<i>AV125</i> June2011_AV125a	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
<i>AV126</i> June2011_AV126	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
<i>AV127</i> June2011A_AV127	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
<i>AV128</i> June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass		
<i>AV130</i> June2011_AV130	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
<i>AV131</i> February2012_AV131	2/24/2012 9:02:44 AM	82238-334	0.2733	Pass		
Feb2012_AV131_ICV	2/24/2012 12:26:24 PM	82245-334	0.2767	Pass	101.234	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 7 of 8

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV132</i> June2011_AV132a	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass
<i>AV133</i> Feb2012_AV133	2/24/2012 1:40:22 PM	82241-334	0.2654	Pass
Feb2012_AV133_ICV	2/24/2012 3:16:36 PM	82247-334	0.2639	Pass 99.4605 Pass
<i>AV134</i> June2011_AV134	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass
<i>AV135</i> June2011_AV135	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass
<i>AV136</i> June2011_AV136	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass
<i>AV137</i> June2011_AV137	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass
<i>AV138</i> June2011_AV138	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass
<i>AV139</i> June2011_AV139a	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass
<i>AV140</i> June2011_AV140	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass
<i>AV141</i> June2011_AV141	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass
<i>AV142</i> June2011_AV142	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass
<i>AV143</i> Dec2011_AV143	12/15/2011 1:36:38 PM	82235-334	0.2708	Pass
<i>AV144</i> June2011_AV144	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass
<i>AV145</i> June2011_AV145	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass
<i>AV146</i> June2011_AV146	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Friday, February 24, 2012

Page 8 of 8

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV1</i>	6/1/2011 2:07:17 PM	63506-334	0.2689	Pass		
	6/1/2011 4:06:00 PM	63509A-334	0.2635	Pass	98.017	Pass
<i>AV3</i>	6/1/2011 2:07:22 PM	63508A-334	0.2671	Pass		
	6/1/2011 4:06:14 PM	63507-334	0.2659	Pass	99.539	Pass
<i>AV4</i>	6/1/2011 2:07:26 PM	63509A-334	0.2679	Pass		
	6/1/2011 4:06:27 PM	63508A-334	0.2631	Pass	98.209	Pass
<i>AV6</i>	6/1/2011 2:08:00 PM	82233-334	0.2795	Pass		
	6/1/2011 4:06:40 PM	82232-334	0.2848	Pass	101.88	Pass
<i>AV7</i>	6/1/2011 2:08:04 PM	82234-334	0.2783	Pass		
	6/1/2011 4:06:58 PM	82233-334	0.2732	Pass	98.157	Pass
<i>AV8</i>	6/1/2011 2:08:08 PM	82235-334	0.2799	Pass		
	6/1/2011 4:07:14 PM	82234-334	0.2798	Pass	99.955	Pass
<i>AV9</i>	6/1/2011 2:10:02 PM	82236-334	0.2743	Pass		
	6/1/2011 4:07:30 PM	82235-334	0.2766	Pass	100.82	Pass
<i>AV10</i>	6/1/2011 2:10:22 PM	82237-334	0.2625	Pass		
	6/1/2011 4:07:43 PM	82236-334	0.2723	Pass	103.70	Pass
<i>AV11</i>	6/10/2011 2:02:03 PM	82238-334	0.2759	Pass		
	6/10/2011 3:55:36 PM	82237-334	0.2712	Pass	98.291	Pass
<i>AV12</i>	6/1/2011 2:12:35 PM	82239-334	0.2713	Pass		
	6/1/2011 4:08:49 PM	82238-334	0.2741	Pass	101.04	Pass
<i>AV13</i>	6/1/2011 2:12:53 PM	82240-334	0.2795	Pass		
	6/1/2011 4:09:02 PM	82239-334	0.2747	Pass	98.276	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV14</i>	6/10/2011 2:02:15 PM	82241-334	0.2799	Pass		
	6/10/2011 3:55:45 PM	82240-334	0.2727	Pass	97.425	Pass
<i>AV15</i>	6/1/2011 2:13:10 PM	82242-334	0.2731	Pass		
	6/1/2011 4:09:33 PM	82241-334	0.2708	Pass	99.161	Pass
<i>AV16</i>	6/1/2011 2:13:39 PM	82243-334	0.2692	Pass		
	6/1/2011 4:09:45 PM	82242-334	0.2732	Pass	101.48	Pass
<i>AV17</i>	6/10/2011 2:02:28 PM	82244-334	0.2619	Pass		
	6/10/2011 3:55:50 PM	82243-334	0.2607	Pass	99.547	Pass
<i>AV18</i>	6/1/2011 2:12:48 PM	82245-334	0.2640	Pass		
	6/1/2011 4:10:09 PM	82244-334	0.2576	Pass	97.578	Pass
<i>AV19</i>	6/10/2011 2:48:01 PM	82246-334	0.2592	Pass		
	6/20/2011 11:48:18 AM	82245-334	0.2695	Pass	103.95	Pass
<i>AV20</i>	6/1/2011 2:13:04 PM	82247-334	0.2701	Pass		
	6/1/2011 4:10:40 PM	82246-334	0.2675	Pass	99.056	Pass
<i>AV21</i>	6/29/2011 3:56:43 PM	63508A-334	0.2596	Pass		
	6/29/2011 5:11:24 PM	63507-334	0.2611	Pass	100.59	Pass
<i>AV22</i>	6/10/2011 4:38:28 PM	63507-334	0.2595	Pass		
	6/20/2011 3:03:26 PM	63506-334	0.2514	Pass	96.881	Pass
<i>AV23</i>	6/2/2011 6:09:19 AM	63508A-334	0.2563	Pass		
	6/2/2011 5:26:58 PM	63507-334	0.2560	Pass	99.882	Pass
<i>AV24</i>	6/2/2011 6:09:22 AM	63509A-334	0.2639	Pass		
	6/2/2011 5:27:05 PM	63508A-334	0.2616	Pass	99.111	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV43</i>	6/20/2011 1:52:02 AM	82232-334	0.2786	Pass		
	6/20/2011 4:09:28 AM	63509A-334	0.2684	Pass	96.334	Pass
<i>AV44</i>	6/20/2011 8:43:44 AM	82233-334	0.2708	Pass		
	6/20/2011 12:55:44 PM	82232-334	0.2760	Pass	101.91	Pass
<i>AV45</i>	6/2/2011 6:09:33 AM	82234-334	0.2811	Pass		
	6/2/2011 5:27:08 PM	82233-334	0.2743	Pass	97.568	Pass
<i>AV46</i>	6/2/2011 6:09:37 AM	82235-334	0.2842	Pass		
	6/2/2011 5:27:12 PM	82234-334	0.2875	Pass	101.13	Pass
<i>AV47</i>	6/20/2011 8:43:55 AM	82236-334	0.2691	Pass		
	6/20/2011 12:55:48 PM	82235-334	0.2785	Pass	103.49	Pass
<i>AV48</i>	6/20/2011 8:44:03 AM	82237-334	0.2671	Pass		
	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	101.82	Pass
<i>AV49</i>	6/2/2011 6:09:47 AM	82238-334	0.2849	Pass		
	6/2/2011 5:27:16 PM	82237-334	0.2745	Pass	96.349	Pass
<i>AV50</i>	6/20/2011 8:44:13 AM	82239-334	0.2730	Pass		
	6/20/2011 12:55:56 PM	82238-334	0.2754	Pass	100.88	Pass
<i>AV51</i>	6/2/2011 6:09:53 AM	82240-334	0.2771	Pass		
	6/2/2011 5:27:20 PM	82239-334	0.2704	Pass	97.595	Pass
<i>AV52</i>	6/2/2011 6:09:56 AM	82241-334	0.2870	Pass		
	6/2/2011 5:27:24 PM	82240-334	0.2893	Pass	100.78	Pass
<i>AV54</i>	6/2/2011 6:10:00 AM	82243-334	0.2719	Pass		
	6/2/2011 5:27:29 PM	82242-334	0.2763	Pass	101.63	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV55</i>	6/20/2011 8:44:19 AM	82244-334	0.2685	Pass		
	6/20/2011 12:56:00 PM	82243-334	0.2693	Pass	100.32	Pass
<i>AV57</i>	6/2/2011 6:10:07 AM	82246-334	0.2733	Pass		
	6/2/2011 5:27:35 PM	82245-334	0.2745	Pass	100.46	Pass
<i>AV58</i>	6/2/2011 6:10:11 AM	82247-334	0.2842	Pass		
	6/2/2011 5:27:39 PM	82246-334	0.2740	Pass	96.420	Pass
<i>AV59</i>	6/29/2011 3:56:50 PM	63509A-334	0.2722	Pass		
	6/29/2011 5:11:40 PM	63508A-334	0.2694	Pass	98.981	Pass
<i>AV60</i>	6/2/2011 11:03:44 AM	63507-334	0.2647	Pass		
	6/2/2011 5:27:47 PM	63506-334	0.2570	Pass	97.082	Pass
<i>AV61</i>	6/20/2011 2:14:49 PM	63508A-334	0.2663	Pass		
	6/20/2011 3:32:40 PM	63507-334	0.2635	Pass	98.951	Pass
<i>AV62</i>	6/2/2011 11:15:48 AM	63509A-334	0.2723	Pass		
	6/2/2011 6:59:03 PM	63508A-334	0.2697	Pass	99.053	Pass
<i>AV63</i>	6/2/2011 11:16:12 AM	82232-334	0.2767	Pass		
	6/2/2011 5:27:53 PM	63509A-334	0.2637	Pass	95.302	Pass
<i>AV64</i>	6/2/2011 11:16:26 AM	82233-334	0.2832	Pass		
	6/2/2011 5:27:57 PM	82232-334	0.2867	Pass	101.23	Pass
<i>AV65</i>	6/2/2011 11:16:39 AM	82234-334	0.2798	Pass		
	6/2/2011 6:58:45 PM	82233-334	0.2773	Pass	99.094	Pass
<i>AV66</i>	6/2/2011 11:16:51 AM	82235-334	0.2808	Pass		
	6/2/2011 6:58:50 PM	82234-334	0.2803	Pass	99.816	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV67</i>	6/2/2011 11:17:07 AM	82236-334	0.2930	Pass		
	6/2/2011 5:28:01 PM	82235-334	0.2955	Pass	100.85	Pass
<i>AV68</i>	6/2/2011 11:17:18 AM	82237-334	0.2658	Pass		
	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass	104.12	Pass
<i>AV69</i>	6/21/2011 2:25:40 PM	82238-334	0.2749	Pass		
	6/23/2011 1:18:22 PM	82237-334	0.2651	Pass	96.439	Pass
<i>AV70</i>	6/21/2011 2:26:58 PM	82239-334	0.2763	Pass		
	6/22/2011 2:20:23 AM	82238-334	0.2700	Pass	97.724	Pass
<i>AV71</i>	6/2/2011 11:17:45 AM	82240-334	0.2741	Pass		
	6/2/2011 6:59:06 PM	82239-334	0.2735	Pass	99.757	Pass
<i>AV72</i>	6/2/2011 11:17:59 AM	82241-334	0.2892	Pass		
	6/2/2011 6:59:09 PM	82240-334	0.2876	Pass	99.447	Pass
<i>AV73</i>	6/20/2011 2:14:44 PM	82242-334	0.2887	Pass		
	6/20/2011 3:32:43 PM	82241-334	0.2772	Pass	96.029	Pass
<i>AV74</i>	6/21/2011 2:25:05 PM	82243-334	0.2715	Pass		
	6/22/2011 2:21:05 AM	82242-334	0.2759	Pass	101.65	Pass
<i>AV75</i>	6/2/2011 11:18:19 AM	82244-334	0.2642	Pass		
	6/2/2011 5:28:13 PM	82243-334	0.2646	Pass	100.16	Pass
<i>AV77</i>	6/2/2011 11:18:32 AM	82246-334	0.2664	Pass		
	6/2/2011 6:58:56 PM	82245-334	0.2742	Pass	102.93	Pass
<i>AV78</i>	6/2/2011 11:18:45 AM	82247-334	0.2767	Pass		
	6/2/2011 6:59:12 PM	82246-334	0.2690	Pass	97.223	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV79</i>	6/29/2011 3:57:04 PM	82232-334	0.2834	Pass		
	6/29/2011 5:16:27 PM	63509A-334	0.2703	Pass	95.357	Pass
<i>AV80</i>	6/10/2011 5:01:32 PM	63507-334	0.2579	Pass		
	6/10/2011 5:01:49 PM	63506-334	0.2530	Pass	98.103	Pass
<i>AV82</i>	6/28/2011 9:27:42 PM	63509A-334	0.2676	Pass		
	6/28/2011 9:28:02 PM	63508A-334	0.2631	Pass	98.329	Pass
<i>AV83</i>	6/28/2011 9:28:42 PM	82232-334	0.2783	Pass		
	6/28/2011 9:29:04 PM	63509A-334	0.2700	Pass	97.024	Pass
<i>AV84</i>	6/28/2011 9:29:52 PM	82233-334	0.2740	Pass		
	6/28/2011 9:30:12 PM	82232-334	0.2822	Pass	103.00	Pass
<i>AV85</i>	6/28/2011 9:30:57 PM	82234-334	0.2852	Pass		
	6/28/2011 9:31:17 PM	82233-334	0.2784	Pass	97.612	Pass
<i>AV86</i>	6/28/2011 9:31:44 PM	82235-334	0.2811	Pass		
	6/28/2011 9:32:01 PM	82234-334	0.2800	Pass	99.596	Pass
<i>AV87</i>	6/21/2011 2:25:24 PM	82236-334	0.2944	Pass		
	6/22/2011 2:21:15 AM	82235-334	0.2987	Pass	101.42	Pass
<i>AV88</i>	6/28/2011 9:33:11 PM	82237-334	0.2657	Pass		
	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	104.76	Pass
<i>AV89</i>	6/2/2011 11:21:41 AM	82238-334	0.2698	Pass		
	6/2/2011 6:58:53 PM	82237-334	0.2724	Pass	100.97	Pass
<i>AV90</i>	6/28/2011 9:34:16 PM	82239-334	0.2753	Pass		
	6/28/2011 9:34:38 PM	82238-334	0.2804	Pass	101.83	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV92</i>	6/28/2011 9:35:11 PM	82241-334	0.2775	Pass		
	6/28/2011 9:35:31 PM	82240-334	0.2758	Pass	99.357	Pass
<i>AV93</i>	6/10/2011 5:05:03 PM	82242-334	0.2772	Pass		
	6/10/2011 5:05:28 PM	82241-334	0.2694	Pass	97.178	Pass
<i>AV94</i>	6/29/2011 3:57:09 PM	82247-334	0.2751	Pass		
	6/29/2011 5:16:31 PM	82246-334	0.2690	Pass	97.805	Pass
<i>AV95</i>	6/30/2011 8:32:04 PM	82244-334	0.2663	Pass		
	7/1/2011 9:11:14 AM	82243-334	0.2666	Pass	100.11	Pass
<i>AV96</i>	6/21/2011 2:25:55 PM	82245-334	0.2743	Pass		
	6/22/2011 2:21:15 AM	82244-334	0.2710	Pass	98.792	Pass
<i>AV97</i>	6/28/2011 9:40:29 PM	82246-334	0.2715	Pass		
	6/28/2011 9:40:49 PM	82245-334	0.2753	Pass	101.41	Pass
<i>AV98</i>	6/28/2011 9:41:09 PM	82247-334	0.2807	Pass		
	6/28/2011 9:41:29 PM	82246-334	0.2744	Pass	97.774	Pass
<i>AV99</i>	6/29/2011 3:57:13 PM	82233-334	0.2698	Pass		
	6/29/2011 5:16:35 PM	82232-334	0.2786	Pass	103.27	Pass
<i>AV100</i>	6/10/2011 2:41:33 PM	63507-334	0.2630	Pass		
	6/10/2011 2:57:02 PM	63506-334	0.2576	Pass	97.938	Pass
<i>AV101</i>	6/10/2011 2:42:11 PM	63508A-334	0.2594	Pass		
	6/10/2011 2:42:00 PM	63507-334	0.2644	Pass	101.90	Pass
<i>AV102</i>	6/10/2011 2:42:28 PM	63509A-334	0.2668	Pass		
	6/10/2011 2:42:43 PM	63508A-334	0.2635	Pass	98.782	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV103</i>	6/29/2011 3:57:18 PM	82237-334	0.2644	Pass		
	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	102.81	Pass
<i>AV104</i>	6/10/2011 2:45:37 PM	82233-334	0.2711	Pass		
	6/10/2011 2:46:11 PM	82232-334	0.2737	Pass	100.94	Pass
<i>AV105</i>	6/10/2011 2:48:33 PM	82234-334	0.2601	Pass		
	6/10/2011 2:48:49 PM	82233-334	0.2562	Pass	98.471	Pass
<i>AV106</i>	6/10/2011 2:49:36 PM	82235-334	0.2828	Pass		
	6/10/2011 2:49:46 PM	82234-334	0.2796	Pass	98.873	Pass
<i>AV107</i>	6/10/2011 2:49:58 PM	82236-334	0.2809	Pass		
	6/10/2011 2:50:11 PM	82235-334	0.2786	Pass	99.167	Pass
<i>AV108</i>	6/10/2011 2:50:25 PM	82237-334	0.2880	Pass		
	6/10/2011 2:50:39 PM	82236-334	0.2848	Pass	98.912	Pass
<i>AV109</i>	6/10/2011 2:50:52 PM	82238-334	0.2642	Pass		
	6/10/2011 2:51:04 PM	82237-334	0.2699	Pass	102.16	Pass
<i>AV110</i>	6/10/2011 2:51:15 PM	82239-334	0.2761	Pass		
	6/10/2011 2:51:31 PM	82238-334	0.2723	Pass	98.639	Pass
<i>AV111</i>	6/10/2011 2:51:42 PM	82240-334	0.2742	Pass		
	6/10/2011 2:51:58 PM	82239-334	0.2698	Pass	98.397	Pass
<i>AV112</i>	6/10/2011 2:52:10 PM	82241-334	0.2689	Pass		
	6/10/2011 2:52:23 PM	82240-334	0.2662	Pass	98.990	Pass
<i>AV113</i>	6/29/2011 8:19:17 PM	82247-334	0.2797	Pass		
	6/30/2011 10:18:11 AM	82246-334	0.2733	Pass	97.694	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV114</i>	6/10/2011 2:53:57 PM	82243-334	0.2672	Pass		
	6/10/2011 2:54:10 PM	82242-334	0.2759	Pass	103.28	Pass
<i>AV115</i>	6/10/2011 2:57:31 PM	82244-334	0.2713	Pass		
	6/10/2011 2:57:44 PM	82243-334	0.2721	Pass	100.29	Pass
<i>AV116</i>	6/2/2011 11:22:31 AM	82245-334	0.2802	Pass		
	6/27/2011 10:38:43 PM	82244-334	0.2729	Pass	97.394	Pass
<i>AV117</i>	6/10/2011 2:54:57 PM	82246-334	0.2598	Pass		
	6/10/2011 2:55:11 PM	82245-334	0.2656	Pass	102.23	Pass
<i>AV118</i>	6/10/2011 2:55:22 PM	82247-334	0.2708	Pass		
	6/10/2011 2:55:36 PM	82246-334	0.2681	Pass	98.996	Pass
<i>AV119</i>	6/29/2011 3:57:22 PM	82234-334	0.2780	Pass		
	6/29/2011 5:16:45 PM	82233-334	0.2724	Pass	98.002	Pass
<i>AV120</i>	6/10/2011 2:56:12 PM	63507-334	0.2673	Pass		
	6/10/2011 2:56:27 PM	63506-334	0.2588	Pass	96.816	Pass
<i>AV121</i>	6/10/2011 2:58:09 PM	63508A-334	0.2680	Pass		
	6/10/2011 2:58:22 PM	63507-334	0.2663	Pass	99.376	Pass
<i>AV122</i>	6/10/2011 2:58:33 PM	63509A-334	0.2633	Pass		
	6/10/2011 2:58:47 PM	63508A-334	0.2595	Pass	98.546	Pass
<i>AV123</i>	6/21/2011 2:27:18 PM	82232-334	0.2737	Pass		
	6/22/2011 3:45:08 AM	82241-334	0.2847	Pass	104.01	Pass
<i>AV124</i>	6/21/2011 2:26:12 PM	82233-334	0.2650	Pass		
	6/22/2011 2:21:19 AM	82232-334	0.2722	Pass	102.70	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI25</i>	6/21/2011 2:26:25 PM	82234-334	0.2746	Pass		
	6/22/2011 2:21:37 AM	82233-334	0.2671	Pass	97.276	Pass
<i>AVI26</i>	6/3/2011 3:29:01 PM	82235-334	0.2754	Pass		
	6/10/2011 3:00:12 PM	82234-334	0.2754	Pass	100.00	Pass
<i>AVI27</i>	6/28/2011 9:47:50 PM	82236-334	0.2755	Pass		
	6/23/2011 8:58:08 AM	82235-334	0.2802	Pass	101.68	Pass
<i>AVI28</i>	6/3/2011 3:29:09 PM	82237-334	0.2615	Pass		
	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass	104.65	Pass
<i>AVI30</i>	6/3/2011 3:29:19 PM	82239-334	0.2686	Pass		
	6/10/2011 3:01:20 PM	82238-334	0.2696	Pass	100.39	Pass
<i>AVI31</i>	6/3/2011 3:29:24 PM	82240-334	0.2766	Pass		
	6/10/2011 3:01:46 PM	82239-334	0.2724	Pass	98.466	Pass
<i>AVI32</i>	6/30/2011 11:37:39 AM	82247-334	0.2712	Pass		
	6/30/2011 12:41:22 PM	82246-334	0.2649	Pass	97.648	Pass
<i>AVI33</i>	6/30/2011 8:32:09 PM	82234-334	0.2707	Pass		
	7/1/2011 9:11:19 AM	82233-334	0.2695	Pass	99.548	Pass
<i>AVI34</i>	6/3/2011 3:29:39 PM	82243-334	0.2826	Pass		
	6/10/2011 3:02:44 PM	82242-334	0.2790	Pass	98.713	Pass
<i>AVI35</i>	6/3/2011 3:29:47 PM	82244-334	0.2626	Pass		
	6/10/2011 3:02:54 PM	82243-334	0.2675	Pass	101.88	Pass
<i>AVI36</i>	6/3/2011 3:29:51 PM	82245-334	0.2706	Pass		
	6/10/2011 3:03:17 PM	82244-334	0.2643	Pass	97.639	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV137</i>	6/3/2011 3:29:43 PM	82246-334	0.2746	Pass		
	6/10/2011 3:03:29 PM	82245-334	0.2844	Pass	103.57	Pass
<i>AV138</i>	6/3/2011 3:29:55 PM	82247-334	0.2648	Pass		
	6/10/2011 3:03:43 PM	82246-334	0.2609	Pass	98.539	Pass
<i>AV139</i>	6/29/2011 3:57:26 PM	82235-334	0.2713	Pass		
	6/29/2011 5:16:50 PM	82234-334	0.2747	Pass	101.26	Pass
<i>AV140</i>	6/3/2011 3:30:04 PM	63507-334	0.2557	Pass		
	6/10/2011 3:04:11 PM	63506-334	0.2506	Pass	98.005	Pass
<i>AV141</i>	6/3/2011 3:30:09 PM	63508A-334	0.2581	Pass		
	6/10/2011 3:04:21 PM	63507-334	0.2577	Pass	99.845	Pass
<i>AV142</i>	6/3/2011 3:30:14 PM	63509A-334	0.2631	Pass		
	6/10/2011 3:04:32 PM	63508A-334	0.2620	Pass	99.586	Pass
<i>AV143</i>	6/10/2011 3:04:43 PM	82232-334	0.2740	Pass		
	6/10/2011 3:05:29 PM	63509A-334	0.2649	Pass	96.698	Pass
<i>AV144</i>	6/10/2011 3:04:53 PM	82233-334	0.2723	Pass		
	6/10/2011 3:05:38 PM	82232-334	0.2825	Pass	103.75	Pass
<i>AV145</i>	6/10/2011 3:05:03 PM	82234-334	0.2749	Pass		
	6/10/2011 3:05:47 PM	82233-334	0.2679	Pass	97.443	Pass
<i>AV146</i>	6/10/2011 3:05:14 PM	82235-334	0.2748	Pass		
	6/10/2011 3:05:57 PM	82234-334	0.2795	Pass	101.70	Pass

June Alpha Spec Calibrations

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV147</i>	6/14/2011 9:47:31 AM	82236-334	0.2858	Pass		
	6/14/2011 9:48:52 AM	82247-334	0.2876	Pass	100.65	Pass
<i>AV148</i>	6/21/2011 2:32:02 PM	82237-334	0.2655	Pass		
	6/21/2011 2:32:43 PM	82236-334	0.2752	Pass	103.63	Pass
<i>AV149</i>	6/21/2011 2:34:00 PM	82238-334	0.2822	Pass		
	6/21/2011 2:34:33 PM	82237-334	0.2743	Pass	97.212	Pass
<i>AV151</i>	6/21/2011 2:36:24 PM	82240-334	0.2779	Pass		
	6/21/2011 2:36:47 PM	82239-334	0.2757	Pass	99.212	Pass
<i>AV152</i>	6/21/2011 2:37:11 PM	82241-334	0.2700	Pass		
	6/21/2011 2:37:32 PM	82240-334	0.2698	Pass	99.948	Pass
<i>AV153</i>	6/30/2011 9:05:44 AM	63508A-334	0.2610	Pass		
	6/30/2011 10:17:32 AM	63507-334	0.2585	Pass	99.026	Pass
<i>AV154</i>	6/21/2011 2:39:31 PM	82243-334	0.2680	Pass		
	6/21/2011 2:40:03 PM	82242-334	0.2722	Pass	101.56	Pass
<i>AV155</i>	6/27/2011 9:21:16 PM	82244-334	0.2651	Pass		
	6/27/2011 9:22:09 PM	82243-334	0.2628	Pass	99.134	Pass
<i>AV156</i>	6/27/2011 9:22:55 PM	82245-334	0.2721	Pass		
	6/27/2011 9:23:40 PM	82244-334	0.2640	Pass	97.019	Pass
<i>AV157</i>	6/27/2011 9:24:40 PM	82246-334	0.2630	Pass		
	6/27/2011 9:25:17 PM	82245-334	0.2703	Pass	102.74	Pass
<i>AV158</i>	6/30/2011 11:40:49 AM	82235-334	0.2758	Pass		
	6/30/2011 12:51:15 PM	82234-334	0.2756	Pass	99.948	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AVI59</i>	6/30/2011 9:06:12 AM	82236-334	0.2701	Pass		
	6/30/2011 9:06:45 AM	82235-334	0.2750	Pass	101.83	Pass
<i>AVI60</i>	6/30/2011 9:07:03 AM	82237-334	0.2630	Pass		
	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	100.98	Pass
<i>AVI61</i>	6/27/2011 9:29:26 PM	63508A-334	0.2652	Pass		
	6/27/2011 9:29:59 PM	63507-334	0.2604	Pass	98.212	Pass
<i>AVI62</i>	6/23/2011 11:26:56 AM	63509A-334	0.2637	Pass		
	6/23/2011 1:44:04 PM	63508A-334	0.2643	Pass	100.20	Pass
<i>AVI63</i>	6/15/2011 1:14:12 AM	82232-334	0.2782	Pass		
	6/27/2011 9:30:57 PM	63509A-334	0.2748	Pass	98.774	Pass
<i>AVI64</i>	6/30/2011 9:07:48 AM	82241-334	0.2661	Pass		
	6/30/2011 9:08:11 AM	82240-334	0.2702	Pass	101.52	Pass
<i>AVI65</i>	6/15/2011 1:14:21 AM	82234-334	0.2869	Pass		
	6/27/2011 9:32:32 PM	82233-334	0.2796	Pass	97.467	Pass
<i>AVI66</i>	6/15/2011 1:14:26 AM	82235-334	0.2773	Pass		
	6/27/2011 9:33:19 PM	82234-334	0.2771	Pass	99.922	Pass
<i>AVI67</i>	6/15/2011 1:14:30 AM	82236-334	0.2723	Pass		
	6/27/2011 9:34:00 PM	82235-334	0.2755	Pass	101.17	Pass
<i>AVI68</i>	6/15/2011 1:14:34 AM	82237-334	0.2627	Pass		
	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	102.85	Pass
<i>AVI69</i>	6/15/2011 1:14:37 AM	82238-334	0.2711	Pass		
	6/27/2011 9:35:26 PM	82237-334	0.2674	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV170</i>	6/15/2011 1:14:41 AM	82239-334	0.2783	Pass		
	6/27/2011 9:36:10 PM	82238-334	0.2688	Pass	96.606	Pass
<i>AV171</i>	6/15/2011 1:14:45 AM	82240-334	0.2709	Pass		
	6/27/2011 9:37:06 PM	82239-334	0.2813	Pass	103.84	Pass
<i>AV172</i>	6/15/2011 1:14:49 AM	82241-334	0.2699	Pass		
	6/27/2011 9:37:46 PM	82240-334	0.2705	Pass	100.22	Pass
<i>AV173</i>	6/15/2011 1:14:52 AM	82242-334	0.2830	Pass		
	6/27/2011 9:38:28 PM	82241-334	0.2716	Pass	95.991	Pass
<i>AV174</i>	6/15/2011 1:14:56 AM	82243-334	0.2679	Pass		
	6/27/2011 9:39:06 PM	82242-334	0.2743	Pass	102.42	Pass
<i>AV175</i>	6/15/2011 1:15:00 AM	82244-334	0.2675	Pass		
	6/27/2011 9:39:52 PM	82243-334	0.2720	Pass	101.67	Pass
<i>AV176</i>	6/15/2011 2:15:31 AM	82245-334	0.2726	Pass		
	6/27/2011 9:40:38 PM	82244-334	0.2661	Pass	97.631	Pass
<i>AV177</i>	6/15/2011 1:15:04 AM	82246-334	0.2651	Pass		
	6/15/2011 4:19:56 AM	82245-334	0.2751	Pass	103.75	Pass
<i>AV178</i>	6/15/2011 1:15:07 AM	82247-334	0.2746	Pass		
	6/27/2011 9:41:21 PM	82246-334	0.2711	Pass	98.745	Pass
<i>AV179</i>	6/30/2011 9:08:46 AM	82237-334	0.2742	Pass		
	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	104.51	Pass
<i>AV180</i>	6/15/2011 1:15:15 AM	63507-334	0.2625	Pass		
	6/27/2011 9:43:59 PM	63506-334	0.2532	Pass	96.455	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV181</i>	6/15/2011 1:15:18 AM	63508A-334	0.2611	Pass		
	6/27/2011 9:44:46 PM	63507-334	0.2587	Pass	99.069	Pass
<i>AV182</i>	6/27/2011 9:45:31 PM	63509A-334	0.2629	Pass		
	6/27/2011 9:46:14 PM	63508A-334	0.2625	Pass	99.822	Pass
<i>AV183</i>	6/20/2011 10:52:50 PM	82232-334	0.2795	Pass		
	6/27/2011 9:46:57 PM	63509A-334	0.2671	Pass	95.537	Pass
<i>AV184</i>	6/20/2011 10:52:55 PM	82233-334	0.2772	Pass		
	6/27/2011 9:47:46 PM	82232-334	0.2799	Pass	100.95	Pass
<i>AV185</i>	6/20/2011 10:52:58 PM	82234-334	0.2823	Pass		
	6/27/2011 9:48:33 PM	82233-334	0.2741	Pass	97.113	Pass
<i>AV186</i>	6/20/2011 10:53:06 PM	82235-334	0.2741	Pass		
	6/27/2011 9:49:22 PM	82234-334	0.2744	Pass	100.12	Pass
<i>AV187</i>	6/20/2011 10:53:09 PM	82236-334	0.2672	Pass		
	6/27/2011 9:50:09 PM	82235-334	0.2741	Pass	102.59	Pass
<i>AV188</i>	6/20/2011 10:53:13 PM	82237-334	0.2820	Pass		
	6/27/2011 9:50:56 PM	82236-334	0.2799	Pass	99.240	Pass
<i>AV189</i>	6/20/2011 10:53:16 PM	82238-334	0.2769	Pass		
	6/27/2011 9:51:48 PM	82237-334	0.2684	Pass	96.927	Pass
<i>AV190</i>	6/21/2011 1:27:18 AM	82239-334	0.2710	Pass		
	6/27/2011 9:52:36 PM	82238-334	0.2739	Pass	101.05	Pass
<i>AV191</i>	6/20/2011 10:53:19 PM	82240-334	0.2794	Pass		
	6/21/2011 4:20:11 AM	82239-334	0.2769	Pass	99.115	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV192</i>	6/20/2011 10:53:23 PM	82241-334	0.2797	Pass		
	6/27/2011 9:53:23 PM	82240-334	0.2797	Pass	100.02	Pass
<i>AV193</i>	6/20/2011 10:53:26 PM	82242-334	0.2736	Pass		
	6/27/2011 9:54:02 PM	82241-334	0.2750	Pass	100.50	Pass
<i>AV194</i>	6/20/2011 10:53:29 PM	82243-334	0.2734	Pass		
	6/27/2011 9:54:56 PM	82242-334	0.2776	Pass	101.56	Pass
<i>AV195</i>	6/20/2011 10:53:33 PM	82244-334	0.2644	Pass		
	6/27/2011 9:55:43 PM	82243-334	0.2668	Pass	100.90	Pass
<i>AV196</i>	6/20/2011 10:53:37 PM	82245-334	0.2839	Pass		
	6/27/2011 9:56:30 PM	82244-334	0.2753	Pass	96.985	Pass
<i>AV197</i>	6/24/2011 2:40:07 AM	82246-334	0.2672	Pass		
	6/27/2011 9:57:47 PM	82245-334	0.2763	Pass	103.37	Pass
<i>AV198</i>	6/24/2011 2:22:48 PM	82247-334	0.2725	Pass		
	6/24/2011 3:24:45 PM	82246-334	0.2672	Pass	98.027	Pass
<i>AV199</i>	6/30/2011 9:09:28 AM	82238-334	0.2684	Pass		
	6/30/2011 10:17:40 AM	82237-334	0.2638	Pass	98.291	Pass
<i>AV200</i>	6/20/2011 10:53:47 PM	63507-334	0.2618	Pass		
	6/27/2011 10:00:20 PM	63506-334	0.2543	Pass	97.155	Pass
<i>AV201</i>	6/20/2011 10:53:53 PM	63508A-334	0.2654	Pass		
	6/27/2011 10:01:08 PM	63507-334	0.2735	Pass	103.06	Pass
<i>AV202</i>	6/27/2011 10:01:51 PM	63509A-334	0.2648	Pass		
	6/27/2011 10:02:25 PM	63508A-334	0.2613	Pass	98.648	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV203</i>	6/21/2011 3:19:59 PM	82232-334	0.2768	Pass		
	6/21/2011 3:21:44 PM	63509A-334	0.2646	Pass	95.582	Pass
<i>AV204</i>	6/27/2011 10:03:31 PM	82233-334	0.2705	Pass		
	6/27/2011 10:04:08 PM	82232-334	0.2736	Pass	101.16	Pass
<i>AV205</i>	6/21/2011 3:29:26 PM	82234-334	0.2783	Pass		
	6/27/2011 10:04:59 PM	82233-334	0.2722	Pass	97.818	Pass
<i>AV206</i>	6/27/2011 10:05:51 PM	82235-334	0.2796	Pass		
	6/27/2011 10:06:38 PM	82234-334	0.2837	Pass	101.48	Pass
<i>AV207</i>	6/27/2011 10:07:21 PM	82236-334	0.2735	Pass		
	6/27/2011 10:08:05 PM	82235-334	0.2759	Pass	100.87	Pass
<i>AV208</i>	6/27/2011 10:08:56 PM	82237-334	0.2765	Pass		
	6/27/2011 10:09:30 PM	82236-334	0.2800	Pass	101.26	Pass
<i>AV209</i>	6/27/2011 10:10:06 PM	82238-334	0.2812	Pass		
	6/27/2011 10:10:39 PM	82237-334	0.2680	Pass	95.309	Pass
<i>AV210</i>	6/21/2011 9:13:09 AM	82239-334	0.2718	Pass		
	6/27/2011 10:11:34 PM	82238-334	0.2722	Pass	100.16	Pass
<i>AV211</i>	6/27/2011 10:12:37 PM	82240-334	0.2684	Pass		
	6/21/2011 10:55:13 AM	82239-334	0.2688	Pass	100.13	Pass
<i>AV212</i>	6/27/2011 10:13:23 PM	82241-334	0.2851	Pass		
	6/27/2011 10:13:58 PM	82240-334	0.2891	Pass	101.41	Pass
<i>AV213</i>	6/23/2011 11:27:18 AM	82242-334	0.2707	Pass		
	6/23/2011 1:44:14 PM	82241-334	0.2712	Pass	100.17	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV214</i>	6/27/2011 10:15:18 PM	82243-334	0.2701	Pass		
	6/27/2011 10:15:54 PM	82242-334	0.2728	Pass	100.98	Pass
<i>AV215</i>	6/27/2011 10:16:46 PM	82244-334	0.2907	Pass		
	6/27/2011 10:17:26 PM	82243-334	0.2768	Pass	95.222	Pass
<i>AV216</i>	6/27/2011 10:18:14 PM	82245-334	0.2815	Pass		
	6/27/2011 10:18:50 PM	82244-334	0.2736	Pass	97.176	Pass
<i>AV217</i>	7/1/2011 10:10:06 AM	82246-334	0.2656	Pass		
	7/1/2011 10:10:22 AM	82245-334	0.2746	Pass	103.39	Pass
<i>AV218</i>	6/24/2011 1:51:29 PM	82247-334	0.2743	Pass		
	6/24/2011 5:16:09 PM	82246-334	0.2696	Pass	98.287	Pass
<i>AV219</i>	6/30/2011 9:09:52 AM	82240-334	0.2749	Pass		
	6/30/2011 9:10:10 AM	82238-334	0.2711	Pass	98.608	Pass
<i>AV220</i>	6/27/2011 10:21:49 PM	63507-334	0.2632	Pass		
	6/27/2011 10:22:24 PM	63506-334	0.2579	Pass	97.981	Pass
<i>AV221</i>	6/27/2011 10:23:08 PM	63508A-334	0.2621	Pass		
	6/27/2011 10:23:43 PM	63507-334	0.2617	Pass	99.836	Pass
<i>AV222</i>	6/27/2011 10:24:23 PM	63509A-334	0.2675	Pass		
	6/27/2011 10:25:09 PM	63508A-334	0.2634	Pass	98.476	Pass
<i>AV223</i>	6/23/2011 11:28:00 AM	82232-334	0.2800	Pass		
	6/23/2011 1:44:18 PM	63509A-334	0.2682	Pass	95.794	Pass
<i>AV224</i>	6/23/2011 11:28:25 AM	82233-334	0.2755	Pass		
	6/23/2011 1:44:22 PM	82232-334	0.2798	Pass	101.55	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV225</i>	6/24/2011 2:40:10 AM	82234-334	0.2791	Pass		
	6/27/2011 10:26:27 PM	82233-334	0.2753	Pass	98.623	Pass
<i>AV226</i>	6/24/2011 2:40:15 AM	82235-334	0.2729	Pass		
	6/27/2011 10:27:06 PM	82234-334	0.2800	Pass	102.61	Pass
<i>AV227</i>	6/25/2011 10:39:33 AM	82236-334	0.2783	Pass		
	6/25/2011 1:18:30 PM	82235-334	0.2773	Pass	99.651	Pass
<i>AV228</i>	6/28/2011 9:07:26 AM	82237-334	0.2755	Pass		
	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	103.94	Pass
<i>AV229</i>	6/25/2011 10:39:43 AM	82238-334	0.2781	Pass		
	6/25/2011 1:18:41 PM	82237-334	0.2735	Pass	98.336	Pass
<i>AV230</i>	6/25/2011 10:39:47 AM	82239-334	0.2844	Pass		
	6/25/2011 1:19:16 PM	82238-334	0.2812	Pass	98.851	Pass
<i>AV231</i>	6/25/2011 10:50:22 AM	82240-334	0.2784	Pass		
	6/25/2011 1:19:42 PM	82239-334	0.2758	Pass	99.090	Pass
<i>AV232</i>	6/25/2011 10:58:31 AM	82241-334	0.2758	Pass		
	6/25/2011 1:19:51 PM	82240-334	0.2812	Pass	101.96	Pass
<i>AV233</i>	6/25/2011 10:58:37 AM	82242-334	0.2668	Pass		
	6/25/2011 1:20:13 PM	82241-334	0.2705	Pass	101.37	Pass
<i>AV234</i>	6/28/2011 9:08:33 AM	82243-334	0.2710	Pass		
	6/28/2011 9:08:49 AM	82242-334	0.2714	Pass	100.13	Pass
<i>AV235</i>	6/25/2011 11:19:40 AM	82244-334	0.2686	Pass		
	6/25/2011 1:21:34 PM	82243-334	0.2694	Pass	100.30	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV236</i>	6/25/2011 11:19:44 AM	82245-334	0.2759	Pass		
	6/25/2011 1:22:02 PM	82244-334	0.2647	Pass	95.960	Pass
<i>AV237</i>	6/25/2011 11:19:48 AM	82246-334	0.2679	Pass		
	6/25/2011 1:22:14 PM	82245-334	0.2783	Pass	103.89	Pass
<i>AV238</i>	6/25/2011 11:19:52 AM	82247-334	0.2740	Pass		
	6/25/2011 1:22:47 PM	82246-334	0.2642	Pass	96.404	Pass
<i>AV239</i>	6/29/2011 4:17:46 PM	82241-334	0.2816	Pass		
	6/29/2011 5:24:20 PM	82239-334	0.2770	Pass	98.355	Pass
<i>AV240</i>	6/28/2011 9:06:33 AM	63507-334	0.2675	Pass		
	6/25/2011 1:23:31 PM	63506-334	0.2636	Pass	98.508	Pass
<i>AV241</i>	6/25/2011 11:47:42 AM	63508A-334	0.2600	Pass		
	6/25/2011 1:23:51 PM	63507-334	0.2602	Pass	100.06	Pass
<i>AV242</i>	6/25/2011 11:47:57 AM	63509A-334	0.2680	Pass		
	6/25/2011 1:24:10 PM	63508A-334	0.2667	Pass	99.534	Pass
<i>AV243</i>	6/25/2011 9:28:07 AM	82232-334	0.2795	Pass		
	6/25/2011 1:24:52 PM	63509A-334	0.2676	Pass	95.760	Pass
<i>AV244</i>	6/25/2011 12:07:09 PM	82233-334	0.2858	Pass		
	6/25/2011 1:25:04 PM	82232-334	0.2904	Pass	101.61	Pass
<i>AV245</i>	6/25/2011 12:07:13 PM	82234-334	0.2856	Pass		
	6/25/2011 1:25:24 PM	82233-334	0.2793	Pass	97.792	Pass
<i>AV246</i>	6/25/2011 12:07:17 PM	82235-334	0.2981	Pass		
	6/25/2011 1:25:53 PM	82234-334	0.2968	Pass	99.576	Pass

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency</i>	<i>Eff (20-32%)</i>	<i>ICV</i>	<i>(95-105%)</i>
<i>AV247</i>	6/28/2011 9:04:33 AM	82236-334	0.2721	Pass		
	6/28/2011 9:04:52 AM	82235-334	0.2774	Pass	101.94	Pass
<i>AV248</i>	6/28/2011 9:09:30 AM	82237-334	0.2651	Pass		
	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	101.77	Pass
<i>AV249</i>	6/28/2011 9:10:11 AM	82238-334	0.2852	Pass		
	6/28/2011 9:10:27 AM	82237-334	0.2781	Pass	97.510	Pass
<i>AV250</i>	6/28/2011 9:10:53 AM	82239-334	0.2800	Pass		
	6/28/2011 9:11:12 AM	82238-334	0.2820	Pass	100.71	Pass

TestAmerica



THE LEADER IN ENVIRONMENTAL TESTING

Alpha Vision Yearly Calibrations Updated 2/22/12

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV22</i>				
Dec2011_AV22	2/21/2012 2:57:59 PM	82237-334	0.2680	Pass
Dec2011a_AV22_ICV	12/8/2011 2:38:54 PM	82236-334	0.2670	Pass 99.6280 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV48</i>						
June2011A_AV48	2/21/2012 2:58:50 PM	82237-334	0.2748	Pass		
June2011_AV48_ICV	6/28/2011 9:18:29 PM	82236-334	0.2720	Pass	98.9875	Pass
<i>AV88</i>						
May2011_AV88	2/21/2012 2:59:57 PM	82237-334	0.2736	Pass		
June2011_AV88_ICV	6/28/2011 9:33:31 PM	82236-334	0.2783	Pass	101.747	Pass
<i>AV103</i>						
June2011_AV103a	2/21/2012 3:00:31 PM	82237-334	0.2722	Pass		
June2011_AV103a_ICVb	6/29/2011 8:19:11 PM	82236-334	0.2718	Pass	99.8524	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV68</i>				
May2011_AV68	2/21/2012 2:59:22 PM	82237-334	0.2733	Pass
June2011_AV68_ICV	6/2/2011 5:28:05 PM	82236-334	0.2767	Pass 101.258 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV128</i>				
June2011_AV128	2/21/2012 3:01:06 PM	82237-334	0.2692	Pass
June2011_AV128_ICV	6/10/2011 3:00:38 PM	82236-334	0.2737	Pass 101.685 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>		
<i>AV160</i>						
June2011A_AV160	2/21/2012 3:02:57 PM	82237-334	0.2708	Pass		
June2011A_AV160_ICV	6/30/2011 9:07:22 AM	82236-334	0.2656	Pass	98.0720	Pass
<i>AV168</i>						
June2011_AV168	2/21/2012 3:03:27 PM	82237-334	0.2704	Pass		
June2011_AV168_ICV	6/27/2011 9:34:45 PM	82236-334	0.2702	Pass	99.9393	Pass
<i>AV179</i>						
June2011B_AV179	2/21/2012 3:03:50 PM	82237-334	0.2821	Pass		
June2011_AV179b_ICV	6/30/2011 10:17:36 AM	82236-334	0.2866	Pass	101.588	Pass
<i>AV228</i>						
June2011A_AV228	2/21/2012 3:04:50 PM	82237-334	0.2834	Pass		
June2011A_AV228_ICV	6/28/2011 9:07:46 AM	82236-334	0.2863	Pass	101.035	Pass
<i>AV248</i>						
June2011_AV248	2/21/2012 3:05:18 PM	82237-334	0.2726	Pass		
June2011_AV248_ICV	6/28/2011 9:09:48 AM	82236-334	0.2698	Pass	98.9835	Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Alpha Spec Calibrations/Verifications

<i>DetectorID</i>	<i>Calibration Date</i>	<i>Source ID</i>	<i>Efficiency (20-32%)</i>	<i>Recov (+/-5%)</i>
<i>AV205</i>				
Dec2011_AV205	2/21/2012 3:04:20 PM	82237-334	0.2688	Pass
Dec2011_AV205_ICV	12/16/2011 3:08:08 AM	82236-334	0.2684	Pass 99.8398 Pass

Note: If no verification result for a detector is present ("Recov"), the detector is Out of Service (OOS).

Wednesday, February 22, 2012

Page 1 of 1

Calibration

Name: June2011_AV120
Description:
Detector: AV120

Calibration Date: 6/10/2011 2:56:12PM
Analyst: 60040

Source Info

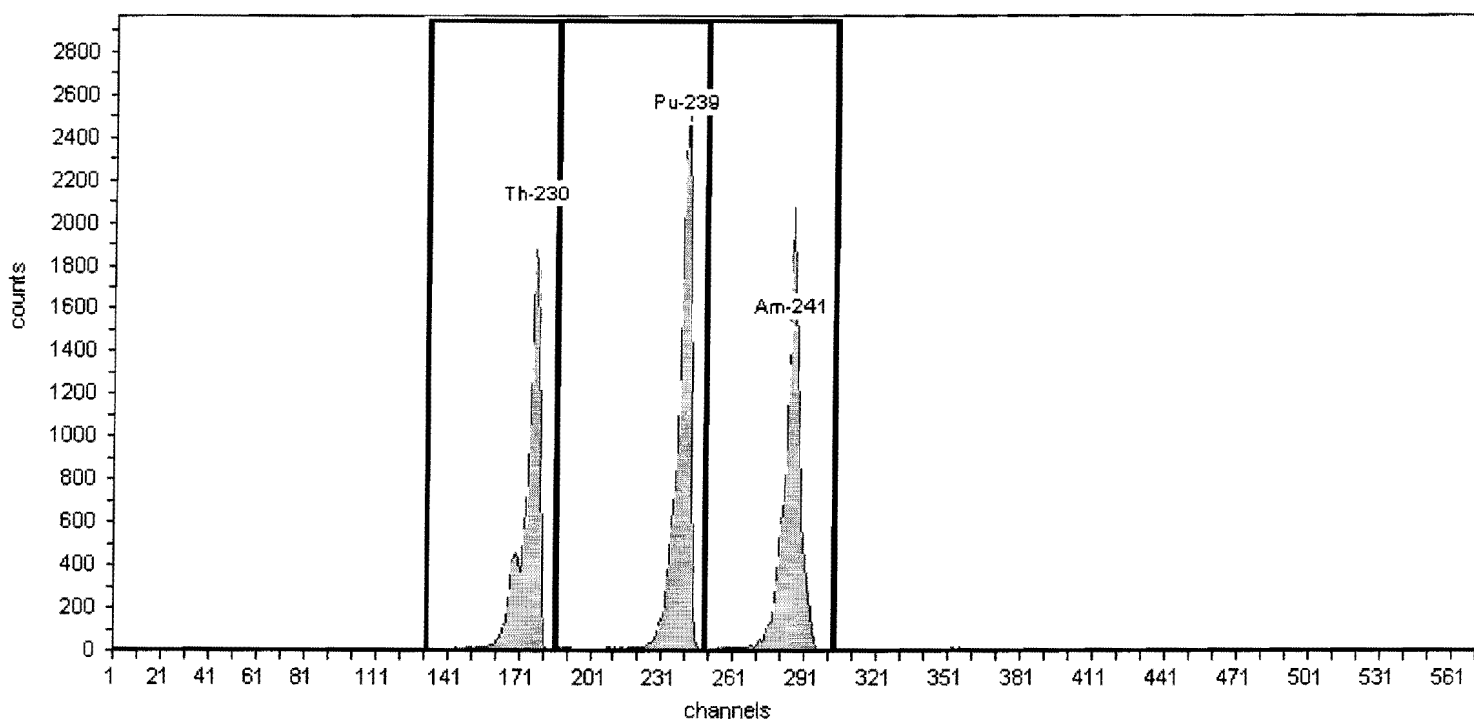
Certificate ID: 63507-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV120 , SN: 49-037W3
Acquisition Start Date: 6/6/2011 8:29:28AM
Live Time: 140.00 min.
Real Time: 145.88 min.
Efficiency: 26.73% +/- 0.28% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,945.00	85.32
Pu-239	240	5.16	186	249	14,871.00	106.22
Am-241	284	5.49	249	303	14,005.00	100.04

Calibration

Name: June2011_AV120_ICV
Description:
Detector: AV120

Calibration Date: 6/10/2011 2:56:27PM
Analyst: 60040

Source Info

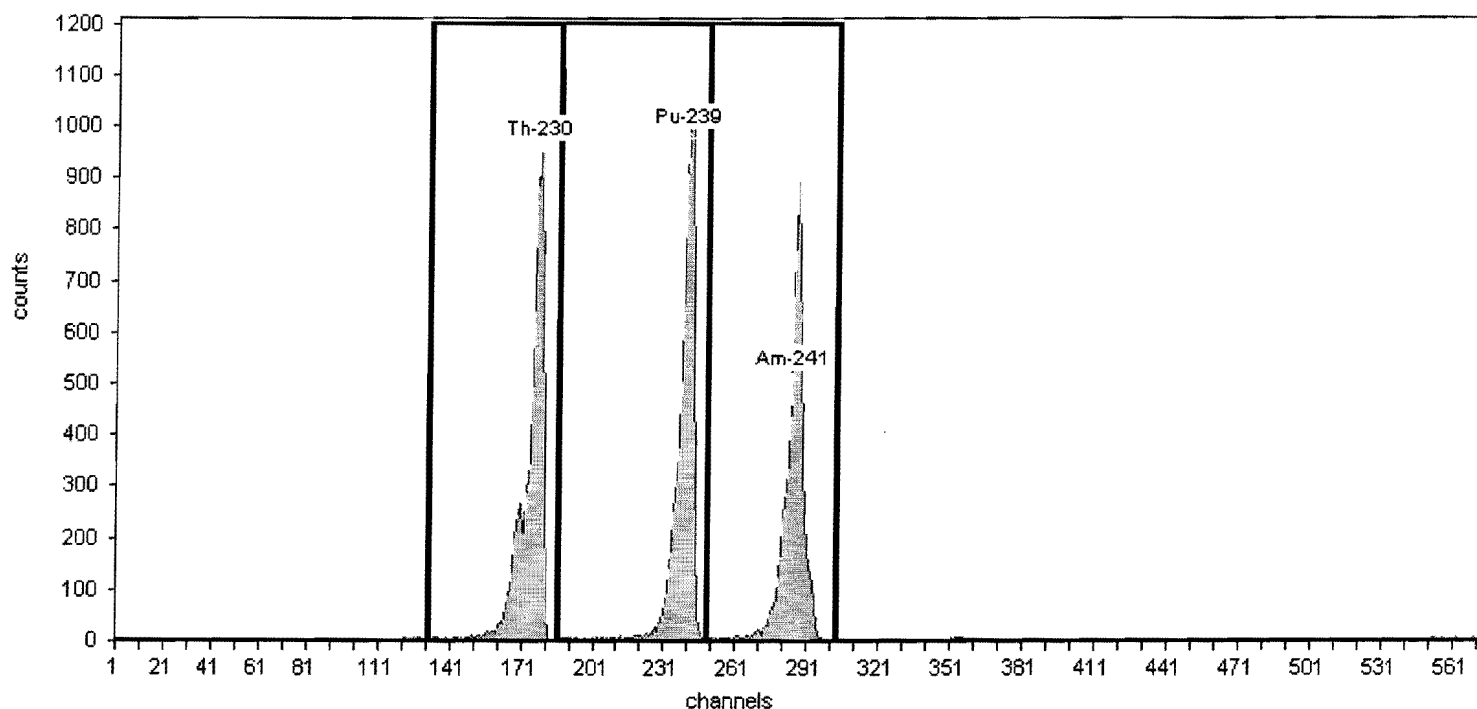
Certificate ID: 63506-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:07PM
Description:

Acquisition

Detector: AV120 , SN: 49-037W3
Acquisition Start Date: 6/6/2011 1:18:32PM
Live Time: 60.00 min.
Real Time: 60.96 min.
Efficiency: 25.88% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	6,418.00	106.97
Pu-239	240	5.16	186	249	6,649.00	110.82
Am-241	284	5.49	249	303	6,008.00	100.13

Calibration

Name: June2011_AV121
Description:
Detector: AV121

Calibration Date: 6/10/2011 2:58:09PM
Analyst: 60040

Source Info

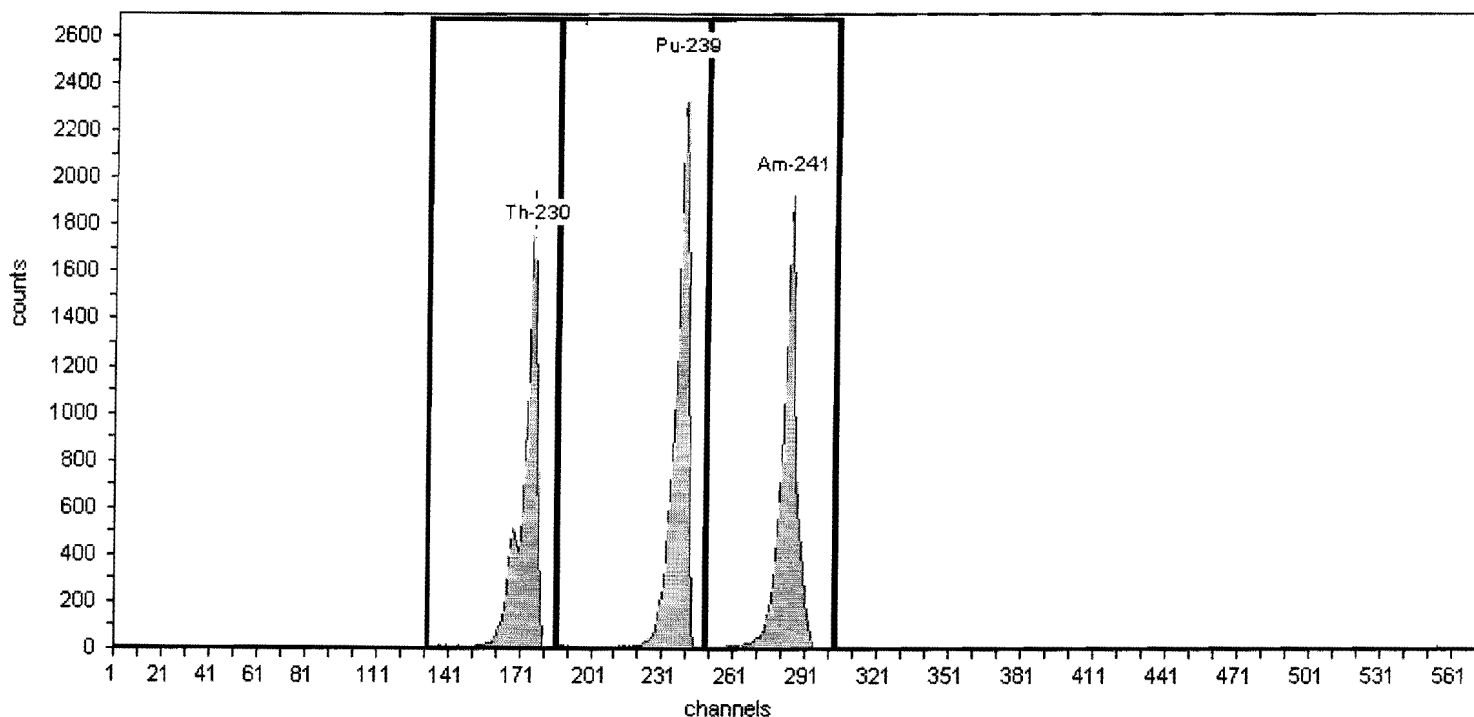
Certificate ID: 63508A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV121, SN: 49-037W2
Acquisition Start Date: 6/6/2011 8:30:12AM
Live Time: 140.00 min.
Real Time: 145.66 min.
Efficiency: 26.80% +/- 0.29% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	12,067.00	86.19
Pu-239	240	5.16	186	249	14,283.00	102.02
Am-241	284	5.49	249	303	13,193.00	94.24

Calibration

Name: June2011_AV121_ICV
Description:
Detector: AV121

Calibration Date: 6/10/2011 2:58:22PM
Analyst: 60040

Source Info

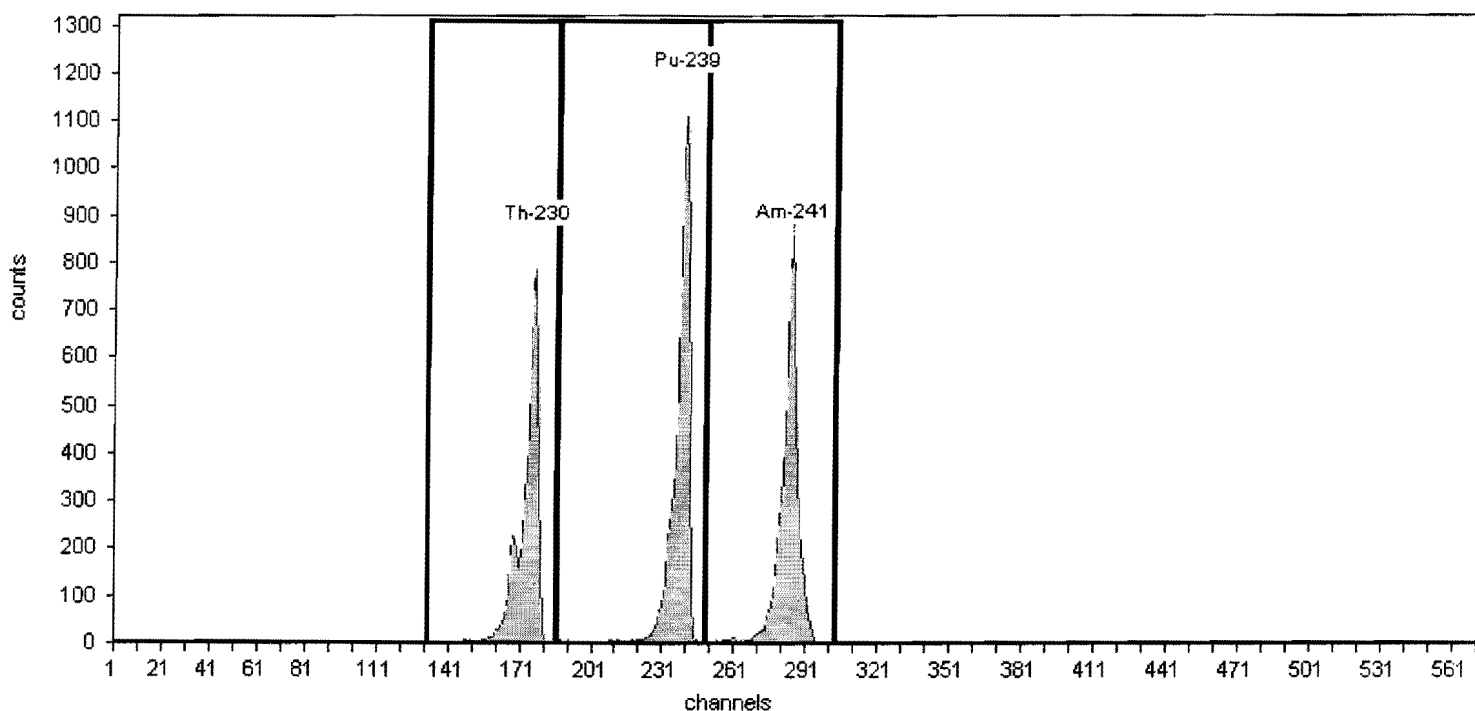
Certificate ID: 63507-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV121, SN: 49-037W2
Acquisition Start Date: 6/6/2011 1:19:24PM
Live Time: 60.00 min.
Real Time: 60.92 min.
Efficiency: 26.63% +/- 0.41% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,115.00	85.25
Pu-239	240	5.16	186	249	6,342.00	105.70
Am-241	284	5.49	249	303	5,972.00	99.53

Calibration

Name: June2011_AV122
Description:
Detector: AV122

Calibration Date: 6/10/2011 2:58:33PM
Analyst: 60040

Source Info

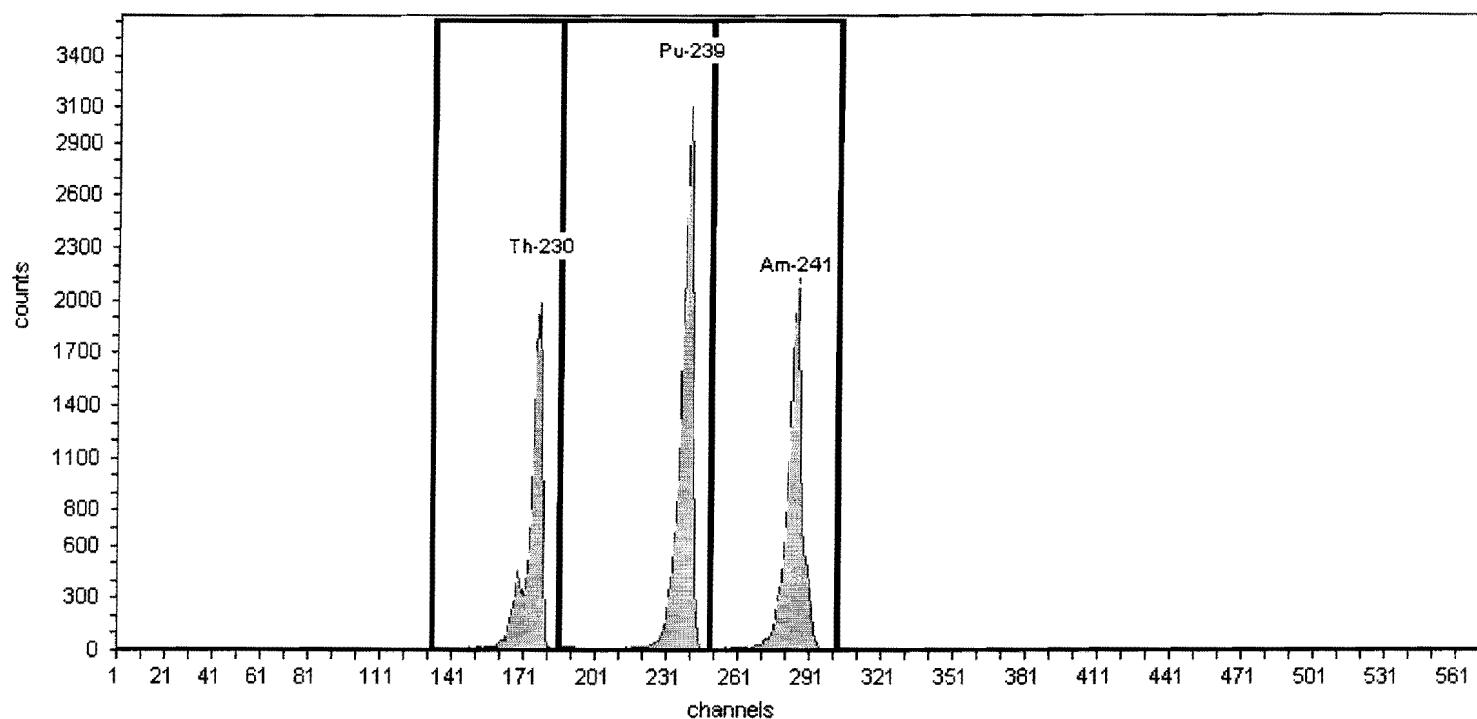
Certificate ID: 63509A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV122 , SN: 49-037G4
Acquisition Start Date: 6/6/2011 8:30:14AM
Live Time: 140.00 min.
Real Time: 145.56 min.
Efficiency: 26.33% +/- 0.27% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,216.00	80.11
Pu-239	240	5.16	186	249	17,326.00	123.76
Am-241	284	5.49	249	303	14,667.00	104.76

Calibration

Name: June2011_AV122_ICV
Description:
Detector: AV122

Calibration Date: 6/10/2011 2:58:47PM
Analyst: 60040

Source Info

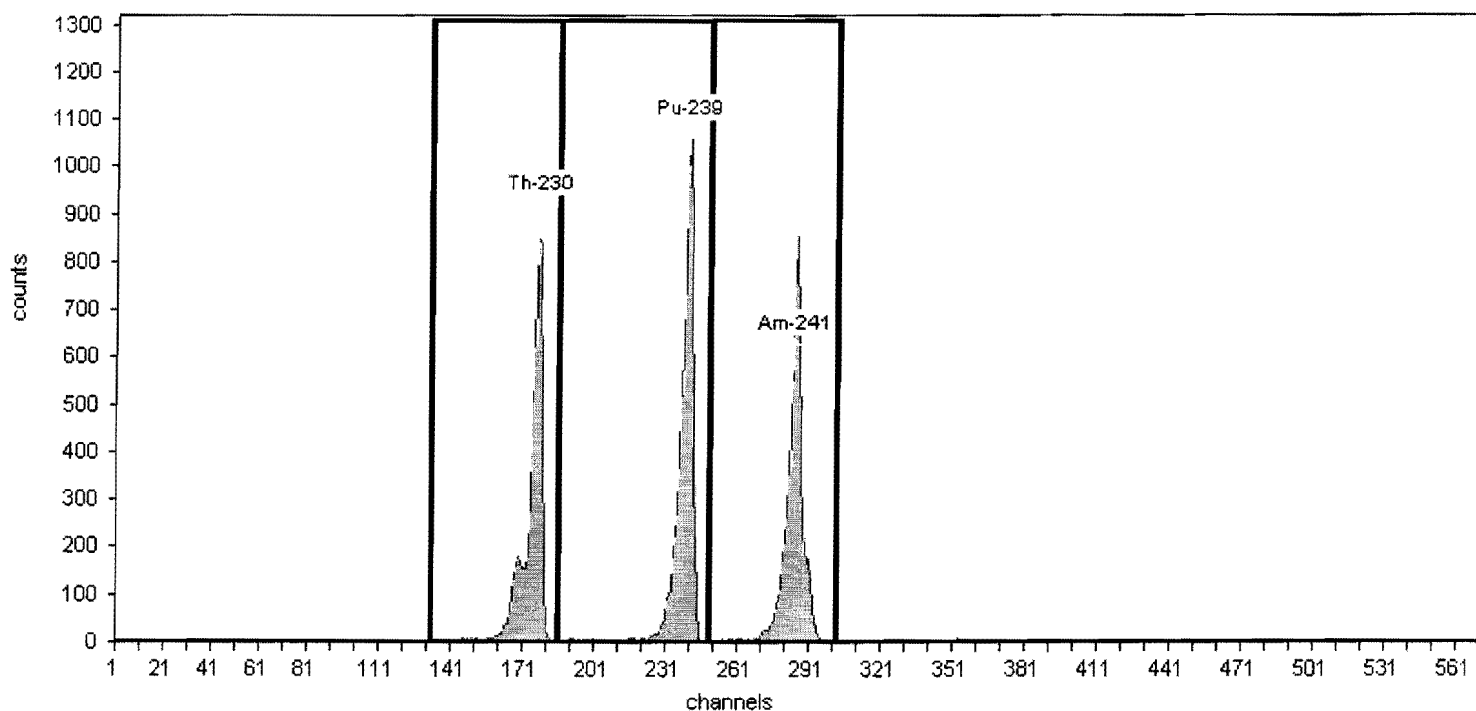
Certificate ID: 63508A-334
Prepared by: Analytics

Certification Date: 5/30/2002 12:00:00PM
Description:

Acquisition

Detector: AV122 , SN: 49-037G4
Acquisition Start Date: 6/6/2011 1:19:55PM
Live Time: 60.00 min.
Real Time: 60.92 min.
Efficiency: 25.95% +/- 0.42% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

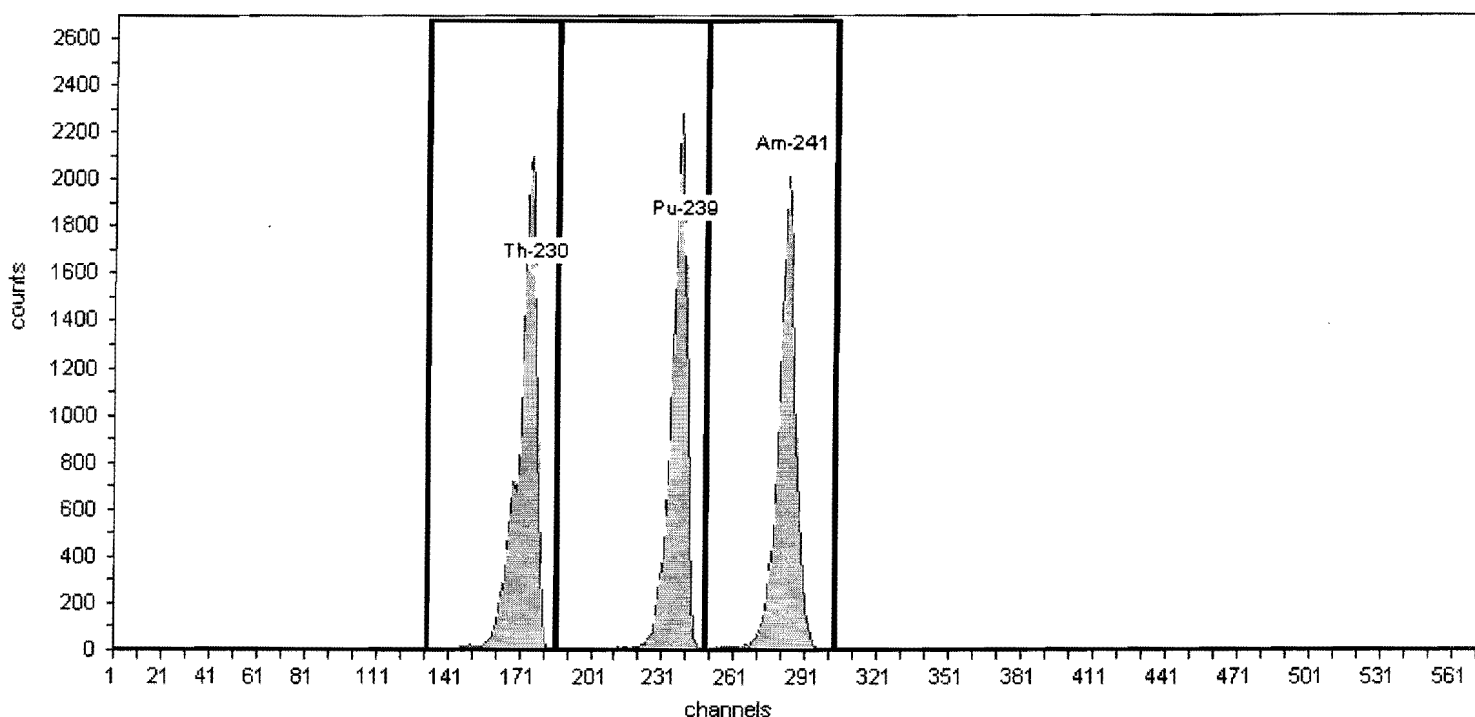
Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	4,969.00	82.82
Pu-239	240	5.16	186	249	6,049.00	100.82
Am-241	284	5.49	249	303	5,403.00	90.05

Calibration	
Name: June2011_AV123a	Calibration Date: 6/21/2011 2:27:18PM
Description:	Analyst: 60040
Detector: AV123	

Source Info	
Certificate ID: 82232-334	Certification Date: 6/3/2010 12:00:00PM
Prepared by: Analytics	Description:

Acquisition	
Detector: AV123, SN: 49-179C1	Energy Calibration Equation:
Acquisition Start Date: 6/21/2011 11:57:32AM	Gain = 7.4575 keV / Ch
Live Time: 140.00 min.	Offset = 3,366.95 keV
Real Time: 140.05 min.	Quadratic = 0.0000 keV / Ch ²
Efficiency: 27.37% +/- 0.31% TPU(2 sigma)	



General Analysis	
Method: Manual (ROI)	Initial Calibration: No
Algorithm: Linear	Shelf: 1

Nuclide Activity Summary						
Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	17,580.00	125.57
Pu-239	240	5.16	186	249	16,498.00	117.84
Am-241	284	5.49	249	303	16,604.00	118.60

Calibration

Name: June2011A_AV123_ICV
Description:
Detector: AV123

Calibration Date: 7/25/2011 1:06:42PM
Analyst: 60040

Source Info

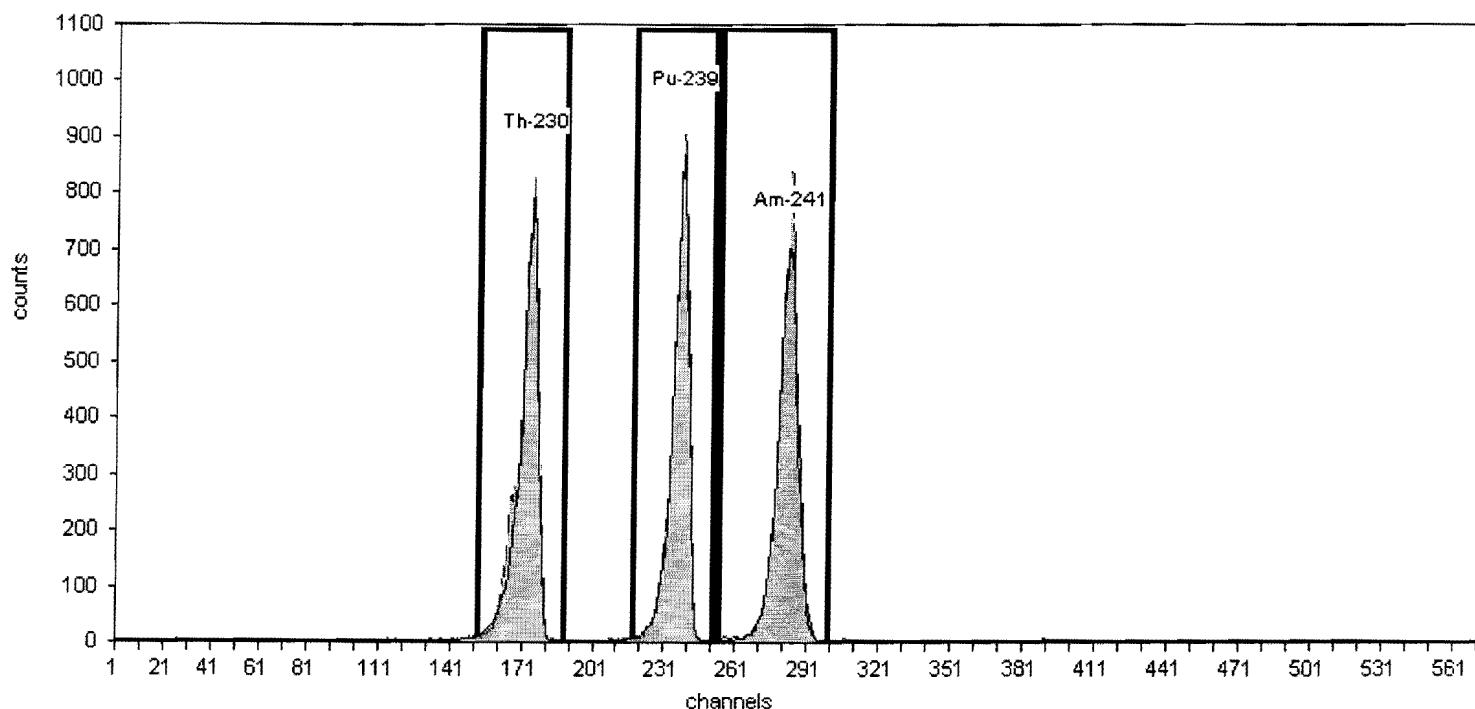
Certificate ID: 82241-334
Prepared by: Analytics

Certification Date: 6/8/2010 12:00:00PM
Description:

Acquisition

Detector: AV123 , SN: 49-179C1
Acquisition Start Date: 6/22/2011 2:44:39AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 28.47% +/- 0.45% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4292 keV / Ch
Offset = 3,387.13 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Auto (Peakfit)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Fitted Area	Net Count Rate (cpm)
Th-230	175	4.69	153	189	6,813.90	113.57
Pu-239	238	5.16	219	251	6,666.59	111.11
Am-241	282	5.49	254	301	7,073.34	117.89

Calibration

Name: June2011_AV124a
Description:
Detector: AV124

Calibration Date: 6/21/2011 2:26:12PM
Analyst: 60040

Source Info

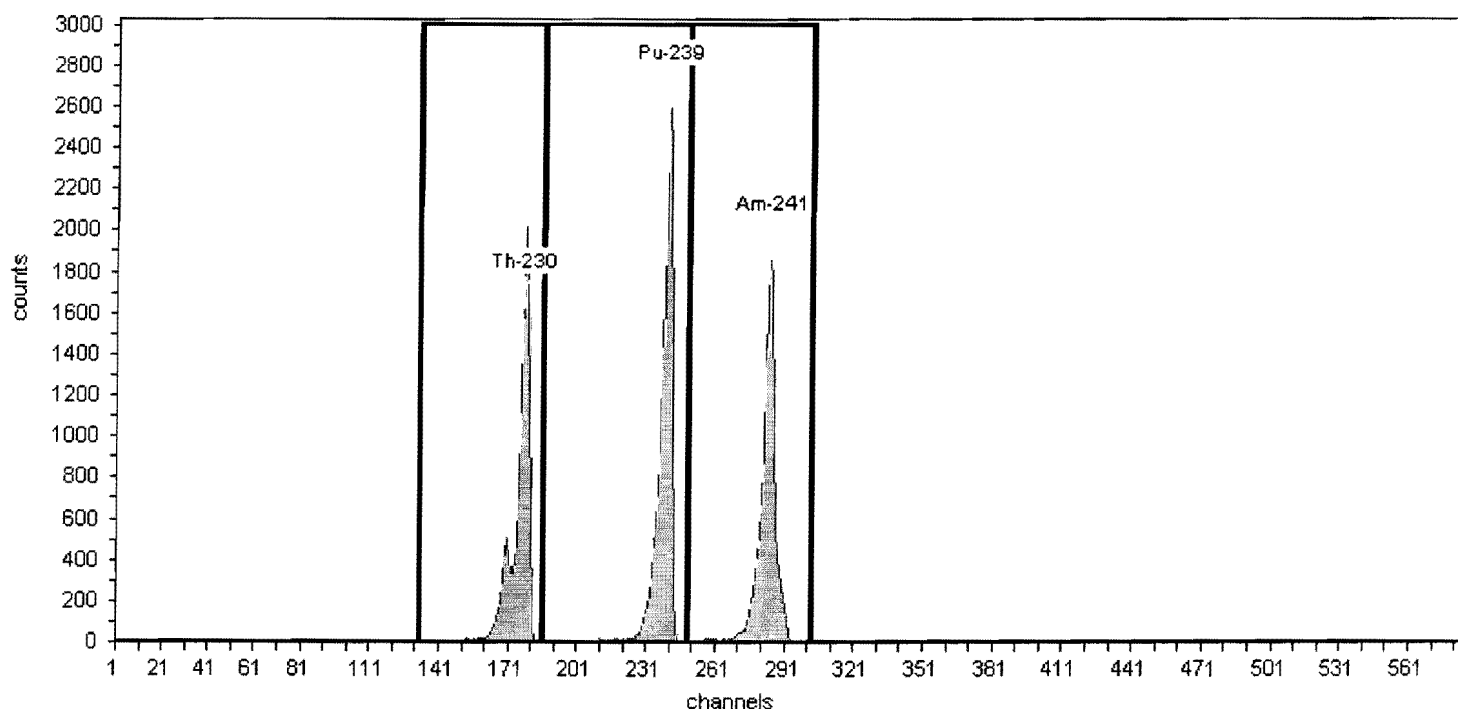
Certificate ID: 82233-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV124 , SN: 49-179C2
Acquisition Start Date: 6/21/2011 12:00:27PM
Live Time: 140.00 min.
Real Time: 140.05 min.
Efficiency: 26.50% +/- 0.38% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	11,018.00	78.70
Pu-239	240	5.16	186	249	13,549.00	96.78
Am-241	284	5.49	249	303	11,322.00	80.87

Calibration

Name: June2011A_AV124_ICV
Description:
Detector: AV124

Calibration Date: 6/22/2011 2:21:19AM
Analyst: 60040

Source Info

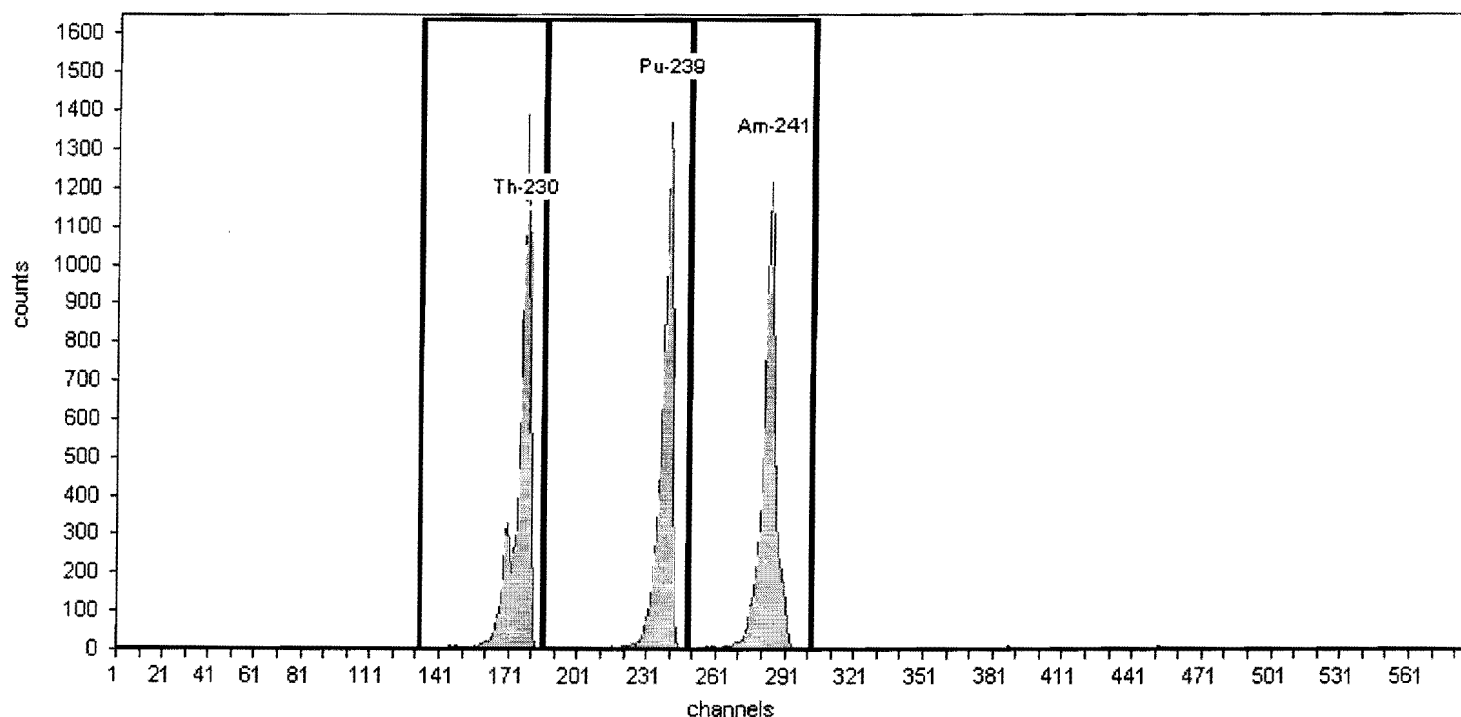
Certificate ID: 82232-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV124 , SN: 49-179C2
Acquisition Start Date: 6/22/2011 1:21:13AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 27.22% +/- 0.41% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

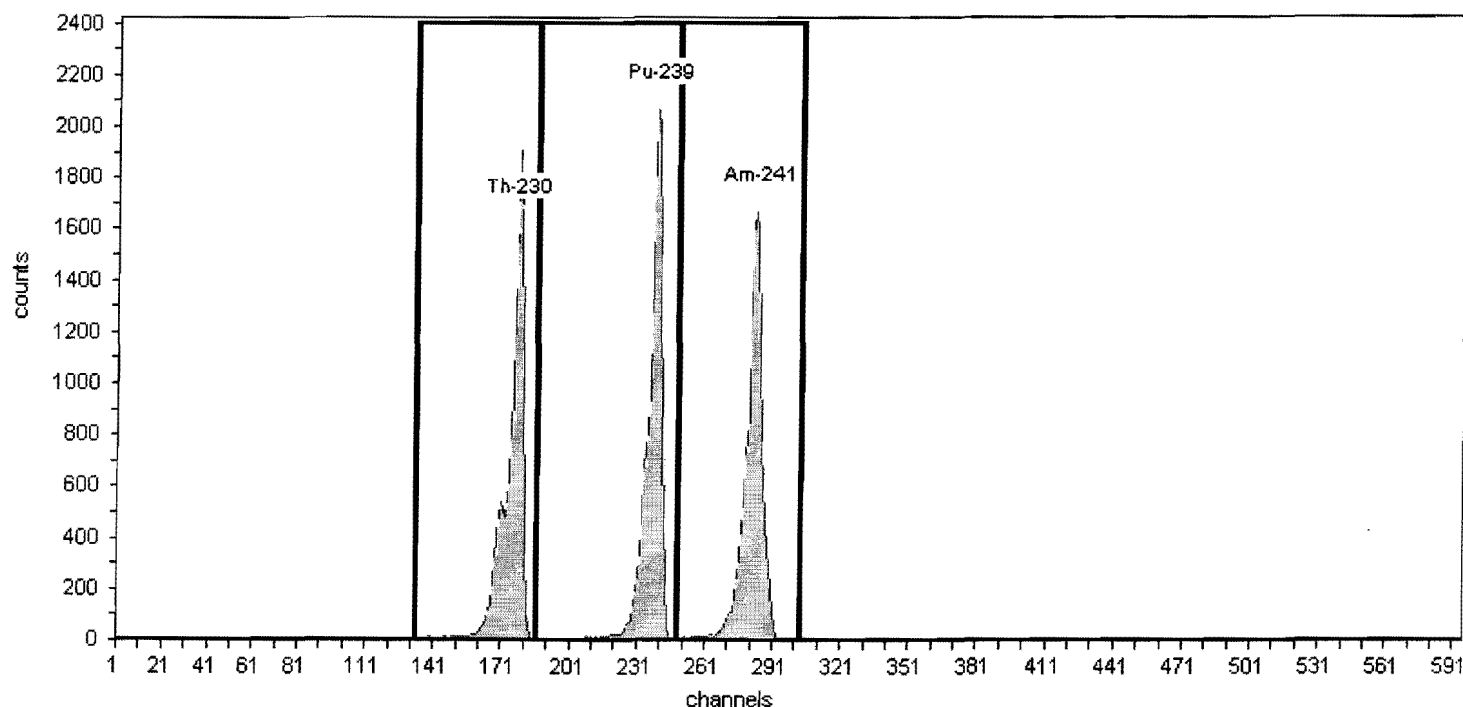
Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,365.00	122.75
Pu-239	240	5.16	186	249	7,019.00	116.98
Am-241	284	5.49	249	303	7,221.00	120.35

Calibration	
Name: June2011_AV125a	Calibration Date: 6/21/2011 2:26:25PM
Description:	Analyst: 60040
Detector: AV125	

Source Info	
Certificate ID: 82234-334	Certification Date: 6/2/2010 12:00:00PM
Prepared by: Analytics	Description:

Acquisition	
Detector: AV125 , SN: 49-179C3	Energy Calibration Equation:
Acquisition Start Date: 6/21/2011 12:03:22PM	Gain = 7.4575 keV / Ch
Live Time: 140.00 min.	Offset = 3,366.95 keV
Real Time: 140.05 min.	Quadratic = 0.0000 keV / Ch ²
Efficiency: 27.46% +/- 0.38% TPU(2 sigma)	



General Analysis	
Method: Manual (ROI)	Initial Calibration: No
Algorithm: Linear	Shelf: 1

Nuclide Activity Summary						
Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	12,960.00	92.57
Pu-239	240	5.16	186	249	13,690.00	97.79
Am-241	284	5.49	249	303	13,190.00	94.21

Calibration

Name: June2011A_AV125_ICV
Description:
Detector: AV125

Calibration Date: 6/22/2011 2:21:37AM
Analyst: 60040

Source Info

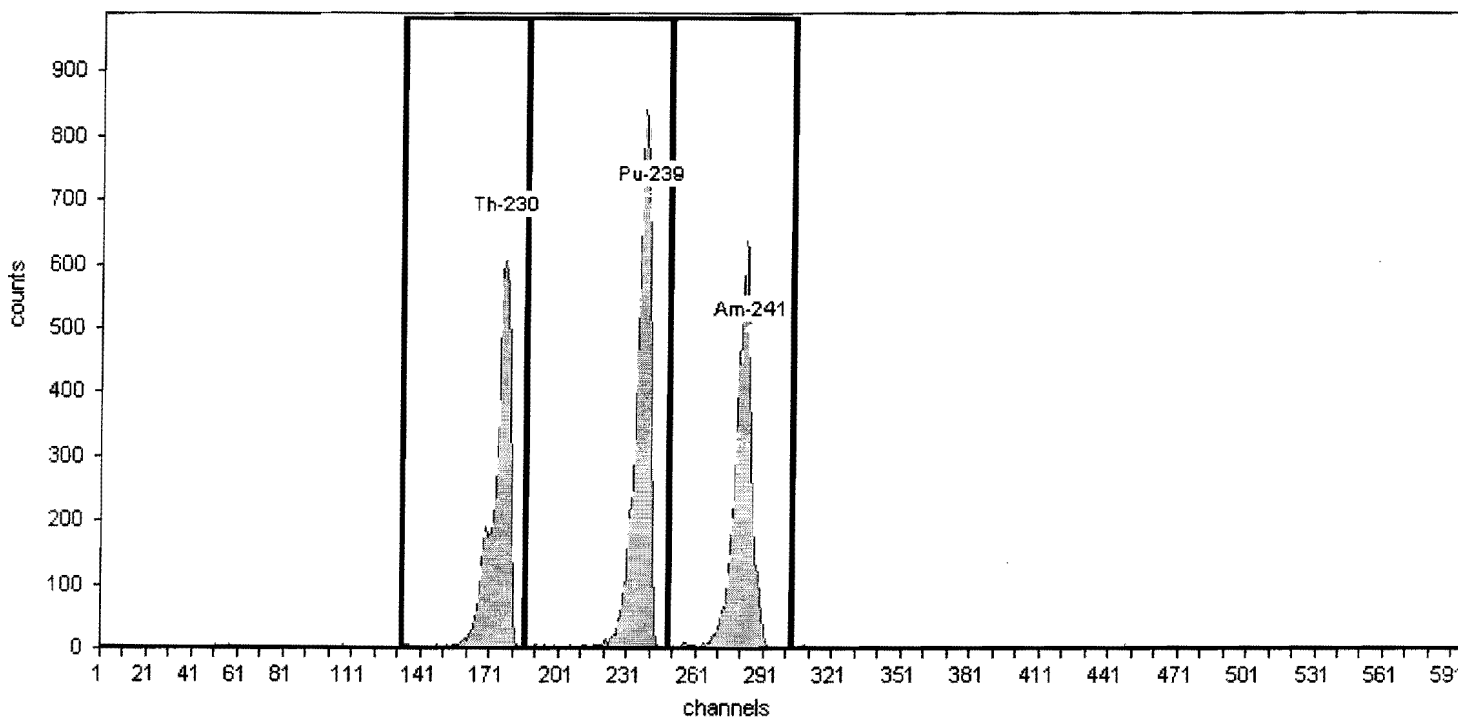
Certificate ID: 82233-334
Prepared by: Analytics

Certification Date: 6/3/2010 12:00:00PM
Description:

Acquisition

Detector: AV125, SN: 49-179C3
Acquisition Start Date: 6/22/2011 1:21:58AM
Live Time: 60.00 min.
Real Time: 60.01 min.
Efficiency: 26.71% +/- 0.50% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	4,676.00	77.93
Pu-239	240	5.16	186	249	5,890.00	98.17
Am-241	284	5.49	249	303	4,938.00	82.30

Calibration

Name: June2011_AV126
Description:
Detector: AV126

Calibration Date: 6/3/2011 3:29:01PM
Analyst: 60040

Source Info

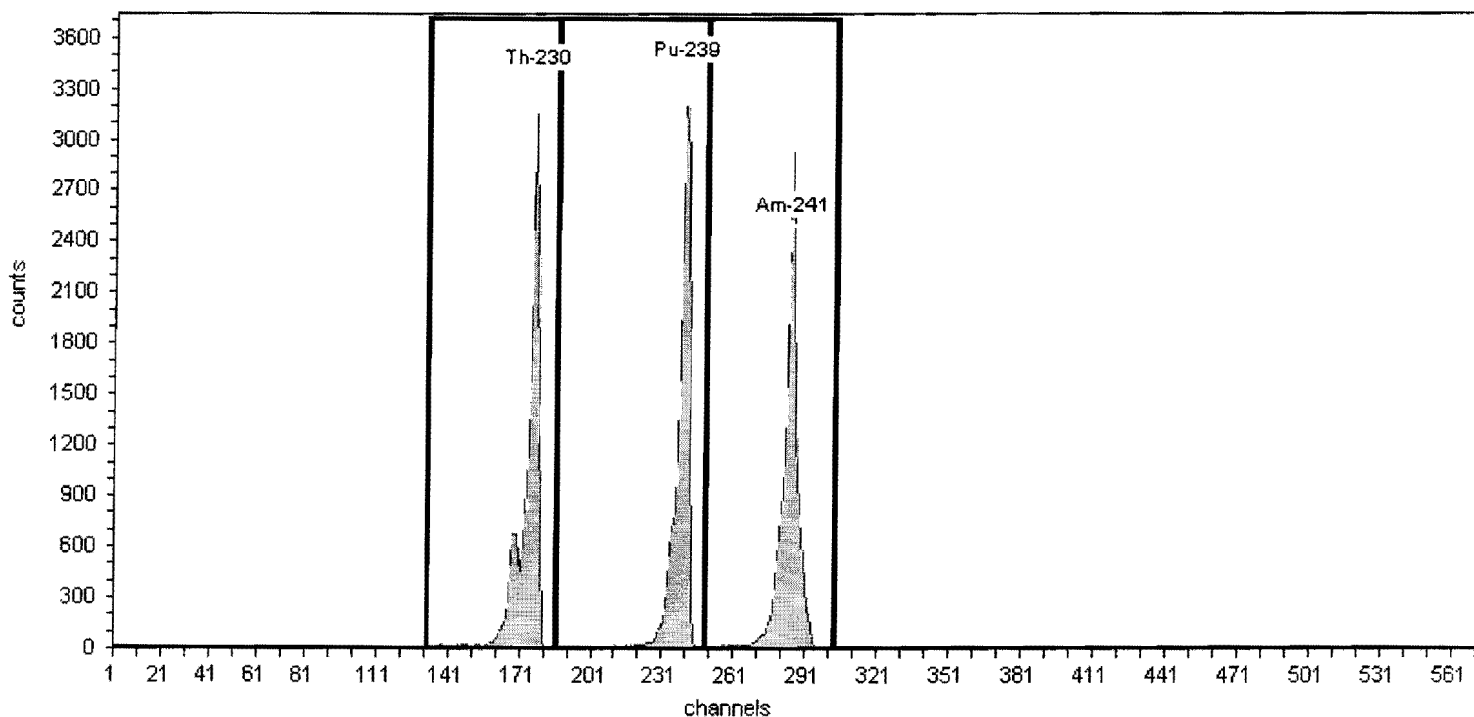
Certificate ID: 82235-334
Prepared by: Analytics

Certification Date: 6/4/2010 12:00:00PM
Description:

Acquisition

Detector: AV126 , SN: 49-179C4
Acquisition Start Date: 6/3/2011 12:53:41PM
Live Time: 140.00 min.
Real Time: 140.15 min.
Efficiency: 27.54% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,438.00	117.41
Pu-239	240	5.16	186	249	16,036.00	114.54
Am-241	284	5.49	249	303	17,332.00	123.80

Calibration

Name: June2011_AV126_ICV
Description:
Detector: AV126

Calibration Date: 6/10/2011 3:00:12PM
Analyst: 60040

Source Info

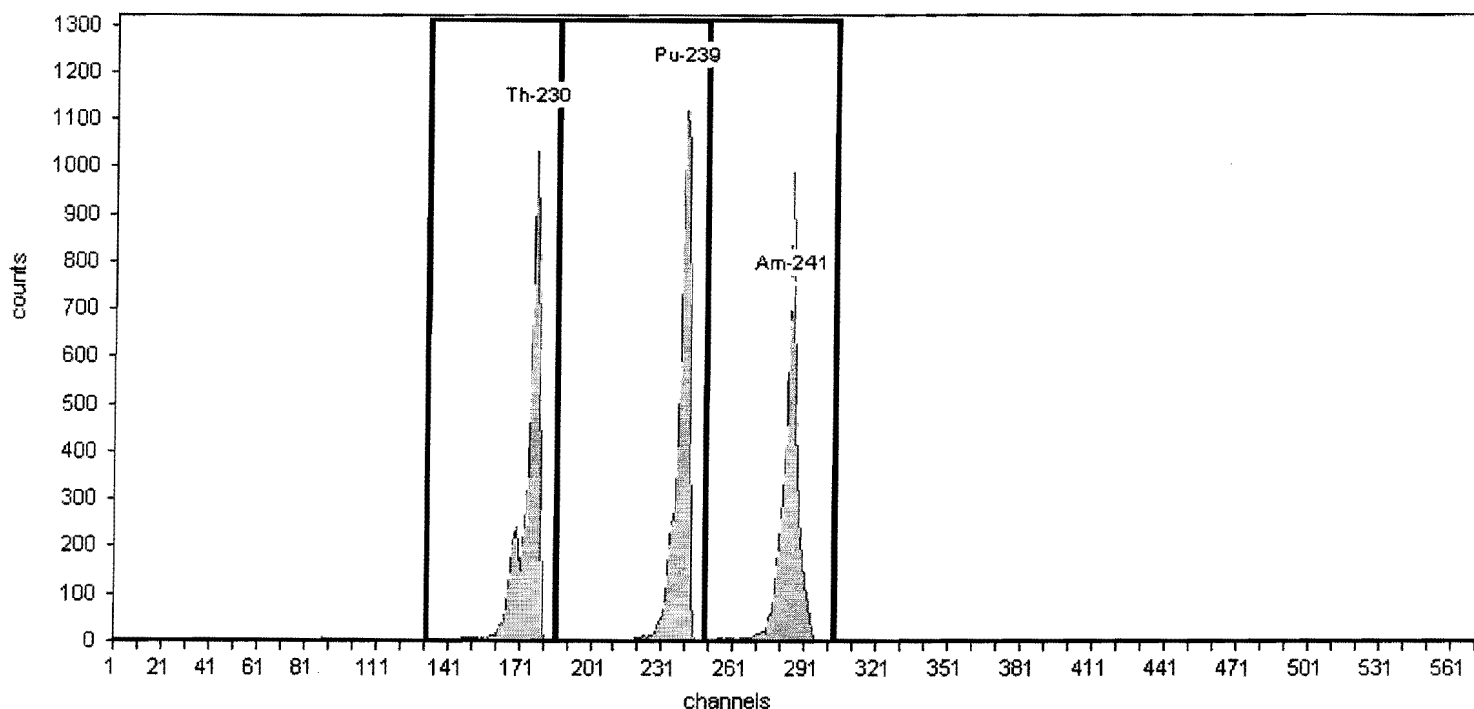
Certificate ID: 82234-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV126 , SN: 49-179C4
Acquisition Start Date: 6/5/2011 7:14:51AM
Live Time: 60.00 min.
Real Time: 60.05 min.
Efficiency: 27.54% +/- 0.49% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	5,617.00	93.62
Pu-239	240	5.16	186	249	5,868.00	97.80
Am-241	284	5.49	249	303	5,641.00	94.02

Calibration

Name: June2011A_AV127
Description:
Detector: AV127

Calibration Date: 6/28/2011 9:47:50PM
Analyst: 60040

Source Info

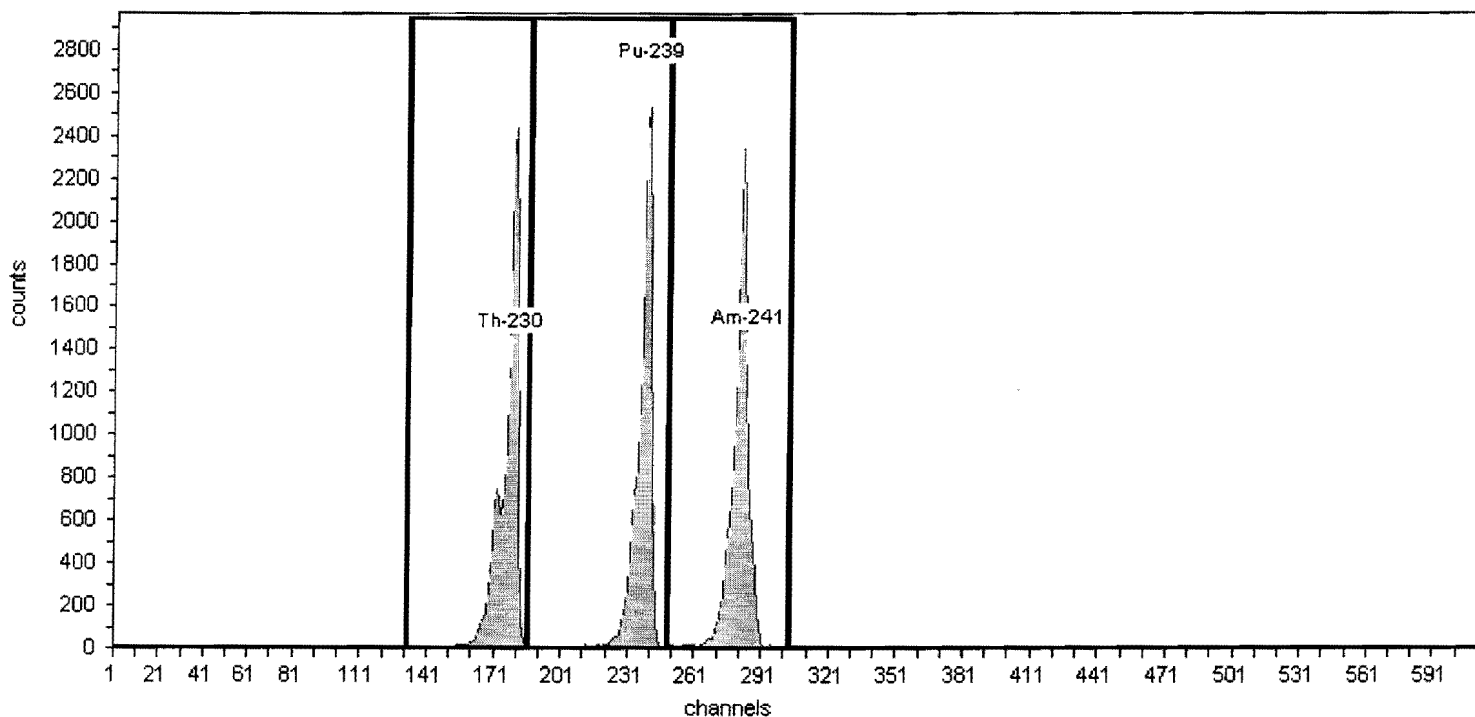
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV127, SN: 49-179C5
Acquisition Start Date: 6/22/2011 11:52:21PM
Live Time: 140.00 min.
Real Time: 140.09 min.
Efficiency: 27.55% +/- 0.32% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	16,390.00	117.07
Pu-239	240	5.16	186	249	15,512.00	110.80
Am-241	284	5.49	249	303	15,915.00	113.68

Calibration

Name: June2011A_AV127_ICV
Description:
Detector: AV127

Calibration Date: 6/23/2011 8:58:08AM
Analyst: 60040

Source Info

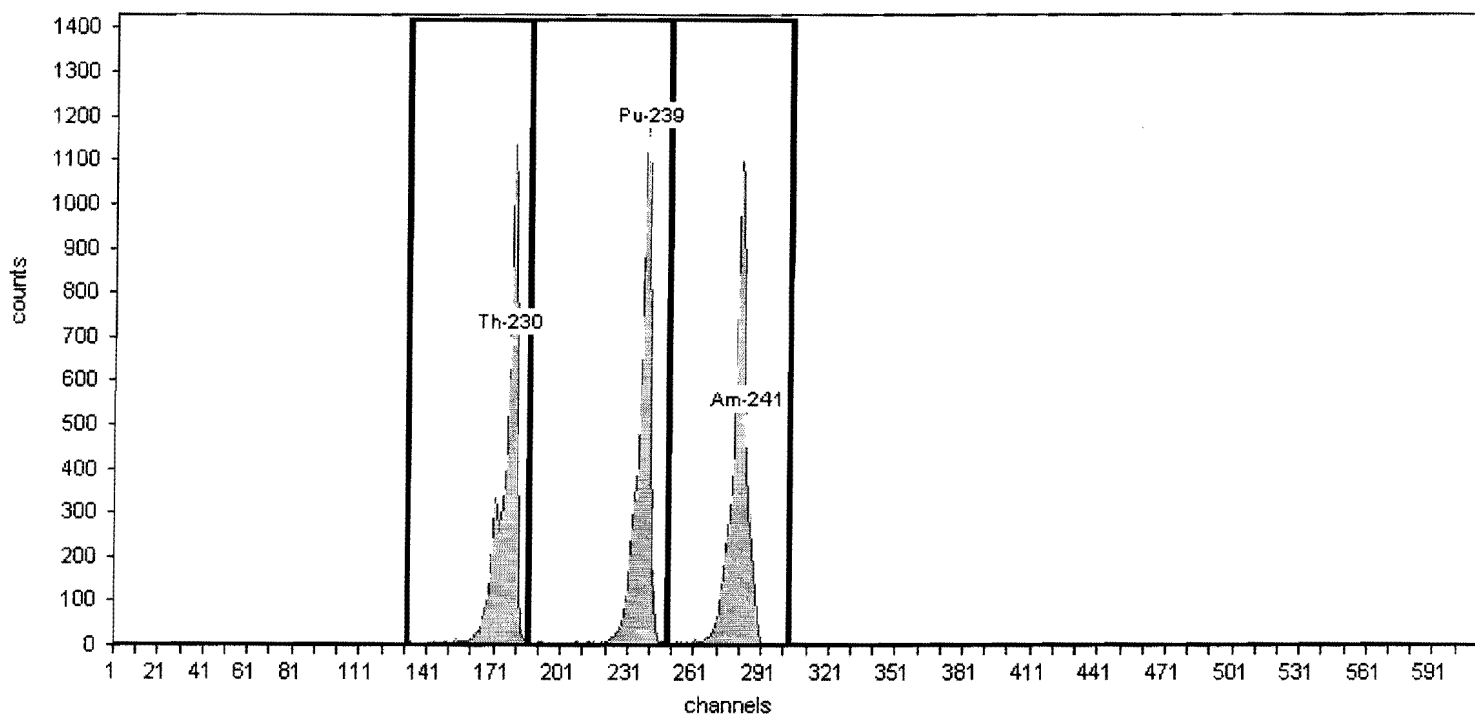
Certificate ID: 82235-334
Prepared by: Analytics

Certification Date: 6/4/2010 12:00:00PM
Description:

Acquisition

Detector: AV127, SN: 49-179C5
Acquisition Start Date: 6/23/2011 4:36:26AM
Live Time: 60.00 min.
Real Time: 60.09 min.
Efficiency: 28.02% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,150.00	119.17
Pu-239	240	5.16	186	249	7,067.00	117.78
Am-241	284	5.49	249	303	7,498.00	124.97

Name: June2011_AV128
Description:
Detector: AV128

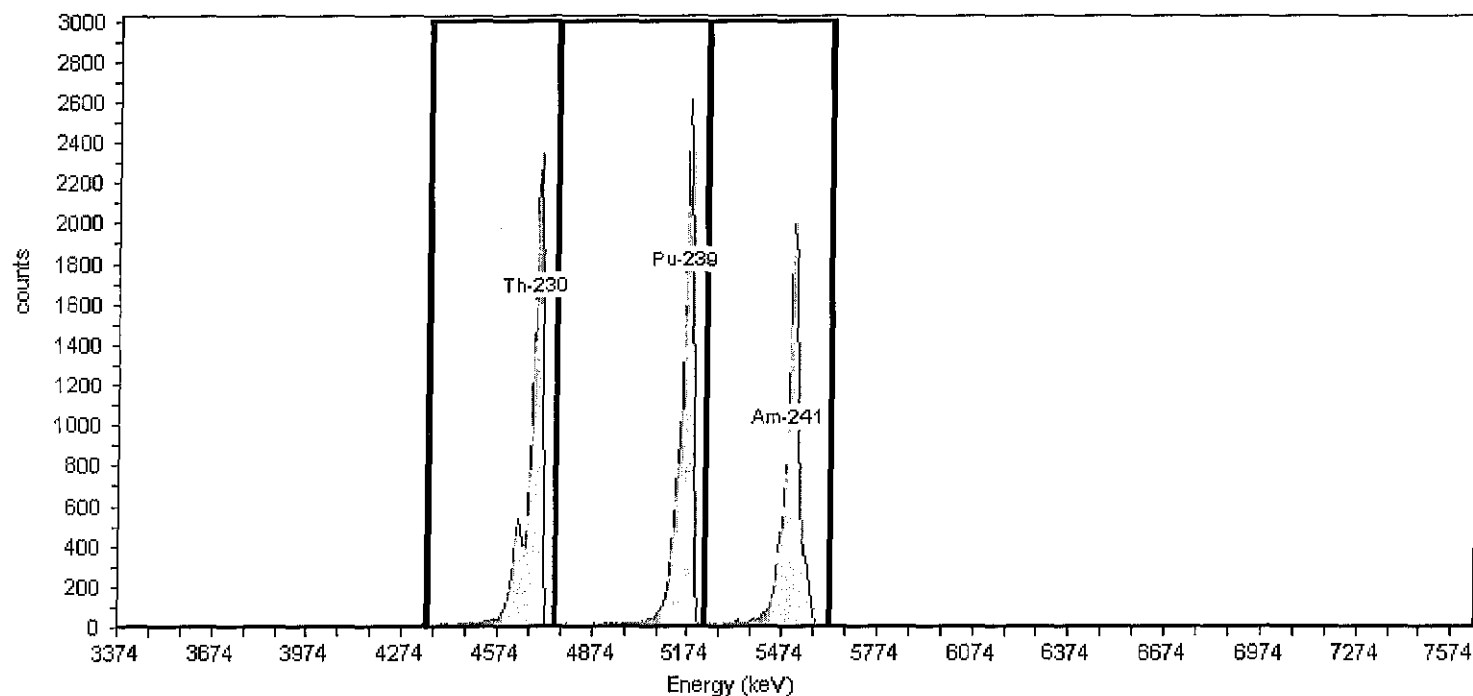
Calibration Date: 2/21/2012 3:01:06PM
Analyst: 60040

Certificate ID: 82237-334
Prepared by: Analytics

Certification Date: 6/1/2010 12:00:00PM
Description:

Detector: AV128 , SN: 49-179C6
Acquisition Start Date: 6/3/2011 12:54:45PM
Live Time: 140.00 min.
Real Time: 140.15 min.
Efficiency: 26.92% +/- 0.37% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	13,328.00	95.20
Pu-239	240	5.16	186	249	14,413.00	102.95
Am-241	284	5.49	249	303	12,713.00	90.81

Calibration

Name: June2011_AV128_ICV
Description:
Detector: AV128

Calibration Date: 6/10/2011 3:00:38PM
Analyst: 60040

Source Info

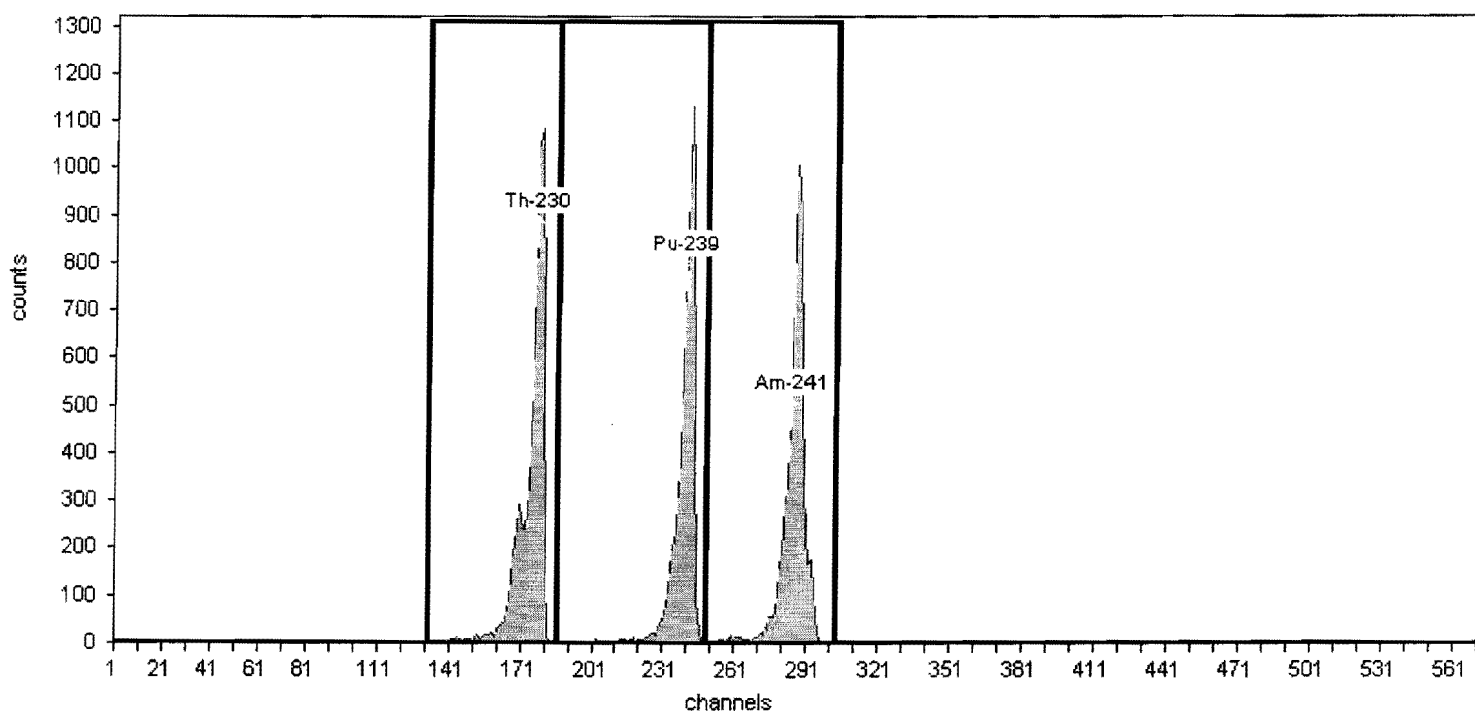
Certificate ID: 82236-334
Prepared by: Analytics

Certification Date: 6/2/2010 12:00:00PM
Description:

Acquisition

Detector: AV128 , SN: 49-179C6
Acquisition Start Date: 6/5/2011 7:15:44AM
Live Time: 60.00 min.
Real Time: 60.05 min.
Efficiency: 27.37% +/- 0.43% TPU(2 sigma)

Energy Calibration Equation:
Gain = 7.4575 keV / Ch
Offset = 3,366.95 keV
Quadratic = 0.0000 keV / Ch²



General Analysis

Method: Manual (ROI)
Algorithm: Linear

Initial Calibration: No
Shelf: 1

Nuclide Activity Summary

Nuclide	Peak Channel	Peak Energy MeV	ROI Start Channel	ROI End Channel	Gross Counts	Net Count Rate (cpm)
Th-230	177	4.69	132	186	7,054.00	117.57
Pu-239	240	5.16	186	249	6,556.00	109.27
Am-241	284	5.49	249	303	6,745.00	112.42




TestAmerica Laboratories, Inc.

ANALYTICAL REPORT


PROJECT NO. 140415

Guterl Steel

Lot #: F2J250431


Shaw Environmental & Infrastru
Attn: Accounts Payable
PO Box 98519
Baton Rouge, LA 70884

TESTAMERICA LABORATORIES, INC.


Project Manager

November 8, 2012

F2J250431

1 of 65

Case Narrative
LOT NUMBER: F2J250431-

This report contains the analytical results for the 22 samples received under chain of custody by TestAmerica in St. Louis on October 25, 2012. These samples are associated with your Guterl Steel project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all DoD QSM 4.2 requirements for which accreditations are held by TestAmerica in St. Louis except as permitted or accepted by the client and/or site specific documentation. In addition, the test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica in St. Louis. **TestAmerica St. Louis' Florida certification number is E87689.** Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium and carbon-14, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Certification Statement:

I certify that this image, and all data packages produced from this image, accurately represent the data and is in compliance with the SAP requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package case narrative. The data, contained in this electronic image and computer-readable EDD, have been authorized by the lab manager, or the manager's designee.

The following clean-up methods for Organic analyses may have been used on samples in this data set. Specific methods employed are documented on the batch extraction logs.

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup
Method 3665A: Sulfuric Acid/Permanganate Cleanup

Isotopic Uranium by Alpha Spectroscopy (EML A-01-R MOD)

The sample aliquot was reduced due to high activity from historical data. The Uranium samples (F2J250431-010 and -011) did not meet the CRDL due to the samples high activity above the MDC.

Affected Samples:

F2J250431 (1): A04BMW704DD0005
F2J250431 (2): A04DMW710D0005
F2J250431 (3): A04DMW708DD0005
F2J250431 (4): A04DMW710DD0005
F2J250431 (5): A04DMW713D0005
F2J250431 (6): A04DMW604D0005
F2J250431 (7): DUPLICATE 03
F2J250431 (8): A04DMW709DD0005
F2J250431 (9): A04BMW707DD0005
F2J250431 (10): A04BMW605D0005
F2J250431 (11): A04BMW260005

The sample aliquot was reduced due to high activity from historical data. The Uranium spike recovery for F2J250431-007S and -007D are outside the upper control limit. The samples associated with the batch were re-extracted. The re-extracted Uranium samples (F2J250431-017S and -017D) have spike recoveries outside the upper control limit due to sample matrix interference.

Affected Samples:

F2J250431 (12): A04BMW704DD0005
F2J250431 (13): A04DMW710D0005
F2J250431 (14): A04DMW708DD0005
F2J250431 (15): A04DMW710DD0005
F2J250431 (16): A04DMW713D0005
F2J250431 (17): A04DMW604D0005
F2J250431 (18): DUPLICATE 03
F2J250431 (19): A04DMW709DD0005
F2J250431 (20): A04BMW707DD0005
F2J250431 (22): A04BMW260005

The sample aliquot was reduced due to high activity from historical data. There was also insufficient sample to perform the sample at the requested 1000mL. The Uranium sample (F2J250431-021) did not meet the CRDL due to the sample's high activity which is greater than the MDC.

Affected Samples:

F2J250431 (21): A04BMW605D0005

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F2J250431

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Uranium by Alpha Spectroscopy ICP-MS (6020A)	EML A-01-R MOD SW846 6020A	

References:

EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F2J250431**

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MW4MT	001	A04BMW704DD0005	10/22/12	10:30
MW4M5	002	A04DMW710D0005	10/22/12	12:50
MW4M6	003	A04DMW708DD0005	10/22/12	15:15
MW4M7	004	A04DMW710DD0005	10/22/12	16:40
MW4M9	005	A04DMW713D0005	10/23/12	13:30
MW4NA	006	A04DMW604D0005	10/23/12	15:05
MW4NC	007	DUPLICATE 03	10/23/12	
MW4ND	008	A04DMW709DD0005	10/23/12	16:40
MW4NE	009	A04BMW707DD0005	10/23/12	17:50
MW4NF	010	A04BMW605D0005	10/24/12	10:15
MW4NG	011	A04BMW260005	10/24/12	12:45
MW4NH	012	A04BMW704DD0005	10/22/12	10:30
MW4NJ	013	A04DMW710D0005	10/22/12	12:50
MW4NK	014	A04DMW708DD0005	10/22/12	15:15
MW4NL	015	A04DMW710DD0005	10/22/12	16:40
MW4NM	016	A04DMW713D0005	10/23/12	13:30
MW4NQ	017	A04DMW604D0005	10/23/12	15:05
MW4NR	018	DUPLICATE 03	10/23/12	
MW4NT	019	A04DMW709DD0005	10/23/12	16:40
MW4NV	020	A04BMW707DD0005	10/23/12	17:50
MW4NW	021	A04BMW605D0005	10/24/12	10:15
MW4N0	022	A04BMW260005	10/24/12	12:45

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0005

TOTAL Metals

Lot-Sample #...: F2J250431-001

Matrix.....: WATER

Date Sampled...: 10/22/12 10:30 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 2300080						
Uranium	72.4	1	ug/L	SW846 6020A	10/26-10/31/12	MW4MT1AA
		Dilution Factor: 1		Analysis Time...: 03:01		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0005

TOTAL Metals

Lot-Sample #...: F2J250431-002

Matrix.....: WATER

Date Sampled...: 10/22/12 12:50 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300080						
Uranium	66.0	1	ug/L	SW846 6020A	10/26-10/31/12	MW4M51AA
		Dilution Factor: 1		Analysis Time...: 03:08		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0005

TOTAL Metals

Lot-Sample #...: F2J250431-003

Matrix.....: WATER

Date Sampled...: 10/22/12 15:15 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300080					
Uranium	20.0	1	ug/L	SW846 6020A	10/26-10/31/12	MW4M61AA
		Dilution Factor: 1		Analysis Time...: 03:15		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0005

TOTAL Metals

Lot-Sample #...: F2J250431-004

Matrix.....: WATER

Date Sampled...: 10/22/12 16:40 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300080					
Uranium	28.6	1	ug/L	SW846 6020A	10/26-10/31/12	MW4M71AA
		Dilution Factor: 1		Analysis Time...: 03:22		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0005

TOTAL Metals

Lot-Sample #...: F2J250431-005

Matrix.....: WATER

Date Sampled...: 10/23/12 13:30 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300080					
Uranium	ND	1	ug/L	SW846 6020A	10/26-10/31/12	MW4M91AA
		Dilution Factor: 1		Analysis Time...: 03:29		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0005

TOTAL Metals

Lot-Sample #...: F2J250431-006

Matrix.....: WATER

Date Sampled...: 10/23/12 15:05 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300080						
Uranium	112	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NA1AA
		Dilution Factor: 1		Analysis Time...: 03:36		

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 03

TOTAL Metals

Lot-Sample #...: F2J250431-007

Matrix.....: WATER

Date Sampled...: 10/23/12

Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300080						
Uranium	111	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NC1AA
		Dilution Factor: 1		Analysis Time...: 04:24		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0005

TOTAL Metals

Lot-Sample #...: F2J250431-008

Matrix.....: WATER

Date Sampled...: 10/23/12 16:40 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300080						
Uranium	85.9	1	ug/L	SW846 6020A	10/26-10/31/12	MW4ND1AA
		Dilution Factor: 1		Analysis Time...: 04:31		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0005

TOTAL Metals

Lot-Sample #...: F2J250431-009

Matrix.....: WATER

Date Sampled...: 10/23/12 17:50 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300080					
Uranium	9.4	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NE1AA
		Dilution Factor: 1		Analysis Time...: 04:38		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0005

TOTAL Metals

Lot-Sample #...: F2J250431-010

Matrix.....: WATER

Date Sampled...: 10/24/12 10:15 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300080						
Uranium	270	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NF1AA
		Dilution Factor: 1		Analysis Time...: 04:44		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260005

TOTAL Metals

Lot-Sample #...: F2J250431-011

Matrix.....: WATER

Date Sampled...: 10/24/12 12:45 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300080						
Uranium	243	1	ug/L	SW846 6020A	10/26-11/02/12	MW4NG1AA
		Dilution Factor: 1		Analysis Time...: 19:56		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-012

Matrix.....: WATER

Date Sampled...: 10/22/12 10:30 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300077						
Uranium	73.4	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NH1AC
		Dilution Factor: 1		Analysis Time...: 00:36		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-013

Matrix.....: WATER

Date Sampled...: 10/22/12 12:50 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300077						
Uranium	66.8	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NJ1AC
		Dilution Factor: 1		Analysis Time...: 00:43		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-014

Matrix.....: WATER

Date Sampled...: 10/22/12 15:15 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300077					
Uranium	20.1	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NK1AC
		Dilution Factor: 1		Analysis Time...: 00:50		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-015

Matrix.....: WATER

Date Sampled...: 10/22/12 16:40 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300077					
Uranium	28.3	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NL1AC
		Dilution Factor: 1		Analysis Time...: 00:57		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-016

Matrix.....: WATER

Date Sampled...: 10/23/12 13:30 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 2300077						
Uranium	ND	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NM1AC
Dilution Factor: 1				Analysis Time...: 01:04		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-017

Matrix.....: WATER

Date Sampled...: 10/23/12 15:05 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300077						
Uranium	111	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NQ1AC
		Dilution Factor: 1		Analysis Time...: 01:11		

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 03

DISSOLVED Metals

Lot-Sample #...: F2J250431-018

Matrix.....: WATER

Date Sampled...: 10/23/12

Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300077					
Uranium	114	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NR1AC
		Dilution Factor: 1		Analysis Time...: 01:59		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-019

Matrix.....: WATER

Date Sampled...: 10/23/12 16:40 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300077						
Uranium	83.8	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NT1AC
		Dilution Factor: 1		Analysis Time...: 02:06		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-020

Matrix.....: WATER

Date Sampled...: 10/23/12 17:50 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300077						
Uranium	8.4	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NV1AC
		Dilution Factor: 1		Analysis Time...: 02:13		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0005

DISSOLVED Metals

Lot-Sample #...: F2J250431-021

Matrix.....: WATER

Date Sampled...: 10/24/12 10:15 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 2300077						
Uranium	266	1	ug/L	SW846 6020A	10/26-10/31/12	MW4NW1AC
		Dilution Factor: 1		Analysis Time...: 02:20		

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260005

DISSOLVED Metals

Lot-Sample #...: F2J250431-022

Matrix.....: WATER

Date Sampled...: 10/24/12 12:45 Date Received...: 10/25/12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	2300077					
Uranium	260	1	ug/L	SW846 6020A	10/26-10/31/12	MW4N01AC
		Dilution Factor: 1		Analysis Time...: 02:27		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F2J250431

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F2J260000-080 Prep Batch #... : 2300080						
Uranium	ND	1	ug/L	SW846 6020A	10/26-10/31/12	MW5HM1AA
Dilution Factor: 1						
Analysis Time...: 02:47						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: F2J250431

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MB Lot-Sample #: F2J260000-077 Prep Batch #... : 2300077						
Uranium	ND	1	ug/L	SW846 6020A	10/26-10/31/12	MW5HH1AA
		Dilution Factor: 1				
		Analysis Time...: 00:23				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2J250431

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------------	----------------------------------	---------------	---	---------------------

LCS Lot-Sample#: F2J260000-080 Prep Batch #...: 2300080

Uranium 99 (80 - 120) SW846 6020A 10/26-10/31/12 MW5HM1AC

Dilution Factor: 1

Analysis Time...: 02:54

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: F2J250431

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	-----------------------------------	----------------------------------	---------------	---	---------------------

LCS Lot-Sample#: F2J260000-077 Prep Batch #...: 2300077

Uranium 98 (80 - 120) SW846 6020A 10/26-10/31/12 MW5HH1AC

Dilution Factor: 1 Analysis Time..: 00:30

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F2J250431

Matrix.....: WATER

Date Sampled...: 10/23/12 15:05 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>PREPARATION-</u>	<u>WORK</u>	
<u>RECOVERY</u>	<u>LIMITS</u>	<u>RPD</u>	<u>LIMITS</u>	<u>METHOD</u>	<u>ANALYSIS DATE</u>	<u>ORDER #</u>

MS Lot-Sample #: F2J250431-006 Prep Batch #...: 2300080

Uranium 106 (80 - 120) SW846 6020A 10/26-10/31/12 MW4NA1AE

105 (80 - 120) 0.72 (0-20) SW846 6020A 10/26-10/31/12 MW4NA1AF

Dilution Factor: 1

Analysis Time...: 03:49

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: F2J250431

Matrix.....: WATER

Date Sampled...: 10/23/12 15:05 Date Received...: 10/25/12

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>PREPARATION-</u>	<u>WORK</u>	
<u>RECOVERY</u>	<u>LIMITS</u>	<u>RPD</u>	<u>LIMITS</u>	<u>METHOD</u>	<u>ANALYSIS DATE</u>	<u>ORDER #</u>

MS Lot-Sample #: F2J250431-017 Prep Batch #...: 2300077

Uranium 108 (80 - 120) SW846 6020A 10/26-10/31/12 MW4NQ1AF

108 (80 - 120) 0.07 (0-20) SW846 6020A 10/26-10/31/12 MW4NQ1AG

Dilution Factor: 1

Analysis Time...: 01:25

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0005

Radiochemistry

Lab Sample ID: F2J250431-001
Work Order: MW4MT
Matrix: WATER

Date Collected: 10/22/12 1030
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 73
Uranium 234	26.0		2.4	0.1	0.08	10/29/12	10/29/12
Uranium 235/236	0.95		0.24	0.10	0.04	10/29/12	10/29/12
Uranium 238	21.5		2.0	0.1	0.03	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0005

Radiochemistry

Lab Sample ID: F2J250431-002

Date Collected: 10/22/12 1250

Work Order: MW4M5

Date Received: 10/25/12 0935

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 75
Uranium 234	19.9		1.9	0.1	0.09	10/29/12	10/29/12
Uranium 235/236	1.13		0.26	0.10	0.07	10/29/12	10/29/12
Uranium 238	19.7		1.9	0.1	0.09	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

35 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0005

Radiochemistry

Lab Sample ID: F2J250431-003
Work Order: MW4M6
Matrix: WATER

Date Collected: 10/22/12 1515
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 80
Uranium 234	6.59		0.76	0.10	0.1	10/29/12	10/29/12
Uranium 235/236	0.29		0.12	0.10	0.07	10/29/12	10/29/12
Uranium 238	5.72		0.68	0.10	0.06	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

36 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0005

Radiochemistry

Lab Sample ID: F2J250431-004
Work Order: MW4M7
Matrix: WATER

Date Collected: 10/22/12 1640
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 82
Uranium 234	8.85		0.95	0.10	0.09	10/29/12	10/29/12
Uranium 235/236	0.36		0.14	0.10	0.09	10/29/12	10/29/12
Uranium 238	8.82		0.95	0.10	0.08	10/29/12	10/29/12

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

37 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0005

Radiochemistry

Lab Sample ID: F2J250431-005
 Work Order: MW4M9
 Matrix: WATER

Date Collected: 10/23/12 1330
 Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 77
Uranium 234	0.066		0.045	0.100	0.056	10/29/12	10/31/12
Uranium 235/236	0.014	U	0.025	0.100	0.044	10/29/12	10/31/12
Uranium 238	0.081		0.049	0.100	0.056	10/29/12	10/31/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0005

Radiochemistry

Lab Sample ID: F2J250431-006
Work Order: MW4NA
Matrix: WATER

Date Collected: 10/23/12 1505
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 68
Uranium 234	36.1		3.3	0.1	0.08	10/29/12	10/29/12
Uranium 235/236	1.65		0.35	0.10	0.04	10/29/12	10/29/12
Uranium 238	35.4		3.3	0.1	0.06	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

39 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 03

Radiochemistry

Lab Sample ID: F2J250431-007
Work Order: MW4NC
Matrix: WATER

Date Collected: 10/23/12 0000
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 69
Uranium 234	33.6		3.1	0.1	0.09	10/29/12	10/29/12
Uranium 235/236	2.08		0.38	0.10	0.09	10/29/12	10/29/12
Uranium 238	34.5		3.1	0.1	0.08	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

40 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0005

Radiochemistry

Lab Sample ID: F2J250431-008
Work Order: MW4ND
Matrix: WATER

Date Collected: 10/23/12 1640
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 69
Uranium 234	27.6		2.6	0.1	0.07	10/29/12	10/29/12
Uranium 235/236	1.41		0.31	0.10	0.08	10/29/12	10/29/12
Uranium 238	27.8		2.6	0.1	0.07	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0005

Radiochemistry

Lab Sample ID: F2J250431-009
Work Order: MW4NE
Matrix: WATER

Date Collected: 10/23/12 1750
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 71
Uranium 234	14.7		1.5	0.1	0.06	10/29/12	10/29/12
Uranium 235/236	0.24		0.12	0.10	0.04	10/29/12	10/29/12
Uranium 238	3.32		0.48	0.10	0.03	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

42 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0005

Radiochemistry

Lab Sample ID: F2J250431-010
 Work Order: MW4NF
 Matrix: WATER

Date Collected: 10/24/12 1015
 Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 50
Uranium 234	79.7		7.0	0.1	0.1	10/29/12	10/29/12
Uranium 235/236	3.59		0.60	0.10	0.12	10/29/12	10/29/12
Uranium 238	79.1		7.0	0.1	0.1	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

43 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260005

Radiochemistry

Lab Sample ID: F2J250431-011

Work Order: MW4NG

Matrix: WATER

Date Collected: 10/24/12 1245

Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2300025	Yld % 49
Uranium 234	77.3		6.9	0.1	0.1	10/29/12	10/29/12
Uranium 235/236	3.86		0.65	0.10	0.06	10/29/12	10/29/12
Uranium 238	76.9		6.9	0.1	0.09	10/29/12	10/29/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

44 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW704DD0005

Radiochemistry

Lab Sample ID: F2J250431-012
Work Order: MW4NH
Matrix: WATER

Date Collected: 10/22/12 1030
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 80
Uranium 234	27.9		2.5	0.1	0.05	11/01/12	11/05/12
Uranium 235/236	1.20		0.23	0.10	0.06	11/01/12	11/05/12
Uranium 238	22.6		2.0	0.1	0.05	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

45 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710D0005

Radiochemistry

Lab Sample ID: F2J250431-013
Work Order: MW4NJ
Matrix: WATER

Date Collected: 10/22/12 1250
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 78
Uranium 234	20.3		1.9	0.1	0.06	11/01/12	11/05/12
Uranium 235/236	1.07		0.22	0.10	0.05	11/01/12	11/05/12
Uranium 238	20.1		1.9	0.1	0.06	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

46 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW708DD0005

Radiochemistry

Lab Sample ID: F2J250431-014
Work Order: MW4NK
Matrix: WATER

Date Collected: 10/22/12 1515
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 81
Uranium 234	7.02		0.73	0.10	0.05	11/01/12	11/05/12
Uranium 235/236	0.35		0.11	0.10	0.06	11/01/12	11/05/12
Uranium 238	6.41		0.68	0.10	0.07	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

47 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW710DD0005

Radiochemistry

Lab Sample ID: F2J250431-015

Date Collected: 10/22/12 1640

Work Order: MW4NL

Date Received: 10/25/12 0935

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 87
Uranium 234	9.34		0.92	0.10	0.05	11/01/12	11/05/12
Uranium 235/236	0.47		0.13	0.10	0.02	11/01/12	11/05/12
Uranium 238	9.06		0.90	0.10	0.02	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

48 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW713D0005

Radiochemistry

Lab Sample ID: F2J250431-016
 Work Order: MW4NM
 Matrix: WATER

Date Collected: 10/23/12 1330
 Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 83
Uranium 234	0.046	U	0.046	0.100	0.067	11/01/12	11/05/12
Uranium 235/236	0.011	U	0.026	0.100	0.050	11/01/12	11/05/12
Uranium 238	0.020		0.023	0.100	0.018	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW604D0005

Radiochemistry

Lab Sample ID: F2J250431-017

Date Collected: 10/23/12 1505

Work Order: MW4NQ

Date Received: 10/25/12 0935

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 78
Uranium 234	32.2		2.9	0.1	0.06	11/01/12	11/05/12
Uranium 235/236	1.71		0.28	0.10	0.06	11/01/12	11/05/12
Uranium 238	32.6		2.9	0.1	0.06	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

50 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: DUPLICATE 03

Radiochemistry

Lab Sample ID: F2J250431-018
Work Order: MW4NR
Matrix: WATER

Date Collected: 10/23/12 0000
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 74
Uranium 234	34.7		3.1	0.1	0.06	11/01/12	11/05/12
Uranium 235/236	1.77		0.29	0.10	0.02	11/01/12	11/05/12
Uranium 238	34.3		3.0	0.1	0.05	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04DMW709DD0005

Radiochemistry

Lab Sample ID: F2J250431-019
Work Order: MW4NT
Matrix: WATER

Date Collected: 10/23/12 1640
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 80
Uranium 234	28.2		2.5	0.1	0.04	11/01/12	11/05/12
Uranium 235/236	1.26		0.23	0.10	0.02	11/01/12	11/05/12
Uranium 238	27.1		2.4	0.1	0.04	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

52 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW707DD0005

Radiochemistry

Lab Sample ID: F2J250431-020

Date Collected: 10/23/12 1750

Work Order: MW4NV

Date Received: 10/25/12 0935

Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 91
Uranium 234	12.2		1.2	0.1	0.07	11/01/12	11/05/12
Uranium 235/236	0.128		0.084	0.100	0.074	11/01/12	11/05/12
Uranium 238	2.49		0.38	0.10	0.08	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

53 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW605D0005

Radiochemistry

Lab Sample ID: F2J250431-021
Work Order: MW4NW
Matrix: WATER

Date Collected: 10/24/12 1015
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 49
Uranium 234	85.2		7.4	0.1	0.1	11/01/12	11/05/12
Uranium 235/236	4.75		0.65	0.10	0.08	11/01/12	11/05/12
Uranium 238	84.0		7.3	0.1	0.09	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

54 of 65

Shaw Environmental & Infrastructure Inc

Client Sample ID: A04BMW260005

Radiochemistry

Lab Sample ID: F2J250431-022
Work Order: MW4N0
Matrix: WATER

Date Collected: 10/24/12 1245
Date Received: 10/25/12 0935

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD				pCi/L		Batch # 2306013	Yld % 57
Uranium 234	69.8		6.1	0.1	0.03	11/01/12	11/05/12
Uranium 235/236	3.66		0.52	0.10	0.07	11/01/12	11/05/12
Uranium 238	70.5		6.1	0.1	0.06	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

F2J250431

55 of 65

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F2J250431
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2300025	Yld % 98	F2J260000-025B
Uranium 234	0.0024	U	0.0089	0.100	0.022	10/29/12	10/29/12
Uranium 235/236	0.010	U	0.015	0.100	0.014	10/29/12	10/29/12
Uranium 238	0.007	U	0.012	0.100	0.022	10/29/12	10/29/12
Iso URANIUM (LONG CT) DOE A-01-R MOD							
			pCi/L	Batch #	2306013	Yld % 95	F2K010000-013B
Uranium 234	0.007	U	0.017	0.100	0.032	11/01/12	11/05/12
Uranium 235/236	-0.003	U	0.011	0.100	0.031	11/01/12	11/05/12
Uranium 238	-0.020	U	0.021	0.100	0.050	11/01/12	11/05/12

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F2J250431
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2J260000-025C
Uranium 234	3.27	3.30	0.37	0.03	90	101	(84 - 120)
Uranium 238	3.39	3.72	0.41	0.02	90	110	(83 - 121)
Batch #:	2300025			Analysis Date:	10/29/12		
Iso URANIUM (LONG CT) DOE A-01-R MOD			pCi/L	A-01-R MOD			F2K010000-013C
Uranium 234	3.27	3.27	0.34	0.03	83	100	(84 - 120)
Uranium 238	3.39	3.35	0.35	0.02	83	99	(83 - 121)
Batch #:	2306013			Analysis Date:	11/05/12		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F2J250431
 Matrix: WATER

Date Sampled: 10/23/12 1505
 Date Received: 10/25/12 0935

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID			
							% Yld	%Rec	QC Control Limits	
Iso URANIUM (LONG CT) DOE A			pCi/L	A-01-R MOD			F2J250431-006			
Uranium 234	6.53	41.0	3.7	65	36.1	3.3	68	74	(65 - 146)	
Spk2	6.53	41.3	3.8	65	36.1	3.3	68	79	(65 - 146)	
						Precision:	0.8	%RPD		
Uranium 238	6.78	41.8	3.8	65	35.4	3.3	68	94	(68 - 143)	
Spk2	6.77	42.3	3.8	65	35.4	3.3	68	101	(68 - 143)	
						Precision:	1	%RPD		
Batch #:		2300025		Analysis date:		10/29/12				
Iso URANIUM (LONG CT) DOE A			pCi/L	A-01-R MOD			F2J250431-017			
Uranium 234	6.53	42.0 a	3.7	65	32.2	2.9	78	150	a (65 - 146)	
Spk2	6.53	41.6	3.7	65	32.2	2.9	78	144	(65 - 146)	
						Precision:	0.9	%RPD		
Uranium 238	6.77	40.8	3.6	65	32.6	2.9	78	121	(68 - 143)	
Spk2	6.78	43.0 a	3.8	65	32.6	2.9	78	153	a (68 - 143)	
						Precision:	5	%RPD		
Batch #:		2306013		Analysis date:		11/05/12				

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

a Spiked analyte outside of stated QC limits.

F2J250431**CLIENT ANALYSIS SUMMARY**Storage Loc: **R249-251,METS**Project Manager: **LMF**Quote #: **89251** SDG:Date Received: **2012-10-25**Project: **140415**

Guterl Steel

Analytical Due Date: **2012-11-06**PO#: **697886**Report to: XXXXXXXXXXReport Due Date: **2012-11-08**Client: **522706 Shaw Environmental & Infrastructure Inc**#SMPS in LOT: **22**Report Type: **D** Expanded DeliverableEDD Code: **00**

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
1	A04BMW704DD0005			2012-10-22 / 1030	MW4MT	WATER

SAMPLE COMMENTS:

UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
2	A04DMW710D0005			2012-10-22 / 1250	MW4M5	WATER

SAMPLE COMMENTS:

UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
3	A04DMW708DD0005			2012-10-22 / 1515	MW4M6	WATER

SAMPLE COMMENTS:

UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
4	A04DMW710DD0005			2012-10-22 / 1640	MW4M7	WATER

SAMPLE COMMENTS:

UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
5	A04DMW713D0005			2012-10-23 / 1330	MW4M9	WATER

SAMPLE COMMENTS:

UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	!
6	A04DMW604D0005			2012-10-23 / 1505	MW4NA	WATER

SAMPLE COMMENTS:

UX	I&	SW846 6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK	06
XX	ZV	RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK	06
XX	2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK	06

F2J250431**CLIENT ANALYSIS SUMMARY**Storage Loc: **R249-251,METS**

Project Manager: LMF

Quote #: 89251

SDG:

Date Received: 2012-10-25

Project: 140415

Guterl Steel

Analytical Due Date: 2012-11-06

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-11-08

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 22

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

D	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S	XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
7	DUPLICATE 03			2012-10-23 / 0	MW4NC	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
8	A04DMW709DD0005			2012-10-23 / 1640	MW4ND	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
9	A04BMW707DD0005			2012-10-23 / 1750	MW4NE	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
10	A04BMW605D0005			2012-10-24 / 1015	MW4NF	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
11	A04BMW260005			2012-10-24 / 1245	MW4NG	WATER

SAMPLE COMMENTS:

UX	I&	SW846	6020A	WATER, 6020 Total Uranium	GJ	METALS, TOTAL - 2% HCL	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX	ZV		RAD SCREEN	WATER, RAD SCREEN, RAD SCREEN, Special L	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: B	WRK LOC	06
XX	2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U (L CT)	J2	Extraction Chromatography - Sequential Actinides	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
----------	------------------	---------	---------------	-------------------	-----------	---

F2J250431**CLIENT ANALYSIS SUMMARY**Storage Loc: **R249-251,METS**

Project Manager: LMF Quote #: 89251 SDG:
 Project: 140415 Guterl Steel
 PO#: 697886 Report to: XXXXXXXXXX
 Client: 522706 Shaw Environmental & Infrastructure Inc

Date Received: 2012-10-25
 Analytical Due Date: 2012-11-06
 Report Due Date: 2012-11-08
 Report Type: D Expanded Deliverable
 EDD Code: 00

#SMPS in LOT: 22

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

12 A04BMW704DD0005 2012-10-22 / 1030 MW4NH WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
13	A04DMW710D0005			2012-10-22 / 1250	MW4NJ	WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
14	A04DMW708DD0005			2012-10-22 / 1515	MW4NK	WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
15	A04DMW710DD0005			2012-10-22 / 1640	MW4NL	WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
16	A04DMW713D0005			2012-10-23 / 1330	MW4NM	WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
17	A04DMW604D0005			2012-10-23 / 1505	MW4NQ	WATER

SAMPLE COMMENTS:

UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06
D UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
D XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S UX 1&	SW846 6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
S XX 2M	EML A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>Site ID</u>	<u>Client Matrix</u>	<u>DATE/TIME SAMPLED</u>	<u>WORKORDER</u>	<u>I</u>
18	DUPLICATE 03			2012-10-23 / 0	MW4NR	WATER

SAMPLE COMMENTS:

F2J250431**CLIENT ANALYSIS SUMMARY**Storage Loc: **R249-251,METS**

Project Manager: LMF

Quote #: 89251 SDG:

Date Received: 2012-10-25

Project: 140415

Guterl Steel

Analytical Due Date: 2012-11-06

PO#: 697886

Report to: [REDACTED]

Report Due Date: 2012-11-08

Client: 522706 Shaw Environmental & Infrastructure Inc

Report Type: D Expanded Deliverable

#SMPS in LOT: 22

EDD Code: 00

DoD QSM 4.1 please use 6020 for total uranium instead of 200.8

UX 1&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
19	A04DMW709DD0005			2012-10-23 / 1640	MW4NT	WATER

SAMPLE COMMENTS:

UX 1&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
20	A04BMW707DD0005			2012-10-23 / 1750	MW4NV	WATER

SAMPLE COMMENTS:

UX 1&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
21	A04BMW605D0005			2012-10-24 / 1015	MW4NW	WATER

SAMPLE COMMENTS:

UX 1&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
22	A04BMW260005			2012-10-24 / 1245	MW4N0	WATER

SAMPLE COMMENTS:

UX 1&	SW846	6020A	WATER, 6020 Dissolved Uranium	JX	METALS, FILTERED 2% HCL, DISSOLVED	D4	DOD QSM V4.X	PROT: A	WRK LOC	06
XX 2M	EML	A-01-R MOD	WATER, A-01-R MOD, Iso U Dissolved	H&	Extraction Chromatography, Sequential Actinides (Dissolved)	01	STANDARD TEST SET	PROT: A	WRK LOC	06

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CUR Form #: 2 6 2

Lot #(s): F2J250431

CONDITION UPON RECEIPT FORMClient: ShawQuote No: 89251COC/RFA No: 197318, 197321Initiated By: SCDate: 10-25-12 Time: 0935**Shipping Information**Shipper: FedEx UPS DHL Courier Client Other: _____Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. <u>4485 0262 6785</u>	6. <u>10-25-12 SC</u>	1. <u>Ambient 10-25-12 SC</u>	6. _____
2. <u>6741</u>	7. _____	2. <u>4</u>	7. _____
3. <u>6796</u>	8. _____	3. <u>2</u>	8. _____
4. _____	9. _____	4. _____	9. _____
5. _____	10. _____	5. _____	10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. Y <u>N</u>	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. Y N <u>N/A</u>	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <u>Y</u> N	Sample received in proper containers?
6. Y <u>N</u>	Was sample received broken?	13. Y N <u>N/A</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>N/A</u>	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.**Notes:**

pH was incorrect for unfiltered LP for sample 'A040MW13'
Add pH to correct per LF. Nitric Lot K26024. 00005

Sample ending in 10700005 - Filtered metal's bottle split open on arrival, volume lost. NMP label 1026112

Corrective Action:☐ Client Contact Name: _____

Informed by: _____

☐ Sample(s) processed "as is"☐ Sample(s) on hold until _____

If released, notify: _____

Project Management Review _____

Date: 10/26/12

THIS FORM MUST BE COMPLETED BY THE PERSONS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

APPENDIX D

Data Validation Reports

(Provided on same CD as Appendix A)



November 18, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H020470
Site Name: Guterl Steel
Samples Collected: 07/27/2011
3 Aqueous Samples and 3 Sludge Samples

Isotopic Thorium and Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
Sewer Location # 1 US-0001 Sludge	F1H020470-001	Sewer Location # 1 UW- 0001 Aqueous DUP	F1H020470-002X
Sewer Location # 1 US-0001 Sludge DUP	F1H020470-001X	Sewer Location # 2 US- 0002 Sludge	F1H020470-003
Sewer Location # 1 UW- 0001 Aqueous	F1H020470-002	Sewer Location # 2 UW- 0002 Aqueous	F1H020470-004

DUP- Laboratory Duplicate

Dear [REDACTED],

A data evaluation was performed on the isotopic uranium and isotopic thorium analytical data from aqueous and sludge samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site (Lockport Sewer Locations).

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy (EML A-01-R-MOD), according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are Th-228, Th-230, Th-232, U-234, U-235 and U-238. The sludge sample results are reported on a dry weight basis.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
X		Blank Results
X		Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
X		Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the isotopic thorium and isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site (Lockport Sewer Locations).

Based upon the Th-230 method blank result the Th-230 result for Sewer Location #1 UW-0001 is qualified as estimated (J).

The Th-228, Th-230 and Th-232 results for Sewer Location # 2 UW-0002 are qualified as non-detected estimated (UJ). The Th-229 tracer recovery is 32%.

The Th-230 result for Sewer Location #1 UW-0001 is qualified as estimated (J). The reported result is greater than the MDC and less than the two sigma uncertainty.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 07/27/2011. The condition upon receipt form indicates that aqueous radionuclide samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Solid method blank results associated with preparation batches 1223198 and 1223199 are summarized below.

Radionuclide	Sample ID	Conc pCi/g	Total Uncertainty pCi/g	MDA pCi/g	Z-Factor
Th-228	F1H110000-198B	-0.0009	0.0018	0.0166	-0.9991
Th-230	F1H110000-198B	0.0221	0.0181	0.0099	2.4428
Th-232	F1H110000-198B	0.0073	0.0103	0.0099	1.4117
U-234	F1H110000-199B	0.0106	0.0150	0.0224	1.4117
U-235	F1H110000-199B	0.0053	0.0105	0.0142	0.9991
U-238	F1H110000-199B	0.0042	0.0084	0.0114	0.9991

MDA- Minimal Detectable Activity

No sludge results are qualified based upon the positive Th-230 method blank results. Th-230 sludge results are at concentrations more than 10 X the Th-230 method blank results.

Aqueous method blank results associated with preparation batches 1227018 and 1227019 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
Th-228	F1H150000-018B	0.0000	0.0075	0.0202	0.000
Th-230	F1H150000-018B	0.0225	0.0260	0.0203	1.7275
Th-232	F1H150000-018B	0.0000	0.0075	0.0202	0.000
U-234	F1H150000-019B	0.0133	0.0218	0.0344	1.2170
U-235	F1H150000-019B	-0.0024	0.0047	0.0428	-0.9991
U-238	F1H150000-019B	0.0000	0.0076	0.0205	0.0000

MDA- Minimal Detectable Activity

Using professional judgment the Th-230 result for Sewer Location # 1 UW-0001 is qualified as estimated (J). The reported positive Th-230 result is 0.026pCi/L +/- 0.030pCi/L. Statistically this result is equal to the positive method blank result. Both the positive sample result and positive method blank results are less than the laboratory reporting limit 0.10 pCi/L.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer	Tracer Recovery
Sewer Location # 2 UW-0002	Th-229	32%

The Th-228, Th-230 and Th-232 results for Sewer Location # 2 UW-0002 are qualified as non-detected estimated (UJ).

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batches 1223198, 1227018, 122319 and 1227019 are summarized below. The laboratory did not analyze a LCSD. The laboratory did analyze a laboratory duplicate pair for each isotope in each matrix.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

All LCS recoveries are within the QAPP acceptance criteria and the laboratory derived acceptance criteria. U-235, Th-228 and Th-232 are not LCS spiked isotopes.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No MS/MSDs were analyzed. The laboratory analyzed a LCS and laboratory duplicate samples for each sample matrix.

No results are qualified due to the absence of MS/MSD results.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H020470.

No results are qualified based upon the absence of field duplicate results.

Laboratory Duplicates

The laboratory analyzed sludge sample Sewer Location #1 US-0001 (F1H020470-001) as the laboratory duplicate pair for analytical batches 1223198 and 1223199. Results are summarized below.

Analyte	Sewer Location #1 US-0001			Sewer Location #1 US-0001 DUP		
	Result pCi/g	TPU	MDA	Result pCi/g	TPU	MDA
Th-228	0.270	0.073	0.031	0.220	0.066	0.031
Th-230	0.448	0.096	0.020	0.271	0.073	0.020
Th-232	0.224	0.065	0.021	0.220	0.065	0.021
U-234	3.55	0.387	0.027	3.15	0.354	0.020
U-235	0.201	0.067	0.014	0.195	0.067	0.025
U-238	3.72	0.401	0.011	3.33	0.370	0.020

TPU – Total Propagated Uncertainty

No sludge results are qualified based upon the laboratory duplicate precision.

The laboratory analyzed aqueous sample Sewer Location #1 UW-0001(F1H020470-002) as the laboratory duplicate pair for analytical batches 1227018 and 1227019. Results are summarized below.

Analyte	Sewer Location #1 UW-0001			Sewer Location #1 UW-0001 DUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
Th-228	-0.002 U	0.020	0.058	0.007 U	0.028	0.062
Th-230	0.026	0.030	0.023	0.018 U	0.026	0.025
Th-232	0.009 U	0.017	0.023	0.009 U	0.018	0.025
U-234	10.9	1.09	0.038	10.9	1.10	0.023
U-235	0.61	0.166	0.047	0.49	0.151	0.029
U-238	10.4	1.05	0.044	11.2	1.13	0.023

TPU – Total Propagated Uncertainty

No aqueous results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
Sewer Location #1 UW-0001	Th-230	0.026	0.030	0.023

The Th-230 result for Sewer Location #1 UW-0001 is qualified as estimated (J).

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for Lockport Sewer Location #1 UW-0001 DUP (F1H020470-002 DUP) Batch 1227019

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 377
U-232 Tracer Background Counts: 1.25
U-232 Tracer net counts: 375.75
Count Time: 240 minutes
Detector Efficiency: 28.11%

U-232 Tracer recovered = $(375.75)/(240)(0.02811) = 5.44$ DPM
U-232 Tracer % Recovery = $(5.44 \text{ DPM}/7.155 \text{ DPM}) * 100 = 77.8\%$. The laboratory reported 77.8%.

The Th-229 tracer recovery for Lockport Sewer Location #1 US-0001 (F1H020470-001) Batch 1223198

Th-229 Tracer concentration: 63.40 DPM/mL (DPM = disintegrations/minute)
Th-229 Tracer volume: 0.10 mL
Th-229 Tracer added: 6.340 DPM
Th-229 Tracer Gross Counts: 331
Th-229 Tracer Background Counts: 0.500
Th-229 Tracer net counts: 330.50
Count Time: 240 minutes
Detector Efficiency: 26.63%

Th-229 Tracer recovered = $(330.50)/(240)(0.02663) = 5.171$ DPM
Th-229 Tracer % Recovery = $(5.171 \text{ DPM}/6.34 \text{ DPM}) * 100 = 81.6\%$. The laboratory reported 81.8%.

The U-234 concentration for Lockport Sewer Location #1 UW-0001 DUP (F1H020470-002 DUP) Batch 1227019

U-234 gross counts: 1265
U-234 background counts: 0.000
U-234 net counts: 1265
Count time: 240 minutes
Detector Efficiency: 28.11%
Tracer Recovery: 77.85%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(1265)/(2.22)(1.000)(240)(0.2811)(0.7785)$ = 10.85 pCi/L. The laboratory reported 10.87 pCi/L

The Th-230 concentration for Lockport Sewer Location #1 US-0001 (F1H020470-001) Batch 1223198

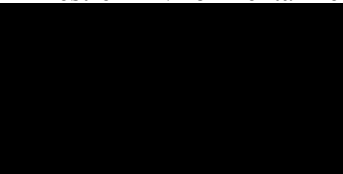
Th-230 gross counts: 104
Th-230 background counts: 0.250
Th-230 net counts: 103.75
Count time: 240 minutes
Detector Efficiency: 26.63%
Tracer Recovery: 81.85%
Sample mass: 2.001 grams
1 picocurie = 2.22 counts/minute

Th-230 Concentration: = $(103.75)/(2.22)(2.000)(240)(0.2663)(0.8185)$ = 0.447 pCi/g. The laboratory reported 0.448 pCi/g

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

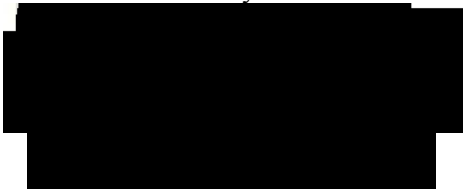
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Thorium and Uranium Isotope results

Guterl Specialty Steel
F1H020470

**Table 1 – Isotopic Thorium and Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
Sewer Location # 1 US-0001 Sludge	Sludge	A
Sewer Location # 1 US-0001 Sludge DUP	Sludge	A
Sewer Location # 1 UW-0001 Aqueous	Aqueous	J ¹ J ²
Sewer Location # 1 UW-0001 Aqueous DUP	Aqueous	A
Sewer Location # 2 US-0002 Sludge	Sludge	A
Sewer Location # 2 UW-0002 Aqueous	Aqueous	J ³

A - Accept all data without qualification.

J¹ - The Th-230 result is qualified as estimated (J) due to positive Th-230 method blank results.

J² - The Th-230 result is qualified as estimated (J). The reported Th-230 result is greater than the MDC and less than the 2 sigma uncertainty.

J³ - The Th-228, Th-230 and Th-232 results are qualified as non-detected estimated (UJ). The Th-239 tracer recovery is 32%.



November 03, 2011

██████████
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H090481
Site Name: Guterl Steel
Samples Collected: 08/04/2011
8 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04DMW240001 Tot	F1H090481-001	A04DMW240001 Diss	F1H090481-005
A04AMW230001 Tot	F1H090481-002	A04AMW230001 Diss	F1H090481-006
A04DMW713D0001 Tot	F1H090481-003	A04DMW713D0001 Diss	F1H090481-007
A04BMW190001 Tot	F1H090481-004	A04BMW190001 Diss	F1H090481-008
Tot- Total		Diss- Dissolved (field filtered)	

Dear ██████████,

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in

conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

All isotopic uranium results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

The condition upon receipt form states that the COC did not list the bottles for the filtered fractions.

The laboratory used an incorrect sample ID on the report forms. The laboratory has used the sample ID A04DMW230001. The COC does not list this sample. The correct sample ID is A04AMW230001. This validation has used the ID that is listed on the COC, A04AMW230001 Tot and A04AMW230001 Diss.

Sample Preservation and Holding Times

Samples were collected on 08/04/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.
No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1228169 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H170000-169B	0.013	0.022	0.035	1.2171
U-235	F1H170000-169B	-0.0024	0.0047	0.043	-0.9991
U-238	F1H170000-169B	-0.0038	0.0053	0.040	-1.4117

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R).

All tracer recoveries were within the acceptance criteria. No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1228169 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 100% and 99% respectively. U-235 is not a spiked isotope. All LCS recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H090481.

No results are qualified based upon the absence of field replicate results.

Laboratory Duplicates

Guterl steel sample A04AMW220001 Tot (F1H090496-02) associated with preparation batch 1228169 was analyzed as the laboratory duplicate sample. Results are summarized below.

Analyte	A04AMW220001 Tot			A04AMW220001 Tot DUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	24.34	2.33	0.034	24.30	2.30	0.062
U-235	1.03	0.27	0.043	1.27	0.293	0.040
U-238	24.83	2.37	0.034	23.20	2.21	0.032

TPU – Total Propagated Uncertainty

All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A04DMW240001 Tot (F1H090481-001)

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.155 DPM

U-232 Tracer net counts: 320

Count Time: 240 minutes

Detector Efficiency: 27.75%

U-232 Tracer recovered = $(320)/(240)(0.2775) = 4.804$ DPM

U-232 Tracer % Recovery = $(4.804 \text{ DPM}/7.155 \text{ DPM}) * 100 = 67.14\%$. The laboratory reported 67.145%.

The U-238 concentration for A04DMW240001 Tot (F1H090481-001)

U-238 net counts: 1254

Count time: 240 minutes

Detector Efficiency: 27.75%

Tracer Recovery: 67.15%

Sample volume: 1.000 Liter

1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(1254)/(2.22)(1.000)(240)(0.2775)(0.6715) = 12.6$ pCi/L. The laboratory reported 12.6 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

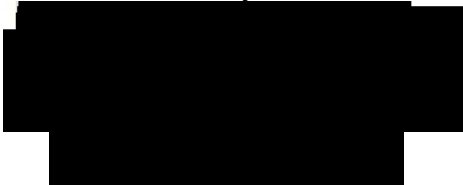
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H090481

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04DMW240001 Tot	Aqueous	A
A04AMW230001 Tot	Aqueous	A
A04DMW713D0001 Tot	Aqueous	A
A04BMW190001 Tot	Aqueous	A
A04DMW240001 Diss	Aqueous	A
A04AMW230001 Diss	Aqueous	A
A04DMW713D0001 Diss	Aqueous	A
A04BMW190001 Diss	Aqueous	A

A - Accept all data without qualification.



October 12, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H090481
Site Name: Guterl Steel
Samples Collected: 08/04/2011
8 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04DMW240001 Tot	F1H090481-001	A04DMW240001 Diss	F1H090481-005
A04AMW230001 Tot	F1H090481-002	A04AMW230001 Diss	F1H090481-006
A04DMW713D0001 Tot	F1H090481-003	A04DMW713D0001 Diss	F1H090481-007
A04BMW190001 Tot	F1H090481-004	A04BMW190001 Diss	F1H090481-008
Tot- Total		Diss- Dissolved (field filtered)	

Dear

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
X		ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The ICP-MS serial dilution % difference is 18.4%. Uranium results for A04DMW240001 Tot, A04AMW230001 Tot, A04DMW713D0001 Tot, A04BMW190001Tot, A04DMW240001 Diss, A04AMW230001 Diss, A04DMW713D0001 Diss and A04BMW190001 Diss are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased low.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total results are at concentrations greater than the dissolved sample results.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The condition upon receipt form states that the COC did not list the bottles for the filtered fractions.

The laboratory used an incorrect sample ID on the report forms. The laboratory has used the sample ID A04DMW230001. The COC does not list this sample. The correct sample ID is A04AMW230001. This validation has used the ID that is listed on the COC, A04AMW230001 Tot and A04AMW230001 Diss.

Sample Preservation and Holding Times

Samples were collected on 08/04/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time ICP-MS analysis is 180 days. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery is 94.4%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04AMW220001 Tot was the MS/MSD pair associated with preparation batch 1222061. These sample results were reported in laboratory data package F1H090496. The MS/MSD recoveries are 105.2% and 108.2% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04AMW220001 Tot, reported in laboratory data package F1H090496, was the MS/MSD pair associated with preparation batch 1222061. The laboratory duplicate RPD is 2.6%

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H090481.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Serial dilution sample A04AMW220001 Tot is associated with preparation batch 1222061. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	73.6	87.2	18.4	J

The uranium results for A04DMW240001 Tot, A04AMW230001 Tot, A04DMW713D0001 Tot, A04BMW190001Tot, A04DMW240001 Diss, A04AMW230001 Diss, A04DMW713D0001 Diss and A04BMW190001 Diss are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased low.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution. The laboratory reported results between the method detection limit (MDL) and reporting limit (RL) as estimated (J).

All field sample results are at concentrations greater than the RL.

All total and dissolve fraction results agree within 20%.

Calculations

Sample A04AMW22001, reported in laboratory data package F1H090496, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 73.6 ug/L

MS uranium concentration: 1130 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1130 \text{ ug/L} - 73.6 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 105.7\%$. The laboratory reported 105.2%.

Serial Dilution:

Sample uranium concentration: 73.6 ug/L

Serial dilution concentration of the 5X dilution: 87.2 ug/L

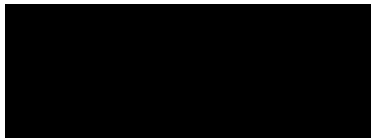
Serial Dilution % Difference = Absolute value $((73.6 \text{ ug/L} - 87.2 \text{ ug/L}) / (73.6 \text{ ug/L})) * 100 = 18.5\%$.
The laboratory reported 18.4%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

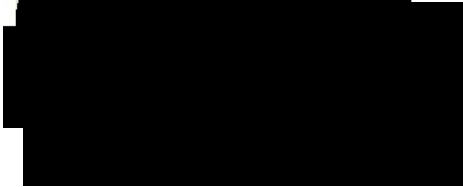
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H090481

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04DMW240001 Tot	Aqueous	J ¹
A04AMW230001 Tot	Aqueous	J ¹
A04DMW713D0001 Tot	Aqueous	J ¹
A04BMW190001 Tot	Aqueous	J ¹
A04DMW240001 Diss	Aqueous	J ¹
A04AMW230001 Diss	Aqueous	J ¹
A04DMW713D0001 Diss	Aqueous	J ¹
A04BMW190001 Diss	Aqueous	J ¹

A - Accept all data.

J¹ - The uranium result is qualified as estimated (J). The ICP-MS serial dilution %D exceeds 10%. The reported result may be biased low.



October 04, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H090496
Site Name: Guterl Steel
Samples Collected: 08/05/2011
6 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04AMW603D0001 Tot	F1H090496-001	A04AMW603D0001 Diss	F1H090499-004
A04AMW220001 Tot	F1H090496-002	A04AMW220001 Diss	F1H090496-005
A04AMW220001 DUP	F1H090496-002X	A04AMW220001 DUP	F1H090496-005X
A04BMW180001 Tot	F1H090496-003	A04BMW180001 Diss	F1H090496-006
Tot- Total	Diss- Dissolved (field filtered)	DUP-Lab Duplicate	

Dear [REDACTED],

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in

conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

All isotopic uranium results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/05/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1228169 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H170000-169B	0.013	0.022	0.035	1.2171
U-235	F1H170000-169B	-0.0024	0.0047	0.043	-0.9991
U-238	F1H170000-169B	-0.0038	0.0053	0.040	-1.4117

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 1220942 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H170000-042B	-0.006	0.007	0.047	0.047
U-235	F1H170000-042B	-0.002	0.005	0.046	0.046
U-238	F1H170000-042B	0.020	0.028	0.043	0.043

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R).

All tracer recoveries were within the acceptance criteria. No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1228169 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 100% and 99% respectively. U-235 is not a spiked isotope. All LCS recoveries are within the QAPP acceptance criteria; 73-131%.

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1229042 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 99.7% and 103% respectively. U-235 is not a spiked isotope. All LCS recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H090496.

No results are qualified based upon the absence of field replicate results.

Laboratory Duplicates

Guterl steel sample A04AMW220001Tot associated with preparation batch 1228169 was analyzed as the laboratory duplicate sample. Results are summarized below.

Analyte	A04AMW220001 Tot			A04AMW220001 Tot DUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	24.34	2.33	0.034	24.30	2.30	0.062
U-235	1.03	0.27	0.043	1.27	0.293	0.040
U-238	24.83	2.37	0.034	23.20	2.21	0.032

TPU – Total Propagated Uncertainty

All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Guterl steel sample A04AMW220001 Dissolved associated with preparation batch 1220942 was analyzed as the laboratory duplicate sample. Results are summarized below.

Analyte	A04AMW220001 Dissolved			A04AMW220001 Dissolved DUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	21.58	2.06	0.088	23.09	2.18	0.058
U-235	1.05	0.26	0.037	1.22	0.28	0.062
U-238	21.20	2.03	0.030	22.69	2.15	0.069

TPU – Total Propagated Uncertainty

All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

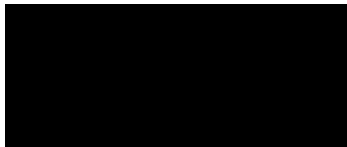
Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

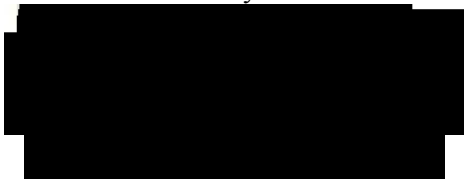
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H090496

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04AMW603D0001 Tot	Aqueous	A
A04AMW220001 Tot	Aqueous	A
A04AMW220001 DUP	Aqueous	A
A04BMW180001 Tot	Aqueous	A
A04AMW603D0001 Diss	Aqueous	A
A04AMW220001 Diss	Aqueous	A
A04AMW220001 DUP	Aqueous	A
A04BMW180001 Diss	Aqueous	A

A - Accept all data.



October 04, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H090496
Site Name: Guterl Steel
Samples Collected: 08/05/2011
6 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04AMW603D0001 Tot	F1H090496-001	A04AMW603D0001 Diss	F1H090496-004
A04AMW220001 Tot	F1H090496-002	A04AMW220001 Diss	F1H090496-005
A04BMW180001 Tot	F1H090496-003	A04BMW180001 Diss	F1H090496-006
Tot- Total		Diss- Dissolved (field filtered)	

Dear

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
X		ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The ICP-MS serial dilution % differences are 18.4% and 35.5%. Uranium results for A04AMW603D0001 Tot, A04AMW220001 Tot, A04BMW180001 Tot, A04AMW603D0001 Diss, A04AMW220001 Diss and A04BMW180001 Diss are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased low.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total results are at concentrations greater than the dissolved sample results.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/05/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery is 94.4%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04AMW220001 Tot was the MS/MSD pair associated with preparation batch 1222061. The MS/MSD recoveries are 105.2% and 108.2% respectively.

Sample A04AMW220001 Diss was the MS/MSD pair associated with preparation batch 1222062. The MS/MSD recoveries are 106.1% and 106.5% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04AMW220001 Tot was the MS/MSD pair associated with preparation batch 1222061. The RPD is 2.6%

Sample A04AMW220001 Diss was the MS/MSD pair associated with preparation batch 1222062. The RPD is 0.31%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H090496.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%. Two LCS samples were reported; one for preparation batch 1222061 and one for preparation batch 1222062.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Two serial dilution samples were analyzed. Serial dilution sample A04AMW220001 Tot is associated with preparation batch 1222061. Serial dilution sample A04AMW220001 Diss is associated with preparation batch 1222062. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	73.6	87.2	18.4	J
Uranium	65.1	88.3	35.6	J

Uranium results for A04AMW603D0001 Tot, A04AMW220001 Tot, A04BMW180001 Tot, A04AMW603D0001 Diss, A04AMW220001 Diss and A04BMW180001 Diss are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased low.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution. The laboratory reported results between the method detection limit (MDL) and reporting limit (RL) as estimated (J).

All field sample results are at concentrations greater than the RL.

The laboratory included supporting documentation Method Detection Limits Form 10, Interement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H090496

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04AMW603D0001 Tot	Aqueous	J ¹
A04AMW220001 Tot	Aqueous	J ¹
A04BMW180001 Tot	Aqueous	J ¹
A04AMW603D0001 Diss	Aqueous	J ¹
A04AMW220001 Diss	Aqueous	J ¹
A04BMW180001 Diss	Aqueous	J ¹

A - Accept all data.

J¹ - The uranium result is qualified as estimated (J). The ICP-MS serial dilution %D exceeds 10%. The reported result may be biased low.



September 30, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H090504
Site Name: Guterl Steel
Samples Collected: 08/08/2011
10 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A02MW110001 Tot	F1H090504-001	A02MW110001 Diss	F1H090504-006
A02MW090001 Tot	F1H090504-002	A02MW090001 Diss	F1H090504-007
A02MW080001 Tot	F1H090504-003	A02MW080001 Diss	F1H090504-008
SEEP 01 Tot	F1H090504-004	SEEP 01 Diss	F1H090504-009
SEEP 02 Tot	F1H090504-005	SEEP 02 Diss	F1H090504-0010
Tot- Total		Diss- Dissolved (field filtered)	

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the Multi-

Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
X		Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The U-232 tracer recovery for sample A02MW080001 Total is 37.4%. The U-234 and U-238 results for A02MW080001 Total are qualified as estimated (J) and the U-235 result for A02MW08001 Total is qualified as non-detected estimated (UJ).

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/08/2011. According to the COC, samples were received on ice at 2° C. The temperature requirement is 4° C ± 2° C. No results are qualified based upon this deviation.

The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H170000-042B	-0.006	0.007	0.047	0.047
U-235	F1H170000-042B	-0.002	0.005	0.046	0.046
U-238	F1H170000-042B	0.020	0.028	0.043	0.043

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). The U-232 tracer recovery for sample A02MW080001 Total is 37.4%. The U-234 and U-238 results for A02MW080001 Total are qualified as estimated (J). The U-235 result for A02MW080001 Total is qualified as non-detected estimated (UJ).

All other tracer recoveries were within the laboratory derived acceptance criteria. No other results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries were 99.7% and 103% respectively. U-235 is not a spiked isotope.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H090504.

No results are qualified based upon the absence of field replicate results.

Laboratory Duplicates

Guterl steel sample A04AMW220001 Dissolved (F1H090496-005) reported in laboratory data package F1H090496 was analyzed as the laboratory duplicate sample. Results are summarized below.

Analyte	A04AMW220001 Dissolved			A04AMW220001 Dissolved DUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	21.58	2.06	0.088	23.09	2.18	0.058
U-235	1.05	0.26	0.037	1.22	0.28	0.062
U-238	21.20	2.03	0.030	22.69	2.15	0.069

TPU – Total Propagated Uncertainty

All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ) based upon tracer recoveries. No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

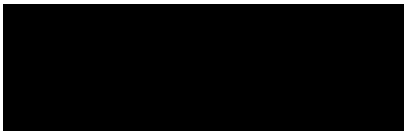
Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

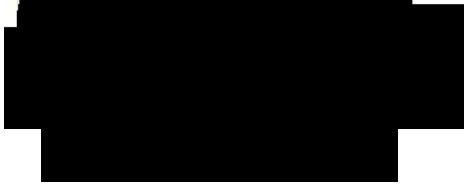
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H090504

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A02MW110001 Tot	Aqueous	A
A02MW090001 Tot	Aqueous	A
A02MW080001 Tot	Aqueous	J ¹ J ²
SEEP 01 Tot	Aqueous	A
SEEP 02 Tot	Aqueous	A
A02MW110001 Diss	Aqueous	A
A02MW090001 Diss	Aqueous	A
A02MW080001 Diss	Aqueous	A
SEEP 01 Diss	Aqueous	A
SEEP 02 Diss	Aqueous	A

A - Accept all data.

J¹- The U-234 and U-238 results are qualified as estimated (J). The U-232 tracer recovery is less than 40%.

J²- The U-235 result is qualified as non-detected estimated (UJ). The U-232 tracer recovery is less than 40%.



September 30, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H090504
Site Name: Guterl Steel
Samples Collected: 08/08/2011
10 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A02MW110001 Tot	F1H090504-001	A02MW110001 Diss	F1H090504-006
A02MW090001 Tot	F1H090504-002	A02MW090001 Diss	F1H090504-007
A02MW080001 Tot	F1H090504-003	A02MW080001 Diss	F1H090504-008
SEEP 01 Tot	F1H090504-004	SEEP 01 Diss	F1H090504-009
SEEP 02 Tot	F1H090504-005	SEEP 02 Diss	F1H090504-010
Tot- Total		Diss- Dissolved (field filtered)	

Dear [REDACTED],

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 6020A (acid digestion) Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
X		ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The ICP-MS serial dilution % difference is 35.5%. Uranium results for A02MW110001 Total, A02MW090001 Total, A02MW080001 Total, SEEP 01 Total, SEEP 02 Total, A02MW110001 Dissolved, A02MW090001 Dissolved, A02MW080001 Dissolved, SEEP 01 Dissolved and SEEP 02 Dissolved are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased low.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total results are detected at concentrations greater than the dissolved sample results.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/08/2011. According to the COC, samples were received on ice at 2° C. The temperature requirement is 4° C \pm 2° C. No results are qualified based upon sample receipt temperatures.

The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery is 94.4%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	LOQ	Blank Conc
None					

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

The MS/MSD sample that was analyzed for total and dissolved uranium was reported in laboratory data package F1H090496. The Shaw sample ID is A04AMW220001 Dissolved. The MS/MSD recoveries were 106.1% and 106.5% respectively and the duplicate relative percent difference is 0.3%. The QAPP acceptance criteria are recoveries between 75-125% and RPDs $\leq 30\%$.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance %RPD for laboratory duplicate samples is $\leq 30\%$.

The MS/MSD sample that was analyzed for total and dissolved uranium was reported in laboratory data package F1H090496. The Shaw sample ID is A04AMW220001 Dissolved. The MS/MSD duplicate relative percent difference is 0.3%. The QAPP acceptance criterion are RPDs $\leq 30\%$.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H090504.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP and ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04AMW220001 Dissolved reported in laboratory data package F1H090496 was analyzed as the ICP-MS serial dilution sample ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	65.1	88.3	35.6	J

Uranium results for A02MW110001 Total, A02MW090001 Total, A02MW080001 Total, SEEP 01 Total, SEEP 02 Total, A02MW110001 Dissolved, A02MW090001 Dissolved, A02MW080001 Dissolved, SEEP 01 Dissolved and SEEP 02 Dissolved are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased low.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution. The laboratory reported results between the method detection limit (MDL) and reporting limit (RL) as estimated (J).

All field sample results are at concentrations greater than the RL.

The laboratory included supporting documentation Method Detection Limits Form 10, Interement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

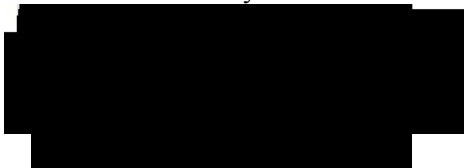
Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H090504

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A02MW110001 Tot	Aqueous	J ¹
A02MW090001 Tot	Aqueous	J ¹
A02MW080001 Tot	Aqueous	J ¹
SEEP 01 Tot	Aqueous	J ¹
SEEP 02 Tot	Aqueous	J ¹
A02MW110001 Diss	Aqueous	J ¹
A02MW090001 Diss	Aqueous	J ¹
A02MW080001 Diss	Aqueous	J ¹
SEEP 01 Diss	Aqueous	J ¹
SEEP 02 Diss	Aqueous	J ¹

A - Accept all data.

J¹- The uranium result is qualified as estimated (J). The ICP-MS serial dilution %D exceeds 10%. The reported result may be biased low.



October 08, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H100419
Site Name: Guterl Steel
Samples Collected: 08/09/2011
6 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
MW705D0001 Tot	F1H100419-001	MW705D0001 Diss	F1H100419-004
MW705DD0001 Tot	F1H100419-002	MW705DD0001 Diss	F1H100419-005
A04DMW711D0001 Tot	F1H100419-003	A04DMW711D0001 Diss	F1H100419-006
Tot- Total	Diss- Dissolved (field filtered)	DUP-Lab Duplicate	

Dear [REDACTED],

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

All isotopic uranium results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/09/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1220942 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H170000-042B	-0.006	0.007	0.047	0.047
U-235	F1H170000-042B	-0.002	0.005	0.046	0.046
U-238	F1H170000-042B	0.020	0.028	0.043	0.043

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R).

All tracer recoveries were within the acceptance criteria. No other results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1229042 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 99.7% and 103% respectively. U-235 is not a spiked isotope. All LCS recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H100419.

No results are qualified based upon the absence of field replicate results.

Laboratory Duplicates

Guterl steel sample A04AMW220001 Dissolved associated with preparation batch 1220942 was analyzed as the laboratory duplicate sample. Results are summarized below.

Analyte	A04AMW220001 Dissolved			A04AMW220001 Dissolved DUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	21.58	2.06	0.088	23.09	2.18	0.058
U-235	1.05	0.26	0.037	1.22	0.28	0.062
U-238	21.20	2.03	0.030	22.69	2.15	0.069

TPU – Total Propagated Uncertainty

All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.

[Redacted Signature]

Reviewed By:

[Redacted Signature]

Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H100419

Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary

Sample ID	Matrix	Qualifier
MW705D0001 Tot	Aqueous	A
MW705DD0001 Tot	Aqueous	A
A04DMW711D0001 Tot	Aqueous	A
MW705D0001 Diss	Aqueous	A
MW705DD0001 Diss	Aqueous	A
A04DMW711D0001 Diss	Aqueous	A

A - Accept all data without qualification.



October 07, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H100419
Site Name: Guterl Steel
Samples Collected: 08/09/2011
6 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
MW705D0001 Tot	F1H100419-001	MW705D0001 Diss	F1H100419-004
MW705DD0001 Tot	F1H100419-002	MW705DD0001 Diss	F1H100419-005
A04DMW711D0001 Tot	F1H100419-003	A04DMW711D0001 Diss	F1H100419-006
Tot- Total	Diss- Dissolved (field filtered)	FDUP- Field Duplicate	

Dear [REDACTED]

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
X		Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The laboratory has reported positive results between the method detection limit (MDL) and RL. The uranium results for MW705D0001 and MW705DD0001Diss are qualified as estimated (J). The reported results are between the MDL and RL.

All other field sample results are detected at concentrations greater than the RL. All total results are at concentrations greater than the dissolved sample results.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/09/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recoveries were 97.4% and 93.7%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample MW705D0001 Tot was analyzed as the MS/MSD pair associated with preparation batch 1223087. The MS/MSD recoveries are 112.4% and 113% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample MW705D0001 Tot was analyzed as the MS/MSD pair associated with preparation batch 1223087. The MS/MSD RPD is 0.5%

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H100419.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample MW705D0001Tot was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium results for MW705D0001Tot and MW705DD0001Diss are qualified as estimated (J). The reported results are between the MDL and RL.

The laboratory included supporting documentation Method Detection Limits Form 10, Interement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.

[REDACTED]

Validator

Reviewed By:

[REDACTED]

Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H100419

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
MW705D0001 Tot	Aqueous	J ¹
MW705DD0001 Tot	Aqueous	A
A04DMW711D0001 Tot	Aqueous	A
MW705D0001 Diss	Aqueous	A
MW705DD0001 Diss	Aqueous	J ¹
A04DMW711D0001 Diss	Aqueous	A

A - Accept all data.

J¹- The uranium result is qualified as estimated (J). The reported result is between the MDL and RL.



November 03, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H110460
Site Name: Guterl Steel
Samples Collected: 08/10/2011
14 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04MW604D0001 Diss	F1H110460-001	A04MW604D0001 Tot	F1H110460-008
A04DMW709DD0001 Diss	F1H110460-002	A04DMW709D0001 Tot	F1H110460-009
A04BMW605D0001 Diss FD#1	F1H110460-003	A04BMW605D0001 Tot FD#3	F1H110460-010
A04BMW260001 Diss	F1H110460-004	A04BMW260001 Tot	F1H110460-011
A04BMW9000 Diss FD#1	F1H110460-005	A04BMW9000 Tot FD#3	F1H110460-012
A04BMW9001 Diss FD#2	F1H110460-006	A04BMW9001 Tot FD#4	F1H110460-013
A04DMW704DD0001 Diss FD#2	F1H110460-007	A04DMW704DD0001 Tot FD#4	F1H110460-014

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

[REDACTED],
A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL)

Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
X		Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The U-234, U-235 and U-238 results for A04BMW605D0001 Diss, A04BMW9000 Diss and A04BMW9000 Tot are qualified as estimated (J). The U-232 tracer recoveries for these samples are less than 40%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/10/2011. The condition upon receipt form indicates that aqueous metal samples were not properly preserved. The laboratory noted that the total and dissolved fractions for samples A04DMW709DD0001 and A04MW604D0001 were received at pH 7. The laboratory acidified the samples to a pH < 2. Samples sat for more than 24 hours at pH 2 before preparation.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1228169 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H190000-145B	0.005	0.015	0.032	0.727
U-235	F1H190000-145B	0.000	0.009	0.024	0.000
U-238	F1H190000-145B	0.005	0.015	0.032	0.727

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries

less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
A04BMW605D0001 Diss	37%
A04BMW9000 Diss	35%
A04BMW9000 Tot	38%

The U-234, U-235 and U-238 results for A04BMW605D0001 Diss, A04BMW9000 Diss and A04BMW9000 Tot are qualified as estimated (J).

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1231145 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 109% and 103% respectively. The U-234 and U-238 LCSD recoveries are 95.2% and 101% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Four field duplicate pairs are reported in laboratory data package F1H110460; A04BMW605D0001 Diss/A04BMW9000 Diss, A04BMW9001 Diss/A04DMW704DD0001 Diss, A04BMW605D0001 Tot/A04BMW9000 Tot and A04BMW704DD0001 Tot/A04BMW9001 Tot. The field duplicate RPDs are less than 50%.

No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The laboratory analyzed a LCS/LCSD pair rather than a laboratory duplicate sample. Results are summarized below.

Analyte	F1H190000-145C LCS			F1H190000-145L LCS		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.55	0.47	0.02	3.11	0.40	0.02
U-235	0.12	0.076	0.052	0.20	0.088	0.025
U-238	3.48	0.46	0.06	3.41	0.43	0.02

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A04DMW704DD0001 Diss (F1H110460-007)

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer net counts: 370.25
Count Time: 240 minutes
Detector Efficiency: 29.30%

U-232 Tracer recovered = $(370.25)/(240)(0.2930) = 5.265$ DPM
U-232 Tracer % Recovery = $(5.265 \text{ DPM}/7.155 \text{ DPM}) * 100 = 73.58\%$. The laboratory reported 73.61%.

The U-234 concentration for A04DMW704DD0001 Diss (F1H110460-007)

U-234 gross counts: 1237
U-234 background counts: 1.500
U-234 net counts: 1235.5
Count time: 240 minutes
Detector Efficiency: 29.30%
Tracer Recovery: 73.61%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(1235.5)/(2.22)(1.000)(240)(0.2930)(0.7361) = 10.75$ pCi/L. The laboratory reported 10.77 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

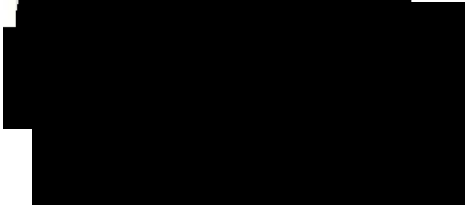
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H110460

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04MW604D0001 Diss	Aqueous	A
A04DMW709DD0001 Diss	Aqueous	A
A04BMW605D0001 Diss FD#1	Aqueous	J ¹
A04BMW260001 Diss	Aqueous	A
A04BMW9000 Diss FD#1	Aqueous	J ¹
A04BMW9001 Diss FD#2	Aqueous	A
A04DMW704DD0001 Diss FD#2	Aqueous	A
A04MW604D0001 Tot	Aqueous	A
A04DMW709D0001 Tot	Aqueous	A
A04BMW605D0001 Tot FD#3	Aqueous	A
A04BMW260001 Tot	Aqueous	A
A04BMW9000 Tot FD#3	Aqueous	J ¹
A04BMW9001 Tot FD#4	Aqueous	A
A04DMW704DD0001 Tot FD#4	Aqueous	A

A - Accept all data without qualification.

J¹ - The U-234, U-235 and U-238 results are qualified as estimated (J). The U-232 tracer recovery is less than 40%.



November 03, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H110460
Site Name: Guterl Steel
Samples Collected: 08/10/2011
14 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04MW604D0001 Diss	F1H110460-001	A04MW604D0001 Tot	F1H110460-008
A04DMW709DD0001 Diss	F1H110460-002	A04DMW709D0001 Tot	F1H110460-009
A04BMW605D0001 Diss FD#1	F1H110460-003	A04BMW605D0001 Tot FD#3	F1H110460-010
A04BMW260001 Diss	F1H110460-004	A04BMW260001 Tot	F1H110460-011
A04BMW9000 Diss FD#1	F1H110460-005	A04BMW9000 Tot FD#3	F1H110460-012
A04BMW9001 Diss FD#2	F1H110460-006	A04BMW9001 Tot FD#4	F1H110460-013
A04DMW704DD0001 Diss FD#2	F1H110460-007	A04DMW704DD0001 Tot FD#4	F1H110460-014

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED],

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved

uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

All results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/10/2011. The condition upon receipt form indicates that aqueous metal samples were not properly preserved. The laboratory noted that the total and dissolved fractions for samples A04DMW709DD0001 and A04MW604D0001 were received at pH 7. The laboratory acidified the samples to a pH < 2. Samples sat for more than 24 hours at pH 2 before preparation.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 96.8%

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04MW604D0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1224017. The MS/MSD recoveries are 102.5% and 102.3% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04MW604D0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1224017. The MS/MSD RPD is 0.2%

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Four field duplicate pairs are reported in laboratory data package F1H110460; A04BMW605D0001 Diss/A04BMW9000 Diss, A04BMW9001 Diss/A04DMW704DD0001 Diss, A04BMW605D0001 Tot/A04BMW9000 Tot and A04BMW704DD0001Tot/A04BMW9001Tot. The field duplicate RPDs are 0.1%, 2.2%, 1.9% and 5.0% respectively.

No results are qualified based upon the field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04MW604D0001 Diss was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

Calculations

Sample A04MW604D0001 Diss, reported in laboratory data package F1H110460, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 101 ug/L

MS uranium concentration: 1130 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1130 \text{ ug/L} - 101 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 102.9\%$. The laboratory reported 102.5%.

Serial Dilution:

Sample uranium concentration: 101 ug/L

Serial dilution concentration of the 5X dilution: 101 ug/L

Serial Dilution % Difference = Absolute value $((101 \text{ ug/L} - 101 \text{ ug/L}) / (101 \text{ ug/L})) * 100 = 0.1\%$.

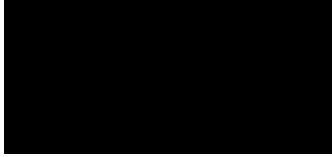
The laboratory reported 0.12%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

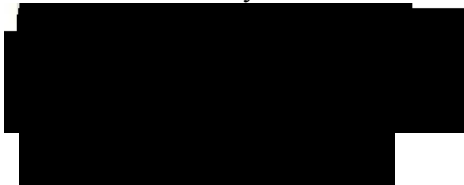
Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H110460

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04MW604D0001 Diss	Aqueous	A
A04DMW709DD0001 Diss	Aqueous	A
A04BMW605D0001 Diss FD#1	Aqueous	A
A04BMW260001 Diss	Aqueous	A
A04BMW9000 Diss FD#1	Aqueous	A
A04BMW9001 Diss FD#2	Aqueous	A
A04DMW704DD0001 Diss FD#2	Aqueous	A
A04MW604D0001 Tot	Aqueous	A
A04DMW709D0001 Tot	Aqueous	A
A04BMW605D0001 Tot FD#3	Aqueous	A
A04BMW260001 Tot	Aqueous	A
A04BMW9000 Tot FD#3	Aqueous	A
A04BMW9001 Tot FD#4	Aqueous	A
A04DMW704DD0001 Tot FD#4	Aqueous	A

A - Accept all data without qualification.



November 03, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H120447
Site Name: Guterl Steel
Samples Collected: 08/11/2011
10 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04MW602D0001 Diss	F1H120447-001	A04MW602D0001 Tot	F1H120447-006
A04MW702DD0001 Diss	F1H120447-002	A04MW702DD0001 Tot	F1H120447-007
A03AMW13D0001 Diss	F1H120447-003	A03AMW13D0001 Tot	F1H120447-008
A04DMW708DD0001 Diss FD	F1H120447-004	A04DMW708DD0001 Tot FD	F1H120447-009
A04DMW9002 Diss FD	F1H120447-005	A04DMW9002 Tot FD	F1H120447-010

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

[REDACTED]
A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

All isotopic uranium results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/11/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1231165 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H190000-165B	0.013	0.021	0.034	1.217
U-235	F1H190000-165B	0.009	0.018	0.025	0.999
U-238	F1H190000-165B	-0.004	0.005	0.039	-1.412

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1231165 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 91% and 98% respectively. The U-234 and U-238 LCSD recoveries are 100% and 106% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Two field duplicate pairs are reported in laboratory data package F1H120447; A04DMW708DD0001 Tot/A04DMW9002 Tot and A04DMW708DD0001 Diss/A04DMW9002 Diss. The field duplicate RPDs are less than 50%.

No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The U-232 tracer recoveries for these samples are less than 40%.

Analyte	F1H190000-165C			F1H190000-165L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	2.97	0.40	0.048	3.27	0.44	0.046
U-235	0.14	0.077	0.027	0.11	0.069	0.029
U-238	3.32	0.43	0.037	3.60	0.46	0.023

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A04MW602D0001 Diss (F1H120447-001)

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.155 DPM

U-232 Tracer Gross Counts: 245

U-232 Tracer Background Counts: 0.00

U-232 Tracer net counts: 245

Count Time: 240 minutes

Detector Efficiency: 27.40%

U-232 Tracer recovered = $(245)/(240)(0.2740) = 3.726$ DPM

U-232 Tracer % Recovery = $(3.726 \text{ DPM}/7.155 \text{ DPM}) * 100 = 52.07\%$. The laboratory reported 52.09%.

The U-238 concentration for A04MW602D0001 Diss (F1H120447-001)

U-238 gross counts: 2605

U-238 background counts: 0.25

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

U-238 net counts: 2604.75
Count time: 240 minutes
Detector Efficiency: 27.40%
Tracer Recovery: 52.09%
Sample volume: 0.930 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(2604.75)/(2.22)(0.930)(240)(0.2740)(0.5209)$ = 36.83 pCi/L. The laboratory reported 36.82 pCi/L

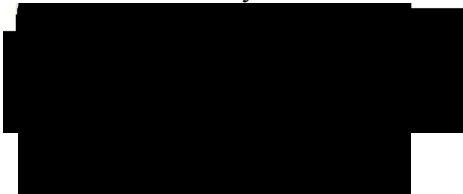
Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H120447

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04MW602D0001 Diss	Aqueous	A
A04MW702DD0001 Diss	Aqueous	A
A03AMW13D0001 Diss	Aqueous	A
A04DMW708DD0001 Diss FD	Aqueous	A
A04DMW9002 Diss FD	Aqueous	A
A04MW602D0001 Tot	Aqueous	A
A04MW702DD0001 Tot	Aqueous	A
A03AMW13D0001 Tot	Aqueous	A
A04DMW708DD0001 Tot FD	Aqueous	A
A04DMW9002 Tot FD	Aqueous	A

A - Accept all data without qualification.



November 03, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H120447
Site Name: Guterl Steel
Samples Collected: 08/11/2011
10 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04MW602D0001 Diss	F1H120447-001	A04MW602D0001 Tot	F1H120447-006
A04MW702DD0001 Diss	F1H120447-002	A04MW702DD0001 Tot	F1H120447-007
A03AMW13D0001 Diss	F1H120447-003	A03AMW13D0001 Tot	F1H120447-008
A04DMW708DD0001 Diss FD	F1H120447-004	A04DMW708DD0001 Tot FD	F1H120447-009
A04DMW9002 Diss FD	F1H120447-005	A04DMW9002 Tot FD	F1H120447-010

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data*

Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

All results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/11/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 96.8%

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the MS/MSD pair associated with preparation batch 1227138. The MS/MSD recoveries are 106.9% and 108.6% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the MS/MSD pair associated with preparation batch 1227138. The MS/MSD RPD is 1.42%

No results are qualified based upon laboratory duplicate precision.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Two field duplicate pairs are reported in laboratory data package F1H120447; A04DMW708DD0001 Tot/A04DMW9002 Tot and A04DMW708DD0001 Diss/A04DMW9002 Diss. The field duplicate RPDs are 0.4% and 0.9% respectively.

No results are qualified based upon the field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

Calculations

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 112 ug/L

MS uranium concentration: 1180 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1180 \text{ ug/L} - 112 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 106.8\%$. The laboratory reported 106.9%.

Serial Dilution:

Sample uranium concentration: 112 ug/L

Serial dilution concentration of the 5X dilution: $21.6 \text{ ug/L} * 5 = 108 \text{ ug/L}$

Serial Dilution % Difference = Absolute value $((112 \text{ ug/L} - 108 \text{ ug/L}) / (112 \text{ ug/L})) * 100 = 3.5\%$.
The laboratory reported 3.4%.

The laboratory included supporting documentation Method Detection Limits Form 10, Inter-element Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.


Validator

Reviewed By:


Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H120447

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04MW602D0001 Diss	Aqueous	A
A04MW702DD0001 Diss	Aqueous	A
A03AMW13D0001 Diss	Aqueous	A
A04DMW708DD0001 Diss FD	Aqueous	A
A04DMW9002 Diss FD	Aqueous	A
A04MW602D0001 Tot	Aqueous	A
A04MW702DD0001 Tot	Aqueous	A
A03AMW13D0001 Tot	Aqueous	A
A04DMW708DD0001 Tot FD	Aqueous	A
A04DMW9002 Tot FD	Aqueous	A

A - Accept all data without qualification.



November 03, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H130407
Site Name: Guterl Steel
Samples Collected: 08/12/2011
10 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04BMW250001 Tot FD	F1H130407-001	A04BMW250001 Diss FD	F1H130407-006
A02MW060001 Tot	F1H130407-002	A02MW060001 Diss	F1H130407-007
A02MW100001 Tot	F1H130407-003	A02MW100001 Diss	F1H130407-008
A02MW070001 Tot	F1H130407-004	A02MW070001 Diss	F1H130407-009
A04BMW9003 Tot FD	F1H130407-005	A04BMW9003 Diss FD	F1H130407-010

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in

conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
X		Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	X	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The U-234, U-235 and U-238 results for A04BMW250001 Tot and A04BMW250001 Diss are qualified as estimated (J). The U-232 tracer recoveries for these samples are less than 40%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/12/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1231165 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H190000-165B	0.013	0.021	0.034	1.217
U-235	F1H190000-165B	0.009	0.018	0.025	0.999
U-238	F1H190000-165B	-0.004	0.005	0.039	-1.412

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
A04BMW250001 Tot	38.8%
A04BMW250001 Diss	36.6%

The U-234, U-235 and U-238 results for A04BMW250001 Tot and A04BMW250001 Diss are qualified as estimated (J).

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1231165 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 91% and 98% respectively. The U-234 and U-238 LCSD recoveries are 100% and 106% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Two field duplicate pairs are reported in laboratory data package F1H130407; A04BMW250001 Tot/A04BMW9003 Tot and A04BMW250001 Diss/A04BMW9003 Diss. The field duplicate RPDs are less than 50%.

No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The U-232 tracer recoveries for these samples are less than 40%.

Analyte	F1H190000-165C			F1H190000-165L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	2.97	0.40	0.048	3.27	0.44	0.046
U-235	0.14	0.077	0.027	0.11	0.069	0.029
U-238	3.32	0.43	0.037	3.60	0.46	0.023

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A02MW060001 Diss (F1H130407-007)

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.155 DPM

U-232 Tracer Gross Counts: 329

U-232 Tracer Background Counts: 0.25

U-232 Tracer net counts: 328.75

Count Time: 240 minutes

Detector Efficiency: 27.08%

U-232 Tracer recovered = $(328.75)/(240)(0.2708) = 5.058$ DPM

U-232 Tracer % Recovery = $(5.058 \text{ DPM}/7.155 \text{ DPM}) * 100 = 70.70\%$. The laboratory reported 70.70%.

The U-238 concentration for A02MW060001 Diss (F1H130407-007)

U-238 gross counts: 106

U-238 background counts: 0.25

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

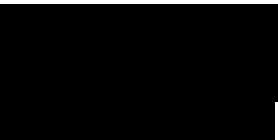
U-238 net counts: 105.75
Count time: 240 minutes
Detector Efficiency: 27.08%
Tracer Recovery: 70.71%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(105.75)/(2.22)(1.000)(240)(0.2708)(0.7071)$ = 1.036 pCi/L. The laboratory reported 1.036 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

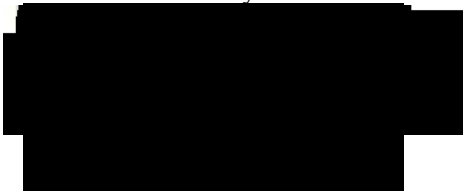
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H130407

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04BMW250001 Tot FD	Aqueous	J ¹
A02MW060001 Tot	Aqueous	A
A02MW100001 Tot	Aqueous	A
A02MW070001 Tot	Aqueous	A
A04BMW9003 Tot FD	Aqueous	A
A04BMW250001 Diss FD	Aqueous	J ¹
A02MW060001 Diss	Aqueous	A
A02MW100001 Diss	Aqueous	A
A02MW070001 Diss	Aqueous	A
A04BMW9003 Diss FD	Aqueous	A

A - Accept all data without qualification.

J¹- The U-234, U-235 and U-238 results are qualified as estimated (J). The U-232 tracer recovery is less than 40%.



November 03, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H130407
Site Name: Guterl Steel
Samples Collected: 08/12/2011
10 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04BMW250001 Tot FD	F1H130407-001	A04BMW250001 Diss FD	F1H130407-006
A02MW060001 Tot	F1H130407-002	A02MW060001 Diss	F1H130407-007
A02MW100001 Tot	F1H130407-003	A02MW100001 Diss	F1H130407-008
A02MW070001 Tot	F1H130407-004	A02MW070001 Diss	F1H130407-009
A04BMW9003 Tot FD	F1H130407-005	A04BMW9003 Diss FD	F1H130407-010

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data*

Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

All results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/12/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 96.8%

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the MS/MSD pair associated with preparation batch 1227138 for data package F1H130407. The MS/MSD recoveries are 106.9% and 108.6% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the MS/MSD pair associated with preparation batch 1227138 for data package F1H130407. The MS/MSD RPD is 1.42%

No results are qualified based upon laboratory duplicate precision.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Two field duplicate pairs are reported in laboratory data package F1H130407; A04BMW250001 Tot/A04BMW9003 Tot and A04BMW250001 Diss/A04BMW9003 Diss. The field duplicate RPDs are 0.6% and 1.7% respectively.

No results are qualified based upon the field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the ICP-MS serial dilution sample for data package F1H130407. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

Calculations

Sample A04MW602D0001 Diss, reported in laboratory data package F1H120447, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 112 ug/L

MS uranium concentration: 1180 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1180 \text{ ug/L} - 112 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 106.8\%$. The laboratory reported 106.9%.

Serial Dilution:

Sample uranium concentration: 112 ug/L

Serial dilution concentration of the 5X dilution: $21.6 \text{ ug/L} * 5 = 108 \text{ ug/L}$

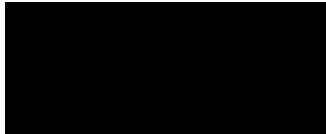
Serial Dilution % Difference = Absolute value $((112 \text{ ug/L} - 108 \text{ ug/L}) / (112 \text{ ug/L})) * 100 = 3.5\%$.
The laboratory reported 3.4%.

The laboratory included supporting documentation Method Detection Limits Form 10, Inter-element Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

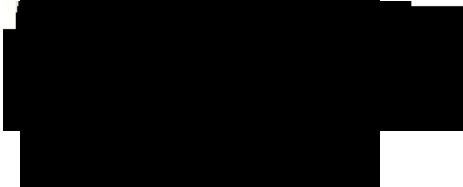
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

**Guterl Specialty Steel
F1H130407**

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04BMW250001 Tot FD	Aqueous	A
A02MW060001 Tot	Aqueous	A
A02MW100001 Tot	Aqueous	A
A02MW070001 Tot	Aqueous	A
A04BMW9003 Tot FD	Aqueous	A
A04BMW250001 Diss FD	Aqueous	A
A02MW060001 Diss	Aqueous	A
A02MW100001 Diss	Aqueous	A
A02MW070001 Diss	Aqueous	A
A04BMW9003 Diss FD	Aqueous	A

A - Accept all data without qualification.



November 03, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H160430
Site Name: Guterl Steel
Samples Collected: 08/15/2011
4 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04BMW706D0001 Diss	F1H160430-001	A04BMW706D0001 Tot	F1H160430-003
A04DMW710D0001 Diss	F1H160430-002	A04DMW710D0001 Tot	F1H160430-004
Tot- Total		Diss- Dissolved (field filtered)	
		FD- Field Duplicate	

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

Using professional judgment the U-234 results for A04DMW710D0001 Diss and A04DMW710D0001 Tot are qualified as estimated (J). These results are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L
U-234	A04DMW710D0001 Diss	24.0	2.33	0.065
U-234	A04DMW710D0001 Tot	19.1	1.87	0.033

MDA- Minimal Detectable Activity

The result for the dissolved fraction of sample A04DMW710D0001 is significantly greater than the total fraction.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample cooler. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/15/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1234168 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H220000-168B	0.019	0.027	0.040	1.4117
U-235	F1H220000-168B	-0.002	0.005	0.043	-0.9991
U-238	F1H220000-168B	-0.002	0.004	0.035	-0.9991

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1234168 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 95% and 100% respectively. The U-234 and U-238 LCSD recoveries are 95.3% and 95.3% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H160430. No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The laboratory analyzed a LCS/LCSD pair rather than a laboratory duplicate sample. Results are summarized below.

Analyte	F1H220000-168C			F1H220000-168L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.09	0.40	0.046	3.11	0.41	0.054
U-235	0.13	0.071	0.026	0.16	0.083	0.052
U-238	3.39	0.43	0.041	3.23	0.42	0.042

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A04BMW706D0001 Tot (F1H160430-003)

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 280.0
U-232 Tracer Background Counts: 1.25
U-232 Tracer net counts: 278.75
Count Time: 240 minutes
Detector Efficiency: 28.11%

U-232 Tracer recovered = $(278.75)/(240)(0.2811) = 4.13$ DPM

U-232 Tracer % Recovery = (4.13 DPM/7.155 DPM) * 100 = 57.75%. The laboratory reported 57.76%.

The U-238 concentration for A04BMW706D0001 Tot (F1H160430-003)

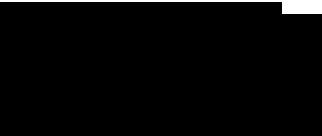
U-238 gross counts: 42
U-238 background counts: 0.500
U-238 net counts: 41.5
Count time: 240 minutes
Detector Efficiency: 28.11%
Tracer Recovery: 57.76%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = (41.5)/(2.22)(1.000)(240)(0.2811)(0.5776) = 0.48 pCi/L. The laboratory reported 0.48 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

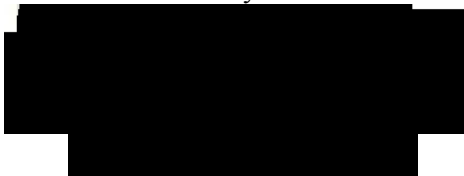
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H160430

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04BMW706D0001 Diss	Aqueous	A
A04DMW710D0001 Diss	Aqueous	J ¹
A04BMW706D0001 Tot	Aqueous	A
A04DMW710D0001 Tot	Aqueous	J ¹

A - Accept all data without qualification.

J¹ - The U-234 results are qualified as estimated (J). The U-234 concentration for the dissolved fraction is significantly greater than the total U-234 concentration for that fraction.



November 03, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H160430
Site Name: Guterl Steel
Samples Collected: 08/15/2011
4 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04BMW706D0001 Diss	F1H160430-001	A04BMW706D0001 Tot	F1H160430-003
A04DMW710D0001 Diss	F1H160430-002	A04DMW710D0001 Tot	F1H160430-004
Tot- Total	Diss- Dissolved (field filtered)	FD- Field Duplicate	

Dear Mr. [REDACTED],

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

All results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/15/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 99.7%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04BMW706D0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1229103. The MS/MSD recoveries are 111.5% and 111.7% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04BMW706D0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1229103. The MS/MSD RPD is 0.1%

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H160430.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04BMW706D0001 Diss was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below. The uranium result for A04BMW706D0001 Diss is 1.7 ug/L. The uranium sample concentration is less than 2X the reporting limit (RL). The uranium concentration is sample A04BMW706D0001 Diss is too low to evaluate the serial dilution results.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%.

Calculations

Sample A04BMW706D0001 Diss, reported in laboratory data package F1H160430, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 1.7 ug/L

MS uranium concentration: 1120 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1120 \text{ ug/L} - 1.7 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 111.8\%$. The laboratory reported 111.5%.

Serial Dilution:

Sample uranium concentration: 1.7 ug/L

Serial dilution concentration of the 5X dilution: 1.8 ug/L

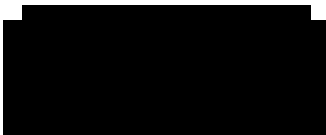
The serial dilution% difference is not calculated because the sample concentration is not greater than 50X the IDL.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

**Guterl Specialty Steel
F1H160430**

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04BMW706D0001 Diss	Aqueous	A
A04DMW710D0001 Diss	Aqueous	A
A04BMW706D0001 Tot	Aqueous	A
A04DMW710D0001 Tot	Aqueous	A

A - Accept all data without qualification.



November 03, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H170425
Site Name: Guterl Steel
Samples Collected: 08/15/2011 and 08/16/2011
12 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A03MW606D0001 Diss	F1H170425-001	A03MW606D0001 Tot	F1H170425-007
A03MW14D0001 Diss	F1H170425-002	A03MW14D0001 Tot	F1H170425-008
A03MW14D0001 Diss LDUP	F1H170425-002X	A03MW606DR0001 Tot	F1H170425-009
A03MW606DR0001 Diss	F1H170425-003	A03MW15D0001 Tot	F1H170425-010
A03MW15D0001 Diss	F1H170425-004	A03MW17D0001 Tot	F1H170425-011
A03MW17D0001 Diss	F1H170425-005	A04CMW711DD0001 Tot	F1H170425-012
A04CMW711DD0001 Diss	F1H170425-006		

Tot- Total Diss- Dissolved (field filtered) FD- Field Duplicate LDUP- Laboratory Duplicate

Dear ,

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices* by

EIChroM ® Separation Resins (STL-RC-240). The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
X		Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The laboratory narrative noted that samples A03MW14D0001 Diss, A04CMW711DD0001 Diss, and A03MW17D0001 Tot had U-232 tracer recoveries below 30%. The laboratory re-extracted and re-analyzed these samples. The U-232 tracer recoveries met the laboratory acceptance criteria for the re-analyses. Due to limited sample volume 250 mLs of sample were extracted for A03MW14D0001 Diss, A04CMW711DD0001 Diss, and A03MW17D0001 Tot. The minimum detectable concentrations (MDCs) were elevated because of the smaller sample volumes.

The U-234, U-235 and U-238 results for A03MW606D0001 Diss, A03MW606DR0001 Diss and A03MW606D0001 Tot are qualified as estimated (J). The U-234 and U-238 results for A04CMW711DD0001 Tot are qualified as estimated (J) and the U-235 result for A04CMW711DD0001 Tot is qualified as non-detected estimated (UJ). The U-232 tracer recoveries are below 40%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/15/2011 and 08/16/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1234168 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H220000-168B	0.019	0.027	0.040	1.4117
U-235	F1H220000-168B	-0.002	0.005	0.043	-0.9991
U-238	F1H220000-168B	-0.002	0.004	0.035	-0.9991

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 1238036 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z- Factor
U-234	F1H260000-036B	-0.002	0.017	0.051	-0.218
U-235	F1H260000-036B	0.007	0.019	0.045	0.727
U-238	F1H260000-036B	-0.004	0.005	0.040	-1.412

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
A03MW606D0001 Diss	38.5%
A03MW606DR0001 Diss	36.6%
A03MW606D0001 Tot	36.6%
A04CMW711DD0001 Tot	30.8%

The U-234, U-235 and U-238 results for A03MW606D0001 Diss, A03MW606DR0001 Diss and A03MW606D0001 Tot are qualified as estimated (J). The U-234 and U-238 results for A04CMW711DD0001 Tot are qualified as estimated (J) and the U-235 result for A04CMW711DD0001 Tot is qualified as non-detected estimated (UJ).

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1234168 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 95% and 100% respectively. The U-234 and U-238 LCSD recoveries are 95.3% and 95.3% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

The laboratory reported LCS results and laboratory duplicate results for preparation batch 1238036. LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1238036 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 97.5% and 110% respectively. U-235 is not a spiked isotope. All LCS recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS/LCSD recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H170425.

No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The laboratory analyzed a LCS/LCSD pair rather than a laboratory duplicate sample for batch 1234168. Results are summarized below.

Analyte	F1H220000-168C			F1H220000-168L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.09	0.40	0.046	3.11	0.41	0.054
U-235	0.13	0.071	0.026	0.16	0.083	0.052
U-238	3.39	0.43	0.041	3.23	0.42	0.042

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Sample A03MW14D0001 Diss was analyzed as the laboratory duplicate sample for batch 1238036. Results are summarized below.

Analyte	A03MW14D0001 Diss			A03MW14D0001 Diss LDUP		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	2.49	0.82	0.39	2.35	0.64	0.25
U-235	-0.038	0.054	0.40	0.049	0.097	0.13
U-238	2.09	0.74	0.32	1.96	0.58	0.23

All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Samples A03MW14D0001 Diss, A04CMW711DD0001 Diss, and A03MW17D0001 Tot were re-extracted because of low U-232 tracer recoveries. Due to limited sample volumes for the re-extractions only 250 mLs of sample were extracted for A03MW14D0001 Diss, A04CMW711DD0001 Diss and A03MW17D0001 Tot. The minimum detectable concentrations (MDCs) were elevated because of the smaller sample volumes.

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A03MW14D0001Tot (F1H170425-008) Batch 1234168

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 192
U-232 Tracer Background Counts: 0.250
U-232 Tracer net counts: 191.75
Count Time: 240 minutes
Detector Efficiency: 26.58%

U-232 Tracer recovered = $(191.75)/(240)(0.2658) = 3.006$ DPM
U-232 Tracer % Recovery = $(3.006 \text{ DPM}/7.155 \text{ DPM}) * 100 = 42.01\%$. The laboratory reported 42.03%.

The U-238 concentration for A03MW14D0001Tot (F1H170425-008) Batch 1234168

U-238 gross counts: 124
U-238 background counts: 0.000
U-238 net counts: 124
Count time: 240 minutes
Detector Efficiency: 26.58%
Tracer Recovery: 42.03%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(124)/(2.22)(1.000)(240)(0.2658)(0.4203) = 2.08$ pCi/L. The laboratory reported 2.08 pCi/L

The U-232 tracer recovery for A03MW14D0001 Diss (F1H170425-002) Batch 1238036

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 212
U-232 Tracer Background Counts: 0.000
U-232 Tracer net counts: 212.00
Count Time: 240 minutes
Detector Efficiency: 26.58%

U-232 Tracer recovered = $(212.00)/(240)(0.2658) = 3.323$ DPM
U-232 Tracer % Recovery = $(3.323 \text{ DPM}/7.155 \text{ DPM}) * 100 = 46.44\%$. The laboratory reported 46.47%.

The U-238 concentration for A03MW14D0001 Diss (F1H170425-002) Batch 1238036

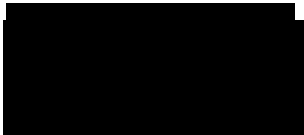
U-238 gross counts: 35
U-238 background counts: 0.500
U-238 net counts: 34.50
Count time: 240 minutes
Detector Efficiency: 26.58%
Tracer Recovery: 46.47%
Sample volume: 0.250 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: $= (34.50)/(2.22)(0.250)(240)(0.2658)(0.4647) = 2.09 \text{ pCi/L}$. The laboratory reported 2.09 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

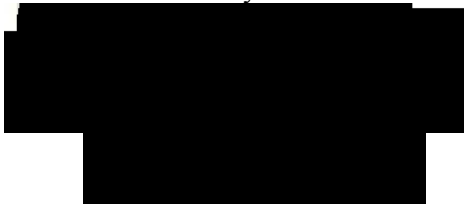
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H170425

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A03MW606D0001 Diss	Aqueous	J ¹
A03MW14D0001 Diss	Aqueous	A
A03MW14D0001 Diss LDUP	Aqueous	A
A03MW606DR0001 Diss	Aqueous	J ¹
A03MW15D0001 Diss	Aqueous	A
A03MW17D0001 Diss	Aqueous	A
A04CMW711DD0001 Diss	Aqueous	A
A03MW606D0001 Tot	Aqueous	J ¹
A03MW14D0001 Tot	Aqueous	A
A03MW606DR0001 Tot	Aqueous	A
A03MW15D0001 Tot	Aqueous	A
A03MW17D0001 Tot	Aqueous	A
A04CMW711DD0001 Tot	Aqueous	J ² J ³

A - Accept all data without qualification.

J¹- The U-234, U-235 and U-238 results are qualified as estimated (J). The U-232 tracer recovery is less than 40%.

J²- The U-235 result is qualified as non-detected estimated (UJ). The U-232 tracer recovery is less than 40%. The laboratory reported the result as non-detected (U).

J³- The U-234 and U-238 results are qualified as estimated (J). The U-232 tracer recovery is less than 40%.



October 20, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H170425
Site Name: Guterl Steel
Samples Collected: 08/15/2011 and 08/16/2011
12 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A03MW606D0001 Diss	F1H170425-001	A03MW606D0001 Tot	F1H170425-007
A03MW14D0001 Diss	F1H170425-002	A03MW14D0001 Tot	F1H170425-008
A03MW606DR0001 Diss	F1H170425-003	A03MW606DR0001 Tot	F1H170425-009
A03MW15D0001 Diss	F1H170425-004	A03MW15D0001 Tot	F1H170425-010
A03MW17D0001 Diss	F1H170425-005	A03MW17D0001 Tot	F1H170425-011
A04CMW711DD0001 Diss	F1H170425-006	A04CMW711DD0001 Tot	F1H170425-012

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED],

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data*

Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%, except for A04CMW711DD0001 Diss and A04CMW711DD0001 Tot. The uranium results are 2.9 ug/L and 1.7 ug/L respectively. Both results are greater than 5X the MDL (0.23 ug/L). Using professional judgment the uranium results for A04CMW711DD0001 Diss and A04CMW711DD0001 Tot are qualified as estimated (J).

All other results are accepted without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/15/2011 and 08/16/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 99.7%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04BMW706D0001 Diss, reported in laboratory data package F1H160430, was analyzed as the MS/MSD pair associated with preparation batch 1229103. The MS/MSD recoveries are 111.5% and 111.7% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04BMW706D0001 Diss, reported in laboratory data package F1H160430, was analyzed as the MS/MSD pair associated with preparation batch 1229103. The MS/MSD RPD is 0.1%

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H170425.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04BMW706D0001 Diss, reported in laboratory data package F1H160430, was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below. The uranium result for A04BMW706D0001 Diss is 1.7ug/L. The uranium sample concentration is less than 2X the reporting limit (RL). The uranium concentration is sample A04BMW706D0001 Diss is too low to evaluate the serial dilution results.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All field sample results are detected at concentrations greater than the RL. All total and dissolved results agree within 20%, except for A04CMW711DD0001 Diss and A04CMW711DD0001 Tot. The uranium results are 2.9 ug/L and 1.7 ug/L respectively. Both results are greater than 5X the MDL. Using professional judgment the uranium results for A04CMW711DD0001 Diss and A04CMW711DD0001 Tot are qualified as estimated (J).

Calculations

Sample A04BMW706D0001 Diss, reported in laboratory data package F1H160430, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 1.7 ug/L

MS uranium concentration: 1120 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1120 \text{ ug/L} - 1.7 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 111.8\%$. The laboratory reported 111.5%.

Serial Dilution:

Sample uranium concentration: 1.7 ug/L

Serial dilution concentration of the 5X dilution: 1.8 ug/L

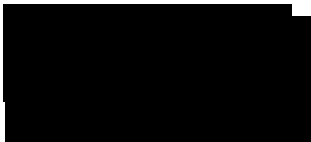
The serial dilution% difference is not calculated because the sample concentration is not greater than 50X the IDL.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

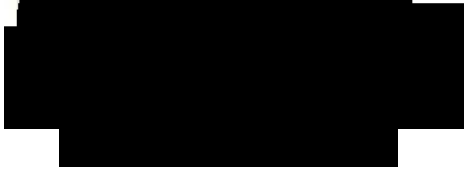
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H170425

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A03MW606D0001 Diss	Aqueous	A
A03MW14D0001 Diss	Aqueous	A
A03MW606DR0001 Diss	Aqueous	A
A03MW15D0001 Diss	Aqueous	A
A03MW17D0001 Diss	Aqueous	A
A04CMW711DD0001 Diss	Aqueous	J ¹
A03MW606D0001 Tot	Aqueous	A
A03MW14D0001 Tot	Aqueous	A
A03MW606DR0001 Tot	Aqueous	A
A03MW15D0001 Tot	Aqueous	A
A03MW17D0001 Tot	Aqueous	A
A04CMW711DD0001 Tot	Aqueous	J ¹

A - Accept all data without qualification.

J¹ – The uranium result is qualified as estimated (J). The dissolved result is greater than the total result, both results are greater than 5X the MDL, and the % difference exceeds 20%.



November 03, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H190431
Site Name: Guterl Steel
Samples Collected: 08/18/2011
12 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04DMW710DD0001 Diss	F1H190431-001	A04DMW710DD0001 Tot	F1H190431-007
A04DFB710DD0001 Diss	F1H190431-002	A04DFB710DD0001 Tot	F1H190431-008
A04DMW712DD0001 Diss	F1H190431-003	A04DMW712DD0001 Tot	F1H190431-009
A04AMW610D0001 Diss	F1H190431-004	A04AMW610D0001 Tot	F1H190431-011
A04AMW200001 Diss	F1H190431-005	A04AMW200001 Tot	F1H190431-012
A04AMW210001 Diss	F1H190431-006	A04AMW210001 Tot	F1H190431-013

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A04AM2100001 Diss rather than the client ID on the chain of custody, A04AMW210001 Diss. This validation uses the client ID as reported on the chain of custody, A04AMW210001 Diss.

All results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A04AM2100001 Diss rather than the client ID on the chain of custody, A04AMW210001 Diss. This validation uses the client ID as reported on the chain of custody, A04AMW210001 Diss.

Sample Preservation and Holding Times

Samples were collected on 08/18/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1235027 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H230000-027B	0.025	0.034	0.053	1.452
U-235	F1H230000-027B	-0.003	0.005	0.047	-0.999
U-238	F1H230000-027B	0.006	0.017	0.037	0.727

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1235027 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 87.6% and 98.0% respectively. The U-234 and U-238 LCSD recoveries are 94.7% and 100% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS/LCSD recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H190431. No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The laboratory analyzed a LCS/LCSD pair rather than a laboratory duplicate sample for batch 1235027. Results are summarized below.

Analyte	F1H230000-027C			F1H230000-027L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	2.86	0.388	0.037	3.09	0.407	0.046
U-235	0.262	0.105	0.027	0.216	0.094	0.027
U-238	3.32	0.431	0.048	3.39	0.434	0.036

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. All difference factors are below the control limits. No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved. The spectra for LCS/LCSDs F1H230000-027C and F1H230000-027L were resolved manually. The full width half maximums for F1H230000-027C were almost twice those reported for the field samples. The LCS/LCSD recoveries were within the acceptance criteria and the U-232 tracer recoveries were 84.9% and 87.4% respectively.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A04DMW712DD0001 Diss (F1H190431-003) Batch 1235027

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 274
U-232 Tracer Background Counts: 1.500

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

U-232 Tracer net counts: 272.50
Count Time: 240 minutes
Detector Efficiency: 27.67%

U-232 Tracer recovered = $(272.50)/(240)(0.2767) = 4.103$ DPM
U-232 Tracer % Recovery = $(4.103 \text{ DPM}/7.155 \text{ DPM}) * 100 = 57.35\%$. The laboratory reported 57.37%.

The U-234 concentration for A04DMW712DD0001 Diss (F1H190431-003) Batch 1235027

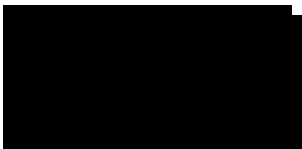
U-234 gross counts: 1184
U-234 background counts: 1.250
U-234 net counts: 1182.75
Count time: 240 minutes
Detector Efficiency: 27.67%
Tracer Recovery: 57.37%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(1182.75)/(2.22)(1.000)(240)(0.2767)(0.5737) = 13.98$ pCi/L. The laboratory reported 14.0 pCi/L

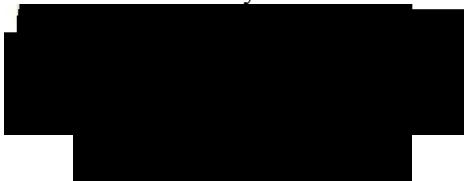
Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H190431

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04DMW710DD0001 Diss	Aqueous	A
A04DFB710DD0001 Diss	Aqueous	A
A04DMW712DD0001 Diss	Aqueous	A
A04AMW610D0001 Diss	Aqueous	A
A04AMW200001 Diss	Aqueous	A
A04AMW210001 Diss	Aqueous	A
A04DMW710DD0001 Tot	Aqueous	A
A04DFB710DD0001 Tot	Aqueous	A
A04DMW712DD0001 Tot	Aqueous	A
A04AMW610D0001 Tot	Aqueous	A
A04AMW200001 Tot	Aqueous	A
A04AMW210001 Tot	Aqueous	A

A - Accept all data without qualification.



October 21, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H190431
Site Name: Guterl Steel
Samples Collected: 08/18/2011
12 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04DMW710DD0001 Diss	F1H190431-001	A04DMW710DD0001 Tot	F1H190431-007
A04DFB710DD0001 Diss	F1H190431-002	A04DFB710DD0001 Tot	F1H190431-008
A04DMW712DD0001 Diss	F1H190431-003	A04DMW712DD0001 Tot	F1H190431-009
A04AMW610D0001 Diss	F1H190431-004	A04AMW610D0001 Tot	F1H190431-011
A04AMW200001 Diss	F1H190431-005	A04AMW200001 Tot	F1H190431-012
A04AMW210001 Diss	F1H190431-006	A04AMW210001 Tot	F1H190431-013

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED],

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data*

Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
X		Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A04AM2100001 Diss rather than the client ID on the chain of custody, A04AMW210001 Diss. This validation uses the client ID as reported on the chain of custody, A04AMW210001 Diss.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for A04DFB710DD0001 Diss is qualified as estimated (J). The reported result is between the method detection limit (MDL) and RL.

All other results are accepted without qualification. All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A04AM2100001 Diss rather than the client ID on the chain of custody, A04AMW210001 Diss. This validation uses the client ID as reported on the chain of custody, A04AMW210001 Diss.

Sample Preservation and Holding Times

Samples were collected on 08/18/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 98.7%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04DMW710DD0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1234135. The MS/MSD recoveries are 105% and 102% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A04DMW710DD0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1234135. The MS/MSD RPD is 2.9%

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H190431.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04DMW710DD0001 Diss was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for A04DFB710DD0001 Diss is qualified as estimated (J). The reported result is between the method detection limit (MDL) and RL.

All other results are accepted without qualification. All total and dissolved results agree within 20%.

Calculations

Sample A04DMW710D0001 Diss, reported in laboratory data package F1H190431, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 67.0 ug/L

MS uranium concentration: 1120 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1120 \text{ ug/L} - 67.0 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 105.3\%$. The laboratory reported 105.0%.

Serial Dilution:

Sample uranium concentration: 67.0 ug/L

Serial dilution concentration of the 5X dilution: 62.7 ug/L

ICP-MS Serial Dilution Percent Difference = $((67.0 - 62.7) / (67.0)) * 100 = 6.41\%$. The laboratory reported 6.31%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

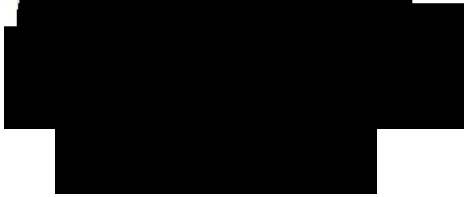
Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.


Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H190431

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04DMW710DD0001 Diss	Aqueous	A
A04DFB710DD0001 Diss	Aqueous	J ¹
A04DMW712DD0001 Diss	Aqueous	A
A04AMW610D0001 Diss	Aqueous	A
A04AMW200001 Diss	Aqueous	A
A04AMW210001 Diss	Aqueous	A
A04DMW710DD0001 Tot	Aqueous	A
A04DFB710DD0001 Tot	Aqueous	A
A04DMW712DD0001 Tot	Aqueous	A
A04AMW610D0001 Tot	Aqueous	A
A04AMW200001 Tot	Aqueous	A
A04AMW210001 Tot	Aqueous	A

A - Accept all data without qualification.

J¹- The uranium result is qualified as estimated (J). The reported result is between the MDL and RL.



November 03, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H230407
Site Name: Guterl Steel
Samples Collected: 08/22/2011
8 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A02MW600D0001 Diss	F1H230407-001	A02MW600D0001 Tot	F1H230407-006
A02MW50001 Diss	F1H230407-002	A02MW50001 Tot	F1H230407-007
A02MW120001 Diss	F1H230407-003	A02MW120001 Tot	F1H230407-008
A02MW30001 Diss	F1H230407-004	A02MW30001 Tot	F1H230407-009
Tot- Total	Diss- Dissolved (field filtered)	FD- Field Duplicate	

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in

conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A02M600D0001 Tot rather than the client ID on the chain of custody, A02MW600D0001 Tot. This validation used the client ID as reported on the chain of custody, A02MW600D0001 Tot.

The laboratory condition upon receipt form noted that the sample label on the sample container for A02MW600D0001 read A05BMW600D0001. The laboratory and this validation memo used A02MW600D0001 as the sample ID.

The laboratory condition upon receipt form noted that the sample label on the sample containers for the matrix spike and matrix spike duplicate (MS/MSD) had an A03 sample prefix rather than A02. The A02 prefix is correct and the laboratory and the validation memo used the A02 prefix for the MS/MSD samples; A02MW50001MS/MSD total and dissolved fractions.

All results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A02M600D0001 Tot rather than the client ID on the chain of custody, A02MW600D0001 Tot. This validation used the client ID as reported on the chain of custody, A02MW600D0001 Tot.

The laboratory condition upon receipt form noted that the sample label on the sample container for A02MW600D0001 read A05BMW600D0001. The laboratory and this validation memo used A02MW600D0001 as the sample ID.

The laboratory condition upon receipt form noted that the sample label on the sample containers for the matrix spike and matrix spike duplicate (MS/MSD) had an A03 sample prefix rather than A02. The A02 prefix is correct and the laboratory and the validation memo used the A02 prefix for the MS/MSD samples; A02MW50001MS/MSD total and dissolved fractions.

Sample Preservation and Holding Times

Samples were collected on 08/22/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1236047 are summarized below.

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H240000-047B	0.015	0.032	0.059	0.961
U-235	F1H240000-047B	-0.003	0.005	0.049	-0.999
U-238	F1H240000-047B	-0.004	0.006	0.046	-1.412

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 1236152 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H240000-152B	-0.007	0.008	0.057	-1.728
U-235	F1H240000-152B	0.000	0.012	0.032	0.000
U-238	F1H240000-152B	0.010	0.036	0.077	0.534

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1236047 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 95.2% and 102% respectively. The U-234 and U-238 LCSD recoveries are 95.5% and 99.2% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

LCS/LCSD recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1236152 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 100% and 100% respectively. The U-234 and U-238 LCSD recoveries are 104% and 120% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 73-131%.

No results are qualified based upon the LCS/LCSD recoveries.

Matrix Spike Sample Results

No matrix spike samples were analyzed. Recoveries are evaluated from the chemical tracer recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H230407.

No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The laboratory analyzed a LCS/LCSD pair rather than a laboratory duplicate sample for batch 1236047. Results are summarized below.

Analyte	F1H240000-047C			F1H240000-047L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.11	0.416	0.044	3.12	0.411	0.051
U-235	0.164	0.085	0.047	0.237	0.100	0.045
U-238	3.47	0.449	0.038	3.36	0.434	0.051

TPU – Total Propagated Uncertainty

The laboratory analyzed a LCS/LCSD pair rather than a laboratory duplicate sample for batch 1236152. Results are summarized below.

Analyte	F1H240000-152C			F1H240000-152L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.27	0.424	0.063	3.41	0.434	0.056
U-235	0.111	0.070	0.058	0.180	0.086	0.052
U-238	3.40	0.435	0.047	4.09	0.495	0.053

TPU – Total Propagated Uncertainty

U-235 is not present in the LCS/LCSD spike solution. The U-238 laboratory duplicate Z factor is 2.068 and the relative percent difference (RPD) is 18.2%. The QAPP RPD acceptance criteria for the laboratory duplicate is the RPD < 40%.

No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks are properly identified, well defined and adequately resolved.

Calculations

The U-232 tracer recovery for A02MW120001 Diss (F1H230407-003) Batch 1236047

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 358
U-232 Tracer Background Counts: 0.000
U-232 Tracer net counts: 358.00
Count Time: 240 minutes
Detector Efficiency: 26.58%

U-232 Tracer recovered = $(358.00)/(240)(0.2658) = 5.612$ DPM
U-232 Tracer % Recovery = $(5.612 \text{ DPM}/7.155 \text{ DPM}) * 100 = 78.44\%$. The laboratory reported 78.48%.

The U-234 concentration for A02MW120001 Diss (F1H230407-003) Batch 1236047

U-234 gross counts: 119
U-234 background counts: 1.000
U-234 net counts: 118
Count time: 240 minutes
Detector Efficiency: 26.58%
Tracer Recovery: 78.48%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(118.00)/(2.22)(1.000)(240)(0.2658)(0.7848) = 1.06$ pCi/L. The laboratory reported 1.06 pCi/L

The U-232 tracer recovery for A02MW120001 Tot (F1H230407-008) Batch 1236152

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 355
U-232 Tracer Background Counts: 0.500
U-232 Tracer net counts: 354.50
Count Time: 240 minutes
Detector Efficiency: 27.22%

U-232 Tracer recovered = $(354.50)/(240)(0.2722) = 5.426$ DPM
U-232 Tracer % Recovery = $(5.426 \text{ DPM}/7.155 \text{ DPM}) * 100 = 75.84\%$. The laboratory reported 75.87%.

The U-238 concentration for A02MW120001 Tot (F1H230407-008) Batch 1236152

U-238 gross counts: 158
U-238 background counts: 0.250
U-238 net counts: 157.75

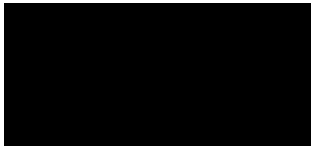
Count time: 240 minutes
Detector Efficiency: 27.22%
Tracer Recovery: 75.87%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(157.75)/(2.22)(1.000)(240)(0.2722)(0.7587) = 1.43 \text{ pCi/L}$. The laboratory reported 1.43 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

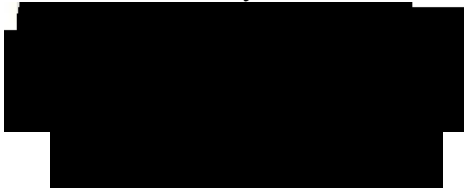
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H230407

Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary

Sample ID	Matrix	Qualifier
A02MW600D0001 Diss	Aqueous	A
A02MW50001 Diss	Aqueous	A
A02MW120001 Diss	Aqueous	A
A02MW30001 Diss	Aqueous	A
A02MW600D0001 Tot	Aqueous	A
A02MW50001 Tot	Aqueous	A
A02MW120001 Tot	Aqueous	A
A02MW30001 Tot	Aqueous	A

A - Accept all data without qualification.



October 24, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H230407
Site Name: Guterl Steel
Samples Collected: 08/22/2011
8 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A02MW600D0001 Diss	F1H230407-001	A02MW600D0001 Tot	F1H230407-006
A02MW50001 Diss	F1H230407-002	A02MW50001 Tot	F1H230407-007
A02MW120001 Diss	F1H230407-003	A02MW120001 Tot	F1H230407-008
A02MW30001 Diss	F1H230407-004	A02MW30001 Tot	F1H230407-009

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A02M600D0001 Tot rather than the client ID on the chain of custody, A02MW600D0001 Tot. This validation used the client ID as reported on the chain of custody, A02MW600D0001 Tot.

The laboratory condition upon receipt form noted that the sample label on the sample container for A02MW600D0001 read A05BMW600D0001. The laboratory and this validation memo used A02MW600D0001 as the sample ID.

The laboratory condition upon receipt form noted that the sample label on the sample containers for the matrix spike and matrix spike duplicate (MS/MSD) had an A03 sample prefix rather than A02. The A02 prefix is correct and the laboratory and the validation memo used the A02 prefix for the MS/MSD samples; A02MW50001MS/MSD total and dissolved fractions.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All results are accepted without qualification. All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The laboratory used an incorrect sample identity. The laboratory used the client sample ID A02M600D0001 Tot rather than the client ID on the chain of custody, A02MW600D0001 Tot. This validation used the client ID as reported on the chain of custody, A02MW600D0001 Tot.

The laboratory condition upon receipt form noted that the sample label on the sample container for A02MW600D0001 read A05BMW600D0001. The laboratory and this validation memo used A02MW600D0001 as the sample ID.

The laboratory condition upon receipt form noted that the sample label on the sample containers for the matrix spike and matrix spike duplicate (MS/MSD) had an A03 sample prefix rather than A02. The A02 prefix is correct and the laboratory and the validation memo used the A02 prefix for the MS/MSD samples; A02MW50001MS/MSD total and dissolved fractions.

Sample Preservation and Holding Times

Samples were collected on 08/22/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection

limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 98.7%

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A02MW50001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1236076. The MS/MSD recoveries are 98.4% and 98.8% respectively.

Sample A02MW50001 Tot was analyzed as the MS/MSD pair associated with preparation batch 1236076. The MS/MSD recoveries are 97.3% and 95.8% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A02MW50001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1236076. The MS/MSD RPD is 0.4%.

Sample A02MW50001 Tot was analyzed as the MS/MSD pair associated with preparation batch 1236076. The MS/MSD RPD is 1.5%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H230407.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A02MW50001 Diss was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon ICP-MS serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All results are accepted without qualification. All total and dissolved results agree within 20%.

Calculations

Sample A02MW50001 Diss, reported in laboratory data package F1H230407, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 6.2 ug/L

MS uranium concentration: 991 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((991 \text{ ug/L} - 6.2 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 98.5\%$. The laboratory reported 98.8%.

Serial Dilution:

Sample uranium concentration: 6.2 ug/L

Serial dilution concentration of the 5X dilution: 6.1 ug/L

ICP-MS Serial Dilution Percent Difference = $((6.2 - 6.1) / 6.2) * 100 = 1.6\%$. The laboratory reported 0.91%. The sample concentration is too low to evaluate the ICP-MS serial dilution results.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

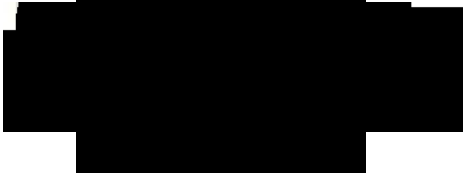
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

**Guterl Specialty Steel
F1H230407**

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A02MW600D0001 Diss	Aqueous	A
A02MW50001 Diss	Aqueous	A
A02MW120001 Diss	Aqueous	A
A02MW30001 Diss	Aqueous	A
A02MW600D0001 Tot	Aqueous	A
A02MW50001 Tot	Aqueous	A
A02MW120001 Tot	Aqueous	A
A02MW30001 Tot	Aqueous	A

A - Accept all data without qualification.



November 21, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H230464
Site Name: Guterl Steel
Samples Collected: 08/19/2011
12 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A03MW607D0001 Tot	F1H230464-001	A03MW607D0001 Diss	F1H230464-009
A03MW703DD0001 Tot	F1H230464-002	A03MW703DD0001 Diss	F1H230464-010
A03MW16D0001 Tot (FD)	F1H230464-003	A03MW16D0001 Diss (FD)	F1H230464-011
A02MW40001 Tot	F1H230464-004	A02MW40001 Diss	F1H230464-012
A03MW9004 Tot (FD)	F1H230464-005	A03MW9004 Diss (FD)	F1H230464-013
A04AMW701DD0001 Tot	F1H230464-006	A04AMW701DD0001 Diss	F1H230464-014

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	X	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The laboratory used an incorrect sample ID. The laboratory used a sample ID of A03MW607D001 Tot (F1H230464-001) rather than A03MW607D0001 Tot; the sample ID on the chain of custody. The validation used the A03MW607D0001 Tot ID.

All isotopic uranium results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates were recorded for all field samples. Sampling times were not recorded for sample A03MW9004. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The laboratory used an incorrect sample ID. The laboratory used a sample ID of A03MW607D001 Tot (F1H230464-001) rather than A03MW607D0001 Tot; the sample ID on the chain of custody. The validation used the A03MW607D0001 Tot ID.

Sample Preservation and Holding Times

Samples were collected on 08/19/2011. The condition upon receipt form indicates that all aqueous metal samples were properly preserved except for A03MW607D0001 Tot and A03MW703DD0001. The laboratory noted that these samples were received at a pH of 7. The laboratory added sufficient nitric acid to lower the pH to < 2. The pH was adjusted on 08/23/2011 and the samples were prepared for analysis on 08/26/2011.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1238042 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H260000-042B	0.007	0.027	0.060	0.493
U-235	F1H260000-042B	-0.0027	0.0055	0.050	-0.999
U-238	F1H260000-042B	0.009	0.026	0.056	0.664

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 1238069 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H260000-069B	0.021	0.029	0.045	1.452
U-235	F1H260000-069B	0.004	0.019	0.047	0.471
U-238	F1H260000-069B	0.004	0.015	0.038	0.471

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1238042 are summarized below. The laboratory did not analyze a LCSD because a MS/MSD pair was analyzed.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 97.2% and 94.4% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 75-131%.

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 1238069 are summarized below. The laboratory did not analyze a LCSD because a MS/MSD pair was analyzed.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 93.8% and 99.2% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 75-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

Guterl Steel sample A03MW703DD0001 Tot (F1H230464-002) was analyzed as the batch 1238042 MS/MSD pair. All MS/MSD recoveries were within the QAPP acceptance criteria, 59-150%. U-235 is not part of the MS/MSD spike solution.

Guterl Steel sample A03MW703DD0001 Diss (F1H230464-10)) was analyzed as the batch 1238069 MS/MSD pair. All MS/MSD recoveries were within the QAPP acceptance criteria, 59-150%. U-235 is not part of the MS/MSD spike solution.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A03MW16D0001Tot and A03MW9004 Tot are a field duplicate pair. Results are summarized below.

Analyte	A03MW16D0001 Tot			A03MW9004 Tot		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	8.8	1.0	0.09	8.38	0.95	0.08
U-235	0.44	0.18	0.08	0.42	0.16	0.08
U-238	9.7	1.1	0.07	8.88	0.99	0.06

TPU – Total Propagated Uncertainty

Samples A03MW16D0001Diss and A03MW9004 Diss are a field duplicate pair. Results are summarized below.

Analyte	A03MW16D0001 Diss			A03MW9004 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	8.9	1.0	0.06	9.2	1.0	0.06
U-235	0.45	0.18	0.05	0.58	0.20	0.04
U-238	10.2	1.1	0.04	10.1	1.1	0.08

TPU – Total Propagated Uncertainty

No results are qualified based upon the field duplicate results.

Laboratory Duplicates

The MS/MSD results are evaluated as laboratory duplicate samples.

The laboratory analyzed sample A03MW703DD0001 Tot (F1H230464-2) as the laboratory MS/MSD pair for analytical batch 1238042. Results are summarized below.

Analyte	A03MW703DD0001 Tot MS			A03MW703DD0001 Tot MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.588	0.3495	0.077	3.119	0.430	0.067
U-235	0.180	0.101	0.071	0.135	0.081	0.052
U-238	3.338	0.471	0.073	3.135	0.340	0.025

TPU – Total Propagated Uncertainty

The laboratory analyzed sample A03MW703DD0001 Diss (F1H230464-10) as the laboratory MS/MSD pair for analytical batch 1238069. Results are summarized below.

Analyte	A03MW703DD0001 Diss MS			A03MW703DD0001 Diss MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.115	0.450	0.057	2.712	0.397	0.062
U-235	0.130	0.085	0.061	0.090	0.069	0.064
U-238	3.176	0.455	0.049	2.837	0.408	0.051

TPU – Total Propagated Uncertainty

No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A03MW16D0001 Tot (F1H230464-003) Batch 1238042

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.155 DPM

U-232 Tracer Gross Counts: 234

U-232 Tracer Background Counts: 1.250

U-232 Tracer net counts: 232.75

Count Time: 240 minutes

Detector Efficiency: 26.42%

U-232 Tracer recovered = $(232.75)/(240)(0.2642) = 3.671$ DPM

U-232 Tracer % Recovery = $(3.671 \text{ DPM}/7.155 \text{ DPM}) * 100 = 51.30\%$. The laboratory reported 51.33%.

The U-234 concentration for A03MW16D0001 Tot (F1H230464-003) Batch 1238042

U-234 gross counts: 634

U-234 background counts: 1.250

U-234 net counts: 632.75

Count time: 240 minutes

Detector Efficiency: 26.42%

Tracer Recovery: 51.33%

Sample volume: 1.000 Liter

1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(632.75)/(2.22)(1.000)(240)(0.2642)(0.5130) = 8.76$ pCi/L. The laboratory reported 8.77 pCi/L.

The U-232 tracer recovery for A03MW703DD0001 Diss MS (F1H230464-010S) Batch 1238069

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.155 DPM

U-232 Tracer Gross Counts: 334

U-232 Tracer Background Counts: 0.75

U-232 Tracer net counts: 333.25

Count Time: 240 minutes
Detector Efficiency: 28.11%

U-232 Tracer recovered = $(333.25)/(240)(0.2811) = 4.940$ DPM
U-232 Tracer % Recovery = $(4.940 \text{ DPM}/7.155 \text{ DPM}) * 100 = 69.03\%$. The laboratory reported 69.07%.

The U-238 concentration for A03MW703DD0001 Diss MS (F1H230464-010S) Batch 1238069

U-238 gross counts: 294
U-238 background counts: 0.500
U-238 net counts: 293.50
Count time: 240 minutes
Detector Efficiency: 28.11%
Tracer Recovery: 69.07%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute
CPM = Counts/minute

U-238 Concentration: = $(293.50)/(2.22)(1.000)(240)(0.2811)(0.6907) = 2.837$ pCi/L. The laboratory reported 2.837 pCi/L.

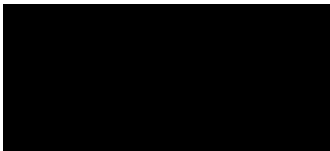
Matrix spike added: $(75.26\text{CPM/ml})(0.10 \text{ mL})(1.0 \text{ pCi}/2.22 \text{ CPM})(1.000 \text{ Liters}) = 3.39$ pCi/L

Matrix Spike % Recovery : $(\text{Concentration measured})/(\text{Calculated Concentration}) * 100 = (2.837 \text{ pCi/L})/(3.39 \text{ pCi/L}) * 100 = 83.7\%$. The laboratory reported the MS recovery 83.7%.

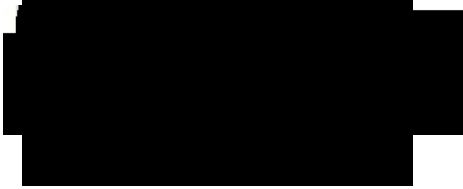
Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F1H230464

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A03MW607D0001 Tot	Aqueous	A
A03MW703DD0001 Tot	Aqueous	A
A03MW16D0001 Tot (FD)	Aqueous	A
A02MW40001 Tot	Aqueous	A
A03MW9004 Tot (FD)	Aqueous	A
A04AMW701DD0001 Tot	Aqueous	A
A03MW607D0001 Diss	Aqueous	A
A03MW703DD0001 Diss	Aqueous	A
A03MW16D0001 Diss (FD)	Aqueous	A
A02MW40001 Diss	Aqueous	A
A03MW9004 Diss (FD)	Aqueous	A
A04AMW701DD0001 Diss	Aqueous	A

A - Accept all data without qualification.



November 21, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H230464
Site Name: Guterl Steel
Samples Collected: 08/19/2011
12 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A03MW607D0001 Tot	F1H230464-001	A03MW607D0001 Diss	F1H230464-009
A03MW703DD0001 Tot	F1H230464-002	A03MW703DD0001 Diss	F1H230464-010
A03MW16D0001 Tot (FD)	F1H230464-003	A03MW16D0001 Diss (FD)	F1H230464-011
A02MW40001 Tot	F1H230464-004	A02MW40001 Diss	F1H230464-012
A03MW9004 Tot (FD)	F1H230464-005	A03MW9004 Diss (FD)	F1H230464-013
A04AMW701DD0001 Tot	F1H230464-006	A04AMW701DD0001 Diss	F1H230464-014

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data*

Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
X		Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Samples were collected on 08/19/2011. The condition upon receipt form indicates that all aqueous metal samples were properly preserved except for A03MW607D0001 Tot and A03MW703DD0001. The laboratory noted that these samples were received at a pH of 7. The laboratory added sufficient nitric acid to lower the pH to < 2. The pH was adjusted on 08/23/2011 and the sample was prepared for analysis on 08/24/2011.

The laboratory used an incorrect sample ID. The laboratory used a sample ID of A03MW607D001 Tot (F1H230464-001) rather than A03MW607D0001 Tot; the sample ID on the chain of custody. The validation used the A03MW607D0001 Tot ID.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for A03MW703DD0001 Tot is qualified as estimated (J). The reported result is between the method detection limit (MDL) and RL.

All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates were recorded for all field samples. Sampling times were not recorded for sample A03MW9004. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The laboratory used an incorrect sample ID. The laboratory used a sample ID of A03MW607D001 Tot (F1H230464-001) rather than A03MW607D0001 Tot; the sample ID on the chain of custody. The validation used the A03MW607D0001 Tot ID.

Sample Preservation and Holding Times

Samples were collected on 08/19/2011. The condition upon receipt form indicates that all aqueous metal samples were properly preserved except for A03MW607D0001 Tot and A03MW703DD0001. The laboratory noted that these samples were received at a pH of 7. The laboratory added sufficient nitric acid to lower the pH to < 2. The pH was adjusted on 08/23/2011 and the samples were prepared for analysis on 08/24/2011.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 98.7%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A03MW703DD0001 Tot was analyzed as the MS/MSD pair associated with preparation batch 1236077. The MS/MSD recoveries are 109% and 109% respectively.

Sample A03MW703DD0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1236077. The MS/MSD recoveries are 103% and 101% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A03MW703DD0001 Tot was analyzed as the MS/MSD pair associated with preparation batch 1236077. The MS/MSD relative percent difference is 0.46%.

Sample A03MW703DD0001 Diss was analyzed as the MS/MSD pair associated with preparation batch 1236077. The MS/MSD relative percent difference is 1.3%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A03MW16D0001/A03MW9004 total and dissolved fractions are two field duplicate pairs. The field duplicate RPDs are less than 50%. The RPDs are 3.1% and 1.8% respectively.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10%, results are qualified as estimated (J).

Sample A03MW703DD0001 Tot was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	0.28	1.2 U	NC	None

The uranium sample concentration is less than 50X the IDL. The concentration is too low to evaluate the serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All total and dissolved results agree within 20%.

The uranium result for A03MW703DD0001 Tot is qualified as estimated (J). The reported result is between the MDL and RL.

Calculations

Sample A03MW703DD0001 Tot, reported in laboratory data package F1H230464, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 0.28 ug/L

MS uranium concentration: 1090 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1090 \text{ ug/L} - 0.28 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 109\%$. The laboratory reported 109.4%.

Serial Dilution:

Sample uranium concentration: 0.28 ug/L

Serial dilution concentration of the 5X dilution: 1.2 ug/L (U)

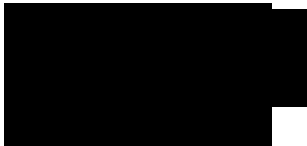
ICP-MS Serial Dilution Percent Difference = Not Calculated. The ICP-MS serial dilution result is reported as non-detected (U) at 1.2 ug/L. The uranium IDL is 0.23 ug/L.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

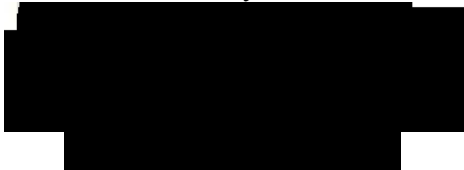
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H230464

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A03MW607D0001 Tot	Aqueous	A
A03MW703DD0001 Tot	Aqueous	J ¹
A03MW16D0001 Tot (FD)	Aqueous	A
A02MW40001 Tot	Aqueous	A
A03MW9004 Tot (FD)	Aqueous	A
A04AMW701DD0001 Tot	Aqueous	A
A03MW607D0001 Diss	Aqueous	A
A03MW703DD0001 Diss	Aqueous	A
A03MW16D0001 Diss (FD)	Aqueous	A
A02MW40001 Diss	Aqueous	A
A03MW9004 Diss (FD)	Aqueous	A
A04AMW701DD0001 Diss	Aqueous	A

A - Accept all data without qualification.

J¹- The uranium result is qualified as estimated (J). The reported result is between the MDL and RL.



November 21, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H240450
Site Name: Guterl Steel
Samples Collected: 08/23/2011
6 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A02MW9005 Tot	F1H240450-001	A02MW9005 Diss	F1H240450-006
A02MW010001 Tot	F1H240450-002	A02MW010001 Diss	F1H240450-007
A02MW020001 Tot	F1H240450-003	A02MW020001 Diss	F1H240450-008
Tot- Total	Diss- Dissolved (field filtered)	FD- Field Duplicate	

Dear Mr. [REDACTED],

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in

conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	X	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

All results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/23/2011. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 1238069 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F1H260000-069B	0.021	0.029	0.045	1.452
U-235	F1H260000-069B	0.004	0.019	0.047	0.471
U-238	F1H260000-069B	0.004	0.015	0.038	0.471

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch

1238069 are summarized below. The laboratory did not analyze a LCSD because a MS/MSD pair was analyzed.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 93.8% and 99.2% respectively. U-235 is not a spiked isotope. All LCS/LCSD recoveries are within the QAPP acceptance criteria; 75-131%.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

Guterl Steel sample A03MW703DD0001 Diss (F1H230464-10) reported in laboratory data package F1H230464) was analyzed as the batch 1238069 MS/MSD pair. All MS/MSD recoveries were within the QAPP acceptance criteria, 59-150%. U-235 is not part of the MS/MSD spike solution.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H240450.

No results are qualified based upon the absence of field duplicate results.

Laboratory Duplicates

The laboratory analyzed sample A03MW703DD0001 Diss (F1H230464-10) reported in laboratory data package F1H230464) as the laboratory MS/MSD pair for analytical batch 1238069. Results are summarized below.

Analyte	A03MW703DD0001 Diss MS			A03MW703DD0001 Diss MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.115	0.450	0.057	2.712	0.397	0.062
U-235	0.130	0.085	0.061	0.090	0.069	0.064
U-238	3.176	0.455	0.049	2.837	0.408	0.051

TPU – Total Propagated Uncertainty

No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A02MW9005 Tot (F1H240450-001) Batch 1238069

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.155 DPM

U-232 Tracer Gross Counts: 308

U-232 Tracer Background Counts: 1.500

U-232 Tracer net counts: 306.50

Count Time: 240 minutes

Detector Efficiency: 26.47%

U-232 Tracer recovered = $(306.50)/(240)(0.2647) = 4.824$ DPM

U-232 Tracer % Recovery = $(4.824 \text{ DPM}/7.155 \text{ DPM}) * 100 = 67.42\%$. The laboratory reported 67.46%.

The U-234 concentration for A02MW9005 Tot (F1H240450-001) Batch 1238069

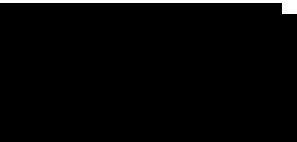
U-234 gross counts: 1039
U-234 background counts: 1.750
U-234 net counts: 137.25
Count time: 240 minutes
Detector Efficiency: 26.47%
Tracer Recovery: 67.46%
Sample volume: 1.000 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(1037.25)/(2.22)(1.000)(240)(0.2647)(0.6745)$ = 10.90 pCi/L. The laboratory reported 10.90 pCi/L

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

**Guterl Specialty Steel
F1H240450**

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A02MW9005 Tot	Aqueous	A
A02MW010001 Tot	Aqueous	A
A02MW020001 Tot	Aqueous	A
A02MW9005 Diss	Aqueous	A
A02MW010001 Diss	Aqueous	A
A02MW020001 Diss	Aqueous	A

A - Accept all data without qualification.



November 14, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1H240450
Site Name: Guterl Steel
Samples Collected: 08/23/2011
7 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A02MW9005 Tot	F1H240450-001	A02MW9005 Diss	F1H240450-005
A02MW010001 Tot	F1H240450-002	A02MW010001 Diss	F1H240450-006
A02MW020001 Tot	F1H240450-003	A02MW020001 Diss	F1H240450-007
A04BMW707DD0001	F1H240450-004		

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
X		ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The condition upon receipt form indicates that all aqueous metal samples were properly preserved except for A04BMW707DD0001 Tot. The laboratory noted that this sample was received at an improper pH. The laboratory added sufficient nitric acid to lower the pH to < 2. The pH was adjusted on 08/24/2011 and the sample was prepared for analysis on 08/25/2011.

The ICP-MS serial dilution % difference was 20.3%. Uranium results for A02MW9005 Tot, A02MW010001 Tot, A02MW020001 Tot, A02MW9005 Diss, A02MW010001 Diss and A02MW020001 Diss are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased high. Sample A04BMW707DD0001 Tot was analyzed at a 5 X dilution. Using professional judgment the uranium result for A04BMW707DD0001 Tot was not qualified.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

Sample A04BMW707DD0001 Tot was analyzed at a 5X dilution.

All results are accepted without qualification. All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates were recorded for all field samples. Sampling times were not recorded for samples A02MW9005 Total and Dissolved and A04BMW707DD0001. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/23/2011. The condition upon receipt form indicates that all aqueous metal samples were properly preserved except for A04BMW707DD0001 Tot. The laboratory noted that this sample was received at an improper pH. The laboratory added sufficient nitric acid to lower the pH to < 2 . The pH was adjusted on 08/24/2011 and the sample was prepared for analysis on 08/25/2011.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recoveries were 102.7% and 98.0%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A02MW9005 Tot was analyzed as the MS/MSD pair associated with preparation batch 1237036. The MS/MSD recoveries are 109% and 107% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample A02MW9005 Tot was analyzed as the MS/MSD pair associated with preparation batch 1237036. The MS/MSD RPD is 2.0%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1H240450.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample A02MW9005 Tot was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	40.1	31.9	20.3%	J+

Uranium results for A02MW9005 Tot, A02MW010001 Tot, A02MW020001 Tot, A02MW9005 Diss, A02MW010001 Diss and A02MW020001 Diss are qualified as estimated (J). Matrix interferences are indicated. The reported results may be biased high. Sample A04BMW707DD0001 Tot was analyzed at a 5 X dilution. Using professional judgment the uranium result for A04BMW707DD0001 Tot was not qualified.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All total and dissolved results agree within 20%.

Sample A04BMW707DD0001 Tot was analyzed at a 5X dilution.

Calculations

Sample A02MW9005 Tot, reported in laboratory data package F1H240450, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 40.1 ug/L

MS uranium concentration: 1130 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1130 \text{ ug/L} - 40.1 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 109\%$. The laboratory reported 109.2%.

Serial Dilution:

Sample uranium concentration: 40.1 ug/L

Serial dilution concentration of the 5X dilution: 31.9 ug/L

ICP-MS Serial Dilution Percent Difference = $((40.1 - 31.9) / 40.1) * 100 = 20.4\%$. The laboratory reported 20.3%. The uranium IDL is 0.23 ug/L.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.

[REDACTED]

Validator

Reviewed By:

[REDACTED]

Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F1H240450

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A02MW9005 Tot	Aqueous	J ¹
A02MW010001 Tot	Aqueous	J ¹
A02MW020001 Tot	Aqueous	J ¹
A04BMW707DD0001	Aqueous	A
A02MW9005 Diss	Aqueous	J ¹
A02MW010001 Diss	Aqueous	J ¹
A02MW020001 Diss	Aqueous	J ¹

A - Accept all data without qualification.

J¹- The uranium result is qualified as estimated (J). The ICP-MS serial dilution %D exceeds 10%. The reported result may be biased high.



November 19, 2011

[REDACTED]
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1I010435
Site Name: Guterl Steel
Samples Collected: 08/31/2011
2 Aqueous Samples and 2 Solid Samples

Isotopic Thorium and Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
AQUEOUS IDW	F1I010435-001	NON-AQUEOUS IDW	F1I010435-002
AQUEOUS IDW DUP	F1I010435-001X	NON-AQUEOUS IDW DUP	F1I010435-002X

DUP- Laboratory Duplicate

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium and isotopic thorium analytical data from aqueous and solid samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy (EML A-01-R-MOD), according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are Th-228, Th-230, Th-232, U-234, U-235 and U-238. The solid sample results are reported on a dry weight basis.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in

conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
X		Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the isotopic thorium and isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Using professional judgment the Th-230 results for AQUEOUS IDW and AQUEOUS IDW DUP are qualified as estimated (J). These Th-230 results are summarized below. Statistically these results are equal to the positive method blank result. Both the positive sample results and positive method blank results are less than the laboratory reporting limit 0.10 pCi/L.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 08/31/2011. The condition upon receipt form indicates that aqueous radionuclide samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Solid method blank results associated with preparation batches 1249210 and 1249211 are summarized below.

Radionuclide	Sample ID	Conc pCi/g	Total Uncertainty pCi/g	MDC pCi/g	Z-Factor
Th-228	F1I060000-210B	0.024	0.021	0.025	2.2251
Th-230	F1I060000-210B	0.021	0.020	0.023	2.0952
Th-232	F1I060000-210B	-0.001	0.002	0.018	-0.9991
U-234	F1I060000-211B	-0.0009	0.0086	0.026	-0.2182
U-235	F1I060000-211B	-0.0023	0.0033	0.025	-1.4117
U-238	F1I060000-211B	0.008	0.011	0.010	1.4117

MDC- Minimal Detectable Concentration

All method blank results are reported as non-detected (U).

Aqueous method blank results associated with preparation batches 1251056 and 1251057 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDC pCi/L	Z-Factor
Th-228	F1I080000-056B	0.012	0.023	0.041	1.0399
Th-230	F1I080000-056B	0.085	0.053	0.036	3.2027
Th-232	F1I080000-056B	-0.0020	0.0039	0.036	-0.9991
U-234	F1I080000-057B	0.058	0.050	0.059	2.3300
U-235	F1I080000-057B	-0.0053	0.0076	0.057	-1.4117
U-238	F1I080000-057B	0.017	0.024	0.023	1.4117

MDC- Minimal Detectable Concentration

Using professional judgment the Th-230 results for AQUEOUS IDW and AQUEOUS IDW DUP are qualified as estimated (J). These Th-230 results are summarized below

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDC pCi/L
Th-230	AQUEOUS IDW	0.077	0.050	0.036
Th-230	AQUEOUS IDW DUP	0.098	0.064	0.045

Statistically these results are equal to the positive method blank result. Both the positive sample results and positive method blank results are less than the laboratory reporting limit 0.10 pCi/L.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batches 1249210, 1249211, 1251056 and 1251057 are summarized below. The laboratory did not analyze a LCSD. The laboratory did analyze a laboratory duplicate pair for each isotope in each matrix.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

All LCS recoveries are within the QAPP acceptance criteria and the laboratory derived acceptance criteria. U-235, Th-228 and Th-232 are not LCS spiked isotopes.

No results are qualified based upon the LCS recoveries.

Matrix Spike Sample Results

No MS/MSDs were analyzed. The laboratory analyzed a LCS and laboratory duplicate samples for each sample matrix.

No results are qualified due to the absence of MS/MSD results.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1I010435.

No results are qualified based upon the absence of field duplicate results.

Laboratory Duplicates

The laboratory analyzed aqueous sample AQUEOUS IDW (F1I010435-001) as the laboratory duplicate pair for analytical batches 1251056 and 1251057. Results are summarized below.

Analyte	AQUEOUS IDW			AQUEOUS IDW DUP		
	Result pCi/L	TPU	MDC	Result pCi/L	TPU	MDC
Th-228	0.022 U	0.028	0.036	0.037 U	0.040	0.045
Th-230	0.077 J	0.050	0.036	0.098 J	0.064	0.045
Th-232	0.028 U	0.032	0.039	0.017 U	0.029	0.045
U-234	0.102	0.062	0.054	0.093	0.063	0.052
U-235	0.011 U	0.021	0.029	0.003 U	0.027	0.072
U-238	0.082	0.054	0.038	0.088	0.063	0.062

TPU – Total Propagated Uncertainty

No aqueous results are qualified based upon the laboratory duplicate precision.

The laboratory analyzed solid sample NON-AQUEOUS IDW (F1I010435-002) as the laboratory duplicate pair for analytical batches 1249210 and 1249211. Results are summarized below.

Analyte	NON-AQUEOUS IDW			NON-AQUEOUS IDW DUP		
	Result pCi/g	TPU	MDC	Result pCi/g	TPU	MDC
Th-228	0.355	0.105	0.048	0.318	0.096	0.048
Th-230	0.400	0.111	0.030	0.379	0.130	0.029
Th-232	0.259	0.088	0.032	0.244	0.081	0.029
U-234	0.337	0.079	0.021	0.303	0.073	0.017
U-235	0.009 U	0.014	0.023	0.014	0.016	0.013
U-238	0.322	0.077	0.011	0.417	0.087	0.010

TPU – Total Propagated Uncertainty

No solid results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for NON-AQUEOUS IDW (F1I010435-002) Batch 1249211

U-232 Tracer concentration: 71.55 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.155 DPM
U-232 Tracer Gross Counts: 405
U-232 Tracer Background Counts: 0.5000
U-232 Tracer net counts: 404.50
Count Time: 240 minutes
Detector Efficiency: 28.11%

U-232 Tracer recovered = $(404.50)/(240)(0.02811) = 5.995$ DPM

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

U-232 Tracer % Recovery = $(5.995 \text{ DPM} / 7.155 \text{ DPM}) * 100 = 83.8\%$. The laboratory reported 83.9%.

The Th-229 tracer recovery for AQUEOUS IDW (F1I010435-001) Batch 1251056

Th-229 Tracer concentration: 63.40 DPM/mL (DPM = disintegrations/minute)

Th-229 Tracer volume: 0.10 mL

Th-229 Tracer added: 6.340 DPM

Th-229 Tracer Gross Counts: 363

Th-229 Tracer Background Counts: 0.000

Th-229 Tracer net counts: 363

Count Time: 240 minutes

Detector Efficiency: 27.43%

Th-229 Tracer recovered = $(363) / (240)(0.2743) = 5.514 \text{ DPM}$

Th-229 Tracer % Recovery = $(5.514 \text{ DPM} / 6.34 \text{ DPM}) * 100 = 87.0\%$. The laboratory reported 87.3%.

The U-234 concentration for NON-AQUEOUS IDW (F1I010435-002) Batch 1249211

U-234 gross counts: 85

U-234 background counts: 0.500

U-234 net counts: 84.5

Count time: 240 minutes

Detector Efficiency: 28.11%

Tracer Recovery: 83.87%

Sample Mass: 2.000 grams

1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(84.5) / (2.22)(2.000)(240)(0.2811)(0.8378) = 0.337 \text{ pCi/g}$. The laboratory reported 0.337 pCi/g

The Th-230 concentration for LCS (F1I080000-056C) Batch 1251056

Th-230 gross counts: 292

Th-230 background counts: 0.500

Th-230 net counts: 291.50

Count time: 240 minutes

Detector Efficiency: 27.61%

Tracer Recovery: 89.11%

Sample Volume: 1.000 Liter

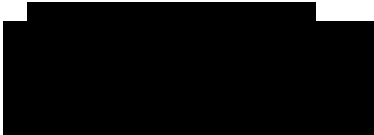
1 picocurie = 2.22 counts/minute

Th-230 Concentration: = $(291.5) / (2.22)(1.000)(240)(0.2761)(0.89115) = 2.224 \text{ pCi/L}$. The laboratory reported 2.23 pCi/L. The laboratory spike concentration added is 2.37 pCi/L. The LCS calculated recovery is $(2.22 / 2.37) * 100 = 93.6\%$. The laboratory reported the LCS Th-230 recovery at 94%.

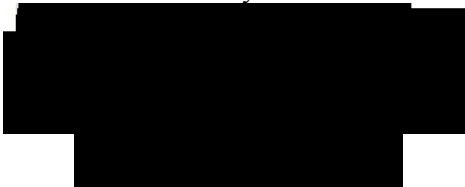
Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.


Validator

Reviewed By:


Attachments: Table 1 Thorium and Uranium Isotope results

**Guterl Specialty Steel
FII010435**

**Table 1 – Isotopic Thorium and Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
AQUEOUS IDW	Aqueous	J ¹
AQUEOUS IDW DUP	Aqueous	J ¹
NON-AQUEOUS IDW	Solid	A
NON-AQUEOUS IDW DUP	Solid	A

A - Accept all data without qualification.

J¹ - The Th-230 result is qualified as estimated (J) due to positive Th-230 method blank results.



November 18, 2011

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F1I010435
Site Name: Guterl Steel
Samples Collected: 08/31/2011
3 Aqueous Samples

Total Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
AQUEOUS IDW	F1I010435-001	A04BMW707DD0001 Diss	F1I010435-004
A04BMW707DD0001 Tot	F1I010435-003		

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
X		Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for AQUEOUS IDW is qualified as estimated (J). The reported result is between the method detection limit (MDL) and RL.

All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

The COC noted that the A04BMW707DD0001 Tot sample bottle listed only total metals for analysis. This bottle was also logged in for total uranium.

Sample Preservation and Holding Times

Samples were collected on 08/31/2011. The condition upon receipt form indicates that all aqueous metal samples were properly preserved.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 97.0%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				
CCB – Continuing Calibration Blank			MB – Prep Blank	

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample AQUEOUS IDW was analyzed as the MS/MSD pair associated with preparation batch 1249123. The MS/MSD recoveries are 106% and 107% respectively.

All MS/MSD recoveries were within the 75-125% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 30\%$.

Sample AQUEOUS IDW was analyzed as the MS/MSD pair associated with preparation batch 1249123. The MS/MSD relative percent difference is 1.0%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F1I010435.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-120%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. If the %D exceeds 10% results are qualified as estimated (J).

Sample AQUEOUS IDW was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	0.28	1.2 U	NC	None

The uranium sample concentration is less than 50X the IDL. The concentration is too low to evaluate the serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for AQUEOUS IDW is qualified as estimated (J). The reported result is between the method detection limit (MDL) and RL.

All total and dissolved results agree within 20%.

Calculations

Sample AQUEOUS IDW was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 0.28 ug/L

MS uranium concentration: 1060 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1060 \text{ ug/L} - 0.28 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 106\%$. The laboratory reported 105.6%.

Serial Dilution:

Sample uranium concentration: 0.28 ug/L

Serial dilution concentration of the 5X dilution: 1.2 ug/L (U)

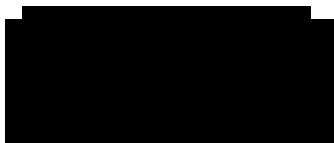
ICP-MS Serial Dilution Percent Difference = Not Calculated. The ICP-MS serial dilution result is reported as non-detected (U) at 1.2 ug/L. The uranium IDL is 0.23 ug/L.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

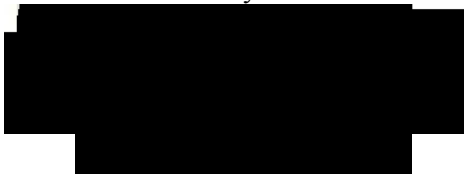
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

**Guterl Specialty Steel
F1I010435**

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
AQUEOUS IDW	Aqueous	J ¹
A04BMW707DD0001 Tot	Aqueous	A
A04BMW707DD0001 Diss	Aqueous	A

A - Accept all data without qualification.

J¹- The uranium result is qualified as estimated (J). The reported result is between the MDL and RL.



March 06, 2012

██████████
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F2B010413
Site Name: Guterl Steel
Samples Collected: 01/30/2012
8 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04DMW710D0002 Diss	F2B010413-001	A04DMW710D0002 Tot	F2B010413-005
A04DMW710DD0002 Diss	F2B010413-002	A04DMW710DD0002 Tot	F2B010413-006
A04DMW713D0002 Diss	F2B010413-003	A04DMW713D0002 Tot	F2B010413-007
A04DMW708DD0002 Diss	F2B010413-004	A04DMW708DD0002 Tot	F2B010413-008
Tot- Total	Diss- Dissolved (field filtered)	FD- Field Duplicate	

Dear ██████████

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, the Multi-*

Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	NA	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The minimal detectable concentrations (MDCs) are elevated for sample A04DMW708DD0002 Tot. As noted in the narrative "The Uranium sample did not meet the CRDL due to a reduced sample volume." The laboratory prepared 258.35 milliliters rather than 500 milliliters.

All isotopic uranium results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 01/30/2012. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 2033010 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2B020000-010B	0.011	0.0205	0.037	1.028
U-235	F2B020000-010B	-0.0022	0.0044	0.040	-0.999
U-238	F2B020000-010B	-0.0018	0.0035	0.032	-0.999

MDA- Minimal Detectable Activity

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2033010 are summarized below. The laboratory did analyze a LCSD because a MS/MSD pair was not analyzed.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 LCS/LCSD recoveries are 96.3% and 92.6% respectively. The U-238 LCS/LCSD recoveries are 104% and 93.2% respectively. U-235 is not a spiked isotope.

All LCS/LCSD recoveries are within the QAPP acceptance criteria.

Matrix Spike Sample Results

No MS/MSDs were analyzed. The laboratory analyzed a LCS/LCSD pair.

No results are qualified due to the absence of MS/MSD results.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F2B010413.

No results are qualified based upon the absence of field duplicate results.

Laboratory Duplicates

The LCS/LCSD results are evaluated as laboratory duplicate samples.

The laboratory analyzed samples F2B020000-010C/F2B020000-010L as the laboratory LCS/LCSD pair for analytical batch 2033010. Results are summarized below. U-235 is not a spiked isotope.

Analyte	F2B020000-010C			F2B020000-010L		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	3.153	0.405	0.0436	3.022	0.387	0.0417
U-235	0.173	0.082	0.0418	0.246	0.095	0.0238
U-238	3.533	0.323	0.0392	3.159	0.400	0.0509

TPU – Total Propagated Uncertainty

No results are qualified based upon the laboratory duplicate precision.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A04DMW710D0002 Diss (F2B010413-001) Batch 2033010

U-232 Tracer concentration: 71.13 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.113 DPM

U-232 Tracer Gross Counts: 342.5

U-232 Tracer Background Counts: 0.500

U-232 Tracer net counts: 342

Count Time: 240 minutes

Detector Efficiency: 28.11%

U-232 Tracer recovered = $(342.0)/(240)(0.2811) = 5.069$ DPM

295 Lower Flying Point Road ☐ Freeport ME 04032

Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

U-232 Tracer % Recovery = $(5.069 \text{ DPM} / 7.113 \text{ DPM}) * 100 = 71.27\%$. The laboratory reported 71.28%.

The U-234 concentration for A04DMW710D0002 Diss (F2B010413-001) Batch 2033010

U-234 gross counts: 925
U-234 background counts: 1.000
U-234 net counts: 924.0
Count time: 240 minutes
Detector Efficiency: 28.11%
Tracer Recovery: 71.28%
Sample volume: 0.500 Liter
1 picocurie = 2.22 counts/minute

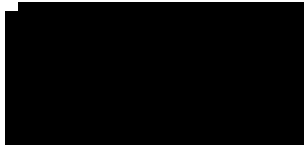
U-234 Concentration: = $(925) / (2.22)(0.500)(240)(0.2811)(0.7128) = 17.33 \text{ pCi/L}$. The laboratory reported 17.34 pCi/L.

Total and dissolved results agree within 20%.

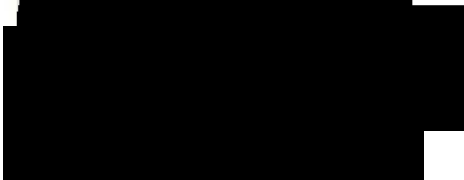
Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F2B010413

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04DMW710D0002 Diss	Aqueous	A
A04DMW710DD0002 Diss	Aqueous	A
A04DMW713D0002 Diss	Aqueous	A
A04DMW708DD0002 Diss	Aqueous	A
A04DMW710D0002 Tot	Aqueous	A
A04DMW710DD0002 Tot	Aqueous	A
A04DMW713D0002 Tot	Aqueous	A
A04DMW708DD0002 Tot	Aqueous	A

A - Accept all data without qualification.



March 08, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2B030480
Site Name: Guterl Steel
Samples Collected: 02/01/2012
14 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04BMW260002 Tot	F2B030480-001	A04BMW260002 Diss	F2B030480-008
A04BMW707DD0002 Tot	F2B030480-002	A04BMW707DD0002 Diss	F2B030480-009
A04BMW605D0002 Tot FD1	F2B030480-003	A04BMW605D0002 Diss FD2	F2B030480-010
A04DMW704DD0002 Tot	F2B030480-004	A04DMW704DD0002 Diss	F2B030480-011
A04BMW9006 Tot FD1	F2B030480-005	A04BMW9006 Diss FD2	F2B030480-012
A04DMW604D0002 Tot	F2B030480-006	A04DMW604D0002 Diss	F2B030480-013
A04DMW709DD0002 Tot	F2B030480-007	A04DMW709DD0002 Diss	F2B030480-014

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	NA	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution
X		Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The minimal detectable concentrations (MDCs) are elevated for samples A04BMW605D0002 Tot, A04BMW9006 Tot, A04BMW605D0002 Diss and A04BMW9006 Diss. As noted in the narrative "The Uranium sample did not meet the CRDL due to a reduced sample volume."

Using professional judgment the U-234 and U-238 results for A04BMW260002 Tot and A04BMW260002 Diss are qualified as estimated (J). These results are summarized below.

Analyte	A04BMW260002 Tot			A04BMW260002 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	39.7	3.7	0.1	48.4	4.5	0.1
U-238	38.3	3.6	0.05	48.4	4.5	0.1

The U-234 and U-238 results for the dissolved fractions are greater than the total fractions. The percent differences between the dissolved and total fractions exceed 20%.

Using professional judgment the U-234 results for A04BMW707DD0002 Tot and A04BMW707DD0002 Diss are qualified as estimated (J). These results are summarized below.

Analyte	A04DMW707DD0002 Tot			A04DMW707DD0002 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	7.76	0.98	0.08	14.5	1.6	0.1

The U-234 result for A04BMW707DD0002 Diss is nearly 2X the U-234 result for A04DMW707DD0002 Tot.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 02/01/2012. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time is 180 days. The analytical holding time was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Initial Calibration Verification Results

All criteria were met. All recoveries are within 95-105% of the initial calibrations.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 2038119 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2B070000-119B	0.011	0.0208	0.038	1.028
U-235	F2B070000-119B	0.009	0.0178	0.024	0.999
U-238	F2B070000-119B	0.007	0.0142	0.019	0.999

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 2038127 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2B070000-127B	0.0367	0.0332	0.020	2.226
U-235	F2B070000-127B	0.0092	0.0184	0.025	0.999
U-238	F2B070000-127B	0.0074	0.0148	0.020	0.999

MDA- Minimal Detectable Activity

The U-234 result for method blank F2B070000-127B is a positive result. The U-234 method blank result is significantly less than the sample concentrations.

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2038119 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 100.4% and 104.0% respectively. U-235 is not a spiked isotope.

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2038127 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 93.1% and 96.8% respectively. U-235 is not a spiked isotope.

All LCS recoveries are within the QAPP acceptance criteria.

Matrix Spike Sample Results

No MS/MSDs were analyzed. The laboratory analyzed laboratory duplicate pairs.

No results are qualified due to the absence of MS/MSD results.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A04BMW605D0002 Tot and A04BMW9006 Tot are a field duplicate pair. Results are summarized below.

Analyte	A04BMW605D0002 Tot			A04BMW9006 Tot		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	87.3	7.9	0.2	101	9.2	0.2
U-235	3.59	0.75	0.09	5.3	1.0	0.2
U-238	91.0	8.3	0.1	99.8	9.1	0.2

TPU – Total Propagated Uncertainty

Samples A04BMW605D0002 Diss and A04BMW9006 Diss are a field duplicate pair. Results are summarized below.

Analyte	A04BMW605D0002 Diss			A04BMW9006 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	92.9	8.5	0.3	90.6	8.3	0.2
U-235	3.99	0.84	0.24	4.67	0.91	0.1
U-238	91.2	8.3	0.2	90.6	8.3	0.08

TPU – Total Propagated Uncertainty

No results are qualified based upon the field duplicate results. All relative percent differences (RPDs) are less than 40%.

Laboratory Duplicates

The laboratory analyzed sample A04DMW704DD0002 Tot (F2B030480-004) as the laboratory duplicate pair for analytical batch 2038119.

Analyte	A04DMW704DD0002 Tot			A04DMW704DD0002 Tot		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	29.8	2.8	0.03	25.9	2.4	0.07
U-235	1.2	0.28	0.08	1.26	0.27	0.03
U-238	23.8	2.3	0.07	21.5	2.0	0.09

TPU – Total Propagated Uncertainty

No results are qualified based upon the laboratory duplicate precision. The RPDs are less than 40%.

The laboratory analyzed sample A04DMW704DD0002 Diss (F2B030480-011) as the laboratory duplicate pair for analytical batch 2038127.

Analyte	A04DMW704DD0002 Diss			A04DMW704DD0002 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	26.3	2.5	0.08	30.0	2.8	0.09
U-235	1.15	0.27	0.04	1.26	0.29	0.08
U-238	22.6	2.1	0.06	24.1	2.3	0.08

TPU – Total Propagated Uncertainty

No results are qualified based upon the laboratory duplicate precision. The RPDs are less than 40%.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A04BMW9006 Tot (F2B030480-005) Batch 2038119

U-232 Tracer concentration: 71.13 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.113 DPM

U-232 Tracer Gross Counts: 210

U-232 Tracer Background Counts: 1.75

U-232 Tracer net counts: 208.25

Count Time: 240 minutes

Detector Efficiency: 27.19%

U-232 Tracer recovered = $(208.25)/(240)(0.2719) = 3.191$ DPM

U-232 Tracer % Recovery = $(3.191 \text{ DPM}/7.113 \text{ DPM}) * 100 = 44.86\%$. The laboratory reported 44.82%.

The U-234 concentration for A04BMW9006 Tot (F2B030480-005) Batch 2038119

U-234 gross counts: 3271

U-234 background counts: 0.5000

U-234 net counts: 3270.50

Count time: 240 minutes

Detector Efficiency: 27.19%

Tracer Recovery: 44.82%

Sample volume: 0.5003 Liter

1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(3270.5)/(2.22)(0.5003)(240)(0.2719)(0.4482) = 100.6$ pCi/L. The laboratory reported 100.9 pCi/L.

The U-232 tracer recovery for A04BMW9006 Diss (F2B030480-012) Batch 2038127

295 Lower Flying Point Road ☐ Freeport ME 04032

Phone: (207) 865-1256 ☎ Fax: (207) 865-1256 ☐ Electronic Mail: KestrelET@comcast.net

U-232 Tracer concentration: 71.13 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.113 DPM
U-232 Tracer Gross Counts: 223
U-232 Tracer Background Counts: 2.00
U-232 Tracer net counts: 221.00
Count Time: 240 minutes
Detector Efficiency: 27.86%

U-232 Tracer recovered = $(221.00)/(240)(0.2786) = 3.305$ DPM
U-232 Tracer % Recovery = $(3.305 \text{ DPM}/7.113 \text{ DPM}) * 100 = 46.47\%$. The laboratory reported 44.42%.

The U-234 concentration for A04BMW9006 Diss (F2B030480-012) Batch 2038127

U-234 gross counts: 3115
U-234 background counts: 0.5000
U-234 net counts: 3114.50
Count time: 240 minutes
Detector Efficiency: 27.86%
Tracer Recovery: 46.42%
Sample volume: 0.5002 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(3114.5)/(2.22)(0.5002)(240)(0.2786)(0.4642) = 90.4$ pCi/L. The laboratory reported 90.6 pCi/L.

Using professional judgment the U-234 and U-238 results for A04BMW260002 Tot and A04BMW260002 Diss are qualified as estimated (J). These results are summarized below.

Analyte	A04BMW260002 Tot			A04BMW260002 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	39.7	3.7	0.1	48.4	4.5	0.1
U-238	38.3	3.6	0.05	48.4	4.5	0.1

The U-234 and U-238 results for the dissolved fractions are greater than the total fractions. The percent differences between the dissolved and total fractions exceed 20%.

Using professional judgment the U-234 results for A04BMW707DD0002 Tot and A04BMW707DD0002 Diss are qualified as estimated (J). These results are summarized below.

Analyte	A04DMW707DD0002 Tot			A04DMW707DD0002 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	7.76	0.98	0.08	14.5	1.6	0.1

The U-234 result for A04BMW707DD0002 Diss is nearly 2X the U-234 result for A04DMW707DD0002 Tot.

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F2B030480

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04BMW260002 Tot	Aqueous	J ¹ J ²
A04BMW707DD0002 Tot	Aqueous	J ¹
A04BMW605D0002 Tot FD 1	Aqueous	A
A04DMW704DD0002 Tot	Aqueous	A
A04BMW9006 Tot FD 1	Aqueous	A
A04DMW604D0002 Tot	Aqueous	A
A04DMW709DD0002 Tot	Aqueous	A
A04BMW260002 Diss	Aqueous	J ¹ J ²
A04BMW707DD0002 Diss	Aqueous	J ¹
A04BMW605D0002 Diss FD 2	Aqueous	A
A04DMW704DD0002 Diss	Aqueous	A
A04BMW9006 Diss FD 2	Aqueous	A
A04DMW604D0002 Diss	Aqueous	A
A04DMW709DD0002 Diss	Aqueous	A

A - Accept all data without qualification.

J¹ - Accept the U-234 result as estimated (J). The dissolved result is greater than the total result. The % difference between the dissolved and total result is greater than 20%.

J² - Accept the U-238 result as estimated (J). The dissolved result is greater than the total result. The % difference between the dissolved and total result is greater than 20%.



March 09, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City MO
Lab Work Order: F2B010413
Site Name: Guterl Steel
Samples Collected: 01/30/2012
8 Aqueous Samples

Total and Dissolved Uranium

Samples Collected: (Client IDs)

Sample ID	Sample ID	Sample ID	Sample ID
A04DMW710D0002 Diss	F2B010413-001	A04DMW710D0002 Tot	F2B010413-005
A04DMW710DD0002 Diss	F2B010413-002	A04DMW710DD0002 Tot	F2B010413-006
A04DMW713D0002 Diss	F2B010413-003	A04DMW713D0002 Tot	F2B010413-007
A04DMW708DD0002 Diss	F2B010413-004	A04DMW708DD0002 Tot	F2B010413-008
Tot- Total	Diss- Dissolved (field filtered)	FD- Field Duplicate	

Dear Mr. [REDACTED]

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
X		ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
X		Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The uranium results for A04DMW710D0002 Diss, A04DMW710DD0002 Diss, A04DMW713D0002 Diss, A04DMW708DD0002 Diss, A04DMW710D0002 Tot, A04DMW710DD0002 Tot, A04DMW713D0002 Tot and A04DMW708DD0002 Tot are qualified as estimated (J). The ICP-MS serial dilution % Difference is 11.2%. The reported results may be biased high.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for A04DMW713D0002 Diss is qualified as estimated (J). The reported result is between the MDL (0.23 ug/L) and 2X the MDL.

All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 01/30/2012. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery was 97.3%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04DMW710D0002 Diss was analyzed as the MS/MSD pair associated with preparation batch 2034044. The MS/MSD recoveries are 108.4% and 108.7% respectively.

All MS/MSD recoveries were within the 70-130% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 20\%$.

Sample A04DMW710D0002 Diss was analyzed as the MS/MSD pair associated with preparation batch 2034044. The MS/MSD RPD is 0.25%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

No field duplicate pair was reported in laboratory data package F2B010413.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 80-115%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. The IDL is 0.23 ug/L. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04DMW710D0002 Diss was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	57.8	51.3	11.2%	J

All uranium results are qualified as estimated (J) based upon ICP-MS serial dilution results. The reported results may be biased high.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for A04DMW713D0002 Diss is qualified as estimated (J). The reported result is between the MDL (0.23 ug/L) and 2X the MDL.

All total and dissolved results agree within 20%.

Calculations

Sample A04DMW710D0002 Diss, reported in laboratory data package F2B010413, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 57.8 ug/L

MS uranium concentration: 1140 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1140 \text{ ug/L} - 57.8 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 108.2\%$. The laboratory reported 108.4%.

Serial Dilution:

Sample uranium concentration: 57.8 ug/L

Serial dilution concentration of the 5X dilution: 51.3 ug/L

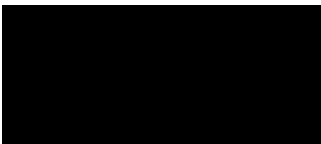
ICP-MS Serial Dilution Percent Difference = $((57.8 - 51.3) / (57.8)) * 100 = 11.2\%$. The laboratory reported 11.2%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

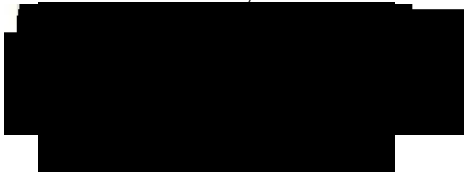
Sincerely,

Kestrel Environmental Technologies, Inc.



Validator

Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F2B010413

**Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04DMW710D0002 Diss	Aqueous	J ¹
A04DMW710DD0002 Diss	Aqueous	J ¹
A04DMW713D0002 Diss	Aqueous	J ¹ J ²
A04DMW708DD0002 Diss	Aqueous	J ¹
A04DMW710D0002 Tot	Aqueous	J ¹
A04DMW710DD0002 Tot	Aqueous	J ¹
A04DMW713D0002 Tot	Aqueous	J ¹
A04DMW708DD0002 Tot	Aqueous	J ¹

A - Accept all data without qualification.

J¹ Accept the uranium result as estimated (J). The ICP-MS serial dilution % Difference exceeds 10%. The reported results may be biased high.

J² Accept the uranium result as estimated (J). The reported result is between the MDL and 2X the MDL.



March 04, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2B030480
Site Name: Guterl Steel
Samples Collected: 02/01/2012
14 Aqueous Samples

Total and Dissolved Uranium

Sample ID	Sample ID	Sample ID	Sample ID
A04BMW260002 Tot	F2B030480-001	A04BMW260002 Diss	F2B030480-008
A04BMW707DD0002 Tot	F2B030480-002	A04BMW707DD0002 Diss	F2B030480-009
A04BMW605D0002 Tot FD1	F2B030480-003	A04BMW605D0002 Diss FD2	F2B030480-010
A04DMW704DD0002 Tot	F2B030480-004	A04DMW704DD0002 Diss	F2B030480-011
A04BMW9006 Tot FD1	F2B030480-005	A04BMW9006 Diss FD2	F2B030480-012
A04DMW604D0002 Tot	F2B030480-006	A04DMW604D0002 Diss	F2B030480-013
A04DMW709DD0002 Tot	F2B030480-007	A04DMW709DD0002 Diss	F2B030480-014

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear [REDACTED]

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September*

2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	NA	Field Duplicate Precision
X		ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

The uranium results for all samples are qualified as estimated (J). The ICP-MS serial dilution % Difference is 14.2%. The reported uranium results may be biased high.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 02/01/2012. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration was 1.0 ug/L. The CRDL recovery was is 90.0%

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL) 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04DMW704DD0002 Tot was analyzed as a MS/MSD pair associated with preparation batch 2037060. The MS/MSD recoveries are 107.9% and 119.6% respectively.

Sample A04DMW704DD0002 Diss was analyzed as a MS/MSD pair associated with preparation batch 2037060. The MS/MSD recoveries are 111.7% and 111.3% respectively.

All MS/MSD recoveries were within the 70-130% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 20\%$.

Sample A04DMW704DD0002 Tot was analyzed as a MS/MSD pair associated with preparation batch 2037060. The MS/MSD RPD is 9.6%.

Sample A04DMW704DD0002 Diss was analyzed as a MS/MSD pair associated with preparation batch 2037060. The MS/MSD RPD is 0.3%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A04BMW605D0002/A04BMW9006 total and dissolved fractions are two field duplicate pairs. The field duplicate RPDs are less than 50%. The RPDs are 0.3% and 0.7% respectively.

No results are qualified based upon the absence of field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 85-115%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. The IDL is 0.23 ug/L. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04DMW704DD0002 Tot was analyzed as the ICP-MS serial dilution sample. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
Uranium	81.3	69.7	14.2%	J

All uranium results are qualified as estimated (J) based upon ICP-MS serial dilution results. The reported results may be biased high.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

All total and dissolved results agree within 20%.

Calculations

Sample A04DMW704DD0002 Tot, reported in laboratory data package F2B0030480, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 81.3 ug/L

MS uranium concentration: 1160 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1160 \text{ ug/L} - 81.3 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 107.92\%$. The laboratory reported 107.9%.

Serial Dilution:

Sample uranium concentration: 81.3 ug/L

Serial dilution concentration of the 5X dilution: 69.7 ug/L

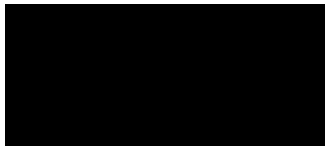
ICP-MS Serial Dilution Percent Difference = $((81.3 - 69.7) / (81.3)) * 100 = 14.2\%$. The laboratory reported 14.2%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

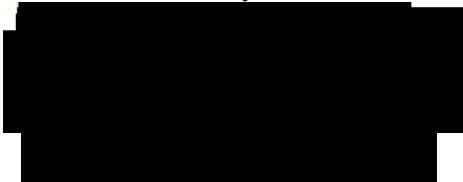
Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F2B030480

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04BMW260002 Tot	Aqueous	J ¹
A04BMW707DD0002 Tot	Aqueous	J ¹
A04BMW605D0002 Tot FD 1	Aqueous	J ¹
A04BMW704DD0002 Tot	Aqueous	J ¹
A04BMW9006 Tot FD 1	Aqueous	J ¹
A04DMW604D0002 Tot	Aqueous	J ¹
A04DMW709DD0002 Tot	Aqueous	J ¹
A04BMW260002 Diss	Aqueous	J ¹
A04BMW707DD0002 Diss	Aqueous	J ¹
A04BMW605D0002 Diss FD 2	Aqueous	J ¹
A04BMW704DD0002 Diss	Aqueous	J ¹
A04BMW9006 Diss FD 2	Aqueous	J ¹
A04DMW604D0002 Diss	Aqueous	J ¹
A04DMW709DD0002 Diss	Aqueous	J ¹

A - Accept all data without qualification.

J¹ Accept the uranium result as estimated (J). The ICP-MS serial dilution % Difference exceeds 10%. The reported results may be biased high.



June 13, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2E080406
Site Name: Guterl Steel
Samples Collected: 05/03/2012 and 05/04/2012
22 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Lab ID	Sample ID	Lab ID
A04DMW710D0003 Tot	F2E080406-001	A04DMW710D0003 Diss	F2E080406-012
A04DMW710DD0003 Tot	F2E080406-002	A04DMW710DD0003 Diss	F2E080406-013
A04DMW713D0003 Tot	F2E080406-003	A04DMW713D0003 Diss	F2E080406-014
A04DMW708DD0003 Tot	F2E080406-004	A04DMW708DD0003 Diss	F2E080406-015
DUP-01 Tot FDUP	F2E080406-005	DUP-01 Diss	F2E080406-016
A04BMW605D0003 Tot FDUP	F2E080406-006	A04BMW605D0003 Diss FDUP	F2E080406-017
A04BMW704DD0003 Tot	F2E080406-007	A04BMW704DD0003 Diss	F2E080406-018
A04BMW707DD0003 Tot	F2E080406-008	A04BMW707DD0003 Diss	F2E080406-019
A04BMW260003 Tot	F2E080406-009	A04BMW260003 Diss	F2E080406-020
A04DMW604D0003 Tot	F2E080406-010	A04DMW604D0003 Diss	F2E080406-021
A04DMW709DD0003 Tot	F2E080406-011	A04DMW709DD0003 Diss	F2E080406-022

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America, Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240)*. The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	X	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution
	X	Sample Quantitation Verification

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The laboratory narrative noted that all samples were prepared using 500 milliliter sample aliquots rather than 1.00 liter sample aliquots.

The minimal detectable concentrations (MDCs) are elevated for samples DUP-01 Tot, A04BMW605D0003 Tot, A04BMW260003 Tot, DUP-01 Diss and A04BMW605D0003 Diss. As noted in the narrative "The associated Uranium samples did not meet the client requested reporting limit due to the presence of the nuclide in the sample and reduced sample volume."

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present and intact on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 05/03/2012 and 05/04/2012. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 2130026 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2E090000-26B	-0.0019 U	0.0039	0.035	-0.9991
U-235	F2E090000-26B	-0.0048 U	0.0069	0.051	-1.4117
U-238	F2E090000-26B	0.021 U	0.027	0.035	1.586

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 2130027 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2E090000-27B	0.015 U	0.029	0.052	1.0670
U-235	F2E090000-27B	-0.0064 U	0.0074	0.050	-1.7275
U-238	F2E090000-27B	0.007 U	0.020	0.044	0.6664

MDA- Minimal Detectable Activity

All method blank results are reported as non-detected (U).

No results are qualified based upon method blank results.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2130026 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 93.6% and 101.8% respectively. U-235 is not a spiked isotope.

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2130027 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 101.2% and 103.2% respectively. U-235 is not a spiked isotope.

All LCS recoveries are within the QAPP acceptance criteria.

Matrix Spike Sample Results

The laboratory analyzed samples A04DMW604D0003 Tot (F2E080406-010) and A04DMW604D0003 Diss (F2E080406-021) as matrix spike/matrix spike duplicate pairs. U-235 is not a spiked isotope. All MS/MSD recoveries are within the laboratory derived recovery acceptance criteria. The U-234 laboratory derived acceptance criteria are 65-146% and the U-238 laboratory acceptance criteria are 68-143%.

A04DMW604D0003 Tot		
Radionuclide	MS % Rec	MSD % Rec
U-234	100%	131%
U-238	91%	121%

A04DMW604D0003 Diss		
Radionuclide	MS % Rec	MSD % Rec
U-234	100%	76%
U-238	96%	97%

No results are qualified based upon MS/MSD recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples DUP-01 Tot and A04BMW605D0003 Tot are a field duplicate pair. Results are summarized below.

Analyte	DUP-01 Tot			A04BMW605D0003 Tot		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	87.9	8.0	0.2	86.2	7.9	0.2
U-235	4.51	0.88	0.1	4.09	0.84	0.19
U-238	89.5	8.2	0.2	87.8	8.0	0.2

TPU – Total Propagated Uncertainty

Samples DUP-01 Diss and A04BMW605D0003 Diss are a field duplicate pair. Results are summarized below.

Analyte	DUP-01 Diss			A04BMW605D0003 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	80.6	7.3	0.2	90.2	8.3	0.2
U-235	3.63	0.73	0.14	4.37	0.89	0.10
U-238	77.9	7.1	0.07	89.6	8.2	0.2

TPU – Total Propagated Uncertainty

No results are qualified based upon the field duplicate results. All relative percent differences (RPDs) are less than 50%.

Laboratory Duplicates

The matrix spike/matrix spike duplicate results (MS/MSD) were analyzed as the laboratory duplicate pair. The relative percent differences are calculated from sample concentrations.

The laboratory analyzed sample A04DMW604D0003 Tot (F2E080406-10) as the laboratory MS/MSD pair for analytical batch 2130026.

Analyte	A04DMW604D0003 Tot MS			A04DMW604D0003 Tot MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	37.8	3.59	0.086	35.7	3.39	0.11
U-235	1.92	0.46	0.11	1.76	0.42	0.058
U-238	37.0	3.53	0.11	34.8	3.32	0.10

TPU – Total Propagated Uncertainty

No results are qualified based upon the MS/MSD duplicate precision. The relative percent differences (RPDs) are less than 40%.

The laboratory analyzed sample A04DMW604D0003 Tot (F2E080406-021) as the laboratory MS/MSD pair for analytical batch 2130027.

Analyte	A04DMW604D0003 Diss MSD			A04DMW604D0003 Diss MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	36.0	3.44	0.15	37.6	3.60	0.16
U-235	1.54	0.40	0.11	2.38	0.53	0.13
U-238	36.5	3.48	0.051	36.4	3.50	0.15

TPU – Total Propagated Uncertainty

No results are qualified based upon the MS/MSD duplicate precision. The RPDs are less than 40%.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A04DMW713D0003 Tot (F2E080406-003) Batch 2130026

U-232 Tracer concentration: 71.00 DPM/mL (DPM = disintegrations/minute)

U-232 Tracer volume: 0.10 mL

U-232 Tracer added: 7.100 DPM

U-232 Tracer Gross Counts: 395

U-232 Tracer Background Counts: 0.50

U-232 Tracer net counts: 394.5

Count Time: 240 minutes

Detector Efficiency: 28.22%

U-232 Tracer recovered = $(394.50)/(240)(0.2822) = 5.824$ DPM

U-232 Tracer % Recovery = $(5.824 \text{ DPM}/7.100 \text{ DPM}) * 100 = 82.03\%$. The laboratory reported 82.02%.

The U-234 concentration for A04DMW713D0003 Tot (F2E080406-003) Batch 2130026

U-234 gross counts: 5.00

U-234 background counts: 0.0000
U-234 net counts: 5.00
Count time: 240 minutes
Detector Efficiency: 28.22%
Tracer Recovery: 82.02%
Sample volume: 0.5002 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(5.00)/(2.22)(0.5002)(240)(0.2822)(0.8202)$ = 0.081 pCi/L. The laboratory reported 0.081 pCi/L.

The U-232 tracer recovery for A04DMW604D0003 Tot (F2E080406-010) Batch 2130026

U-232 Tracer concentration: 71.00 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.100 DPM
U-232 Tracer Gross Counts: 343
U-232 Tracer Background Counts: 0.750
U-232 Tracer net counts: 342.25
Count Time: 240 minutes
Detector Efficiency: 26.63%

U-232 Tracer recovered = $(342.25)/(240)(0.2663)$ = 5.355 DPM
U-232 Tracer % Recovery = $(5.355 \text{ DPM}/7.100 \text{ DPM}) * 100$ = 75.42%. The laboratory reported 75.38%.

The U-238 concentration for A04DMW604D0003 Tot (F2E080406-010) Batch 2130026

U-238 gross counts: 1543
U-238 background counts: 1.500
U-238 net counts: 1541.50
Count time: 240 minutes
Detector Efficiency: 26.63%
Tracer Recovery: 75.42%
Sample volume: 0.5004 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(1541.5)/(2.22)(0.5004)(240)(0.2663)(0.7542)$ = 28.78 pCi/L. The laboratory reported 28.80 pCi/L.

The U-232 tracer recovery for A04BMW260003 Diss (F2E080406-020) Batch 2130027

U-232 Tracer concentration: 71.00 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.100 DPM
U-232 Tracer Gross Counts: 279
U-232 Tracer Background Counts: 5.750

U-232 Tracer net counts: 273.25
Count Time: 240 minutes
Detector Efficiency: 26.19%

U-232 Tracer recovered = $(273.25)/(240)(0.2619) = 4.347$ DPM
U-232 Tracer % Recovery = $(4.347 \text{ DPM}/7.100 \text{ DPM}) * 100 = 61.23\%$. The laboratory reported 61.21%.

The U-238 concentration for A04BMW260003 Diss (F2E080406-020) Batch 2130027

U-238 gross counts: 2379
U-238 background counts: 0.250
U-238 net counts: 2378.75
Count time: 240 minutes
Detector Efficiency: 26.19%
Tracer Recovery: 61.22%
Sample volume: 0.5004 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(2378.75)/(2.22)(0.5004)(240)(0.2619)(0.6122) = 55.65$ pCi/L. The laboratory reported 55.67 pCi/L.

U-238 matrix spike recovery for A04DMW604D0003 Tot:
A04DMW604D0003 Tot U-238 concentration 28.8 pCi/L
A04DMW604D0003 Tot U-238 matrix spike concentration 37.02 pCi/L
U-238 spike concentration 6.7756 pCi/L
 $(37.02 \text{ pCi/L} - 28.8 \text{ pCi/L}) / (6.7756 \text{ pCi/L}) * 100 = 121.3\%$. The laboratory reported 121.2%.

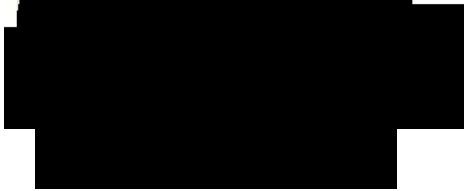
Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.


Validator

Reviewed By:



Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F2E080406

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04DMW710D0003 Tot	Aqueous	A
A04DMW710DD0003 Tot	Aqueous	A
A04DMW713D0003 Tot	Aqueous	A
A04DMW708DD0003 Tot	Aqueous	A
DUP-01 Tot FDUP	Aqueous	A
A04BMW605D0003 Tot FDUP	Aqueous	A
A04BMW704DD0003 Tot	Aqueous	A
A04BMW707DD0003 Tot	Aqueous	A
A04BMW260003 Tot	Aqueous	A
A04DMW604D0003 Tot	Aqueous	A
A04DMW709D0003 Tot	Aqueous	A
A04DMW710D0003 Diss	Aqueous	A
A04DMW710DD0003 Diss	Aqueous	A
A04DMW713D0003 Diss	Aqueous	A
A04DMW708DD0003 Diss	Aqueous	A
DUP-01 Diss FDUP	Aqueous	A
A04BMW605D0003 Diss FDUP	Aqueous	A
A04BMW704DD0003 Diss	Aqueous	A
A04BMW707DD0003 Diss	Aqueous	A
A04BMW260003 Diss	Aqueous	A
A04DMW604D0003 Diss	Aqueous	A
A04DMW709DD0003 Diss	Aqueous	A

A - Accept all data without qualification.



June 12, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2E080406
Site Name: Guterl Steel
Samples Collected: 05/03/2012 and 05/04/2012
22 Aqueous Samples

Total and Dissolved Uranium

Sample ID	Lab ID	Sample ID	Lab ID
A04DMW710D0003 Tot	F2E080406-001	A04DMW710D0003 Diss	F2E080406-012
A04DMW710DD0003 Tot	F2E080406-002	A04DMW710DD0003 Diss	F2E080406-013
A04DMW713D0003 Tot	F2E080406-003	A04DMW713D0003 Diss	F2E080406-014
A04DMW708DD0003 Tot	F2E080406-004	A04DMW708DD0003 Diss	F2E080406-015
DUP-01 Tot FDUP	F2E080406-005	DUP-01 Diss	F2E080406-016
A04BMW605D0003 Tot FDUP	F2E080406-006	A04BMW605D0003 Diss FDUP	F2E080406-017
A04BMW704DD0003 Tot	F2E080406-007	A04BMW704DD0003 Diss	F2E080406-018
A04BMW707DD0003 Tot	F2E080406-008	A04BMW707DD0003 Diss	F2E080406-019
A04BMW260003 Tot	F2E080406-009	A04BMW260003 Diss	F2E080406-020
A04DMW604D0003 Tot	F2E080406-010	A04DMW604D0003 Diss	F2E080406-021
A04DMW709DD0003 Tot	F2E080406-011	A04DMW709DD0003 Diss	F2E080406-022
Tot- Total	Diss- Dissolved (field filtered)	FD- Field Duplicate	

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America, Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of*

Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45 and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
X		Sample Quantitation Verification

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

Non-detected results are reported as non-detected (U) at the reporting limit (RL). The RL is adjusted for sample volume and sample dilution.

The uranium result for A04DMW713D0003 Tot is qualified as estimated (J). The reported result is between the method detection limit (MDL) and 2X the MDL.

All total and dissolved results agree within 20%.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples. Custody seals were present and intact on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 05/03/2012 and 05/04/2012. The condition upon receipt form indicates that aqueous metal samples were properly preserved. The pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recovery is 93.4%

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL), 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04DMW604D0003 Tot was analyzed as a MS/MSD pair associated with preparation batch 2131079. The MS/MSD recoveries are 96.4% and 96.8% respectively.

Sample A04DMW604D0003 Diss was analyzed as a MS/MSD pair associated with preparation batch 2131080. The MS/MSD recoveries are 93.9% and 97.5% respectively.

All MS/MSD recoveries are within the 70-130% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 20\%$.

Sample A04DMW604D0003 Tot was analyzed as a MS/MSD pair associated with preparation batch 2131079. The MS/MSD RPD is 0.4%.

Sample A04DMW604D0003 Diss was analyzed as a MS/MSD pair associated with preparation batch 2131080. The MS/MSD RPD is 3.5%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A04BMW605D0003/DUP-01 total and dissolved fractions are two field duplicate pairs. The field duplicate RPDs are less than 50%. The RPDs are 0.4% and 2.3% respectively.

No results are qualified based upon the field duplicate results.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 85-115%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. The IDL is 0.23 ug/L. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04DMW604D0003 Tot was analyzed as the ICP-MS serial dilution sample with batch 2131079. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

Sample A04DMW604D0003 Diss was analyzed as the ICP-MS serial dilution sample with batch 2131080. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon the serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125% and the laboratory acceptance criteria of 80-120%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the RL. The RL is adjusted for sample volume and sample dilution.

All total and dissolved results agree within 20%.

The uranium result for A04DMW713D0003 Total is qualified as estimated (J). The reported result is between the MDL and 2X the MDL.

Calculations

Sample A04DMW604D0003 Tot, reported in laboratory data package F2E080406, was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 86.5 ug/L

MS uranium concentration: 1050 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1050 \text{ ug/L} - 86.5 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 96.4\%$. The laboratory reported 96.4%.

Serial Dilution:

Sample uranium concentration: 86.5 ug/L

Serial dilution concentration of the 5X dilution: 79.1 ug/L

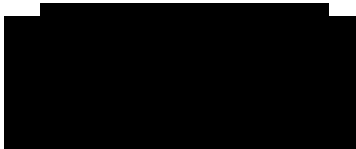
ICP-MS Serial Dilution Percent Difference = $((86.5 - 79.1) / (86.5)) * 100 = 8.55\%$. The laboratory reported 8.55%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

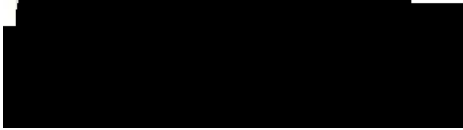
Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Reviewed By:



Deborah L. Smith

Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS US EPA
6020A

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F2E080406

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04DMW710D0003 Tot	Aqueous	A
A04DMW710DD0003 Tot	Aqueous	A
A04DMW713D0003 Tot	Aqueous	J ¹
A04DMW708DD0003 Tot	Aqueous	A
DUP-01 Tot FDUP	Aqueous	A
A04BMW605D0003 Tot FDUP	Aqueous	A
A04BMW704DD0003 Tot	Aqueous	A
A04BMW707DD0003 Tot	Aqueous	A
A04BMW260003 Tot	Aqueous	A
A04DMW604D0003 Tot	Aqueous	A
A04DMW709D0003 Tot	Aqueous	A
A04DMW710D0003 Diss	Aqueous	A
A04DMW710DD0003 Diss	Aqueous	A
A04DMW713D0003 Diss	Aqueous	A
A04DMW708DD0003 Diss	Aqueous	A
DUP-01 Diss FDUP	Aqueous	A
A04BMW605D0003 Diss FDUP	Aqueous	A
A04BMW704DD0003 Diss	Aqueous	A
A04BMW707DD0003 Diss	Aqueous	A
A04BMW260003 Diss	Aqueous	A
A04DMW604D0003 Diss	Aqueous	A
A04DMW709DD0003 Diss	Aqueous	A

A - Accept all data without qualification.

J¹- Accept the uranium result as estimated (J). The reported result is between the MDL and 2X the MDL.



October 01, 2012

Mr. Karl Van Keuren
Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2H090401
Site Name: Guterl Steel
Samples Collected: 08/03/2012 and 08/06/2012
22 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Lab ID	Sample ID	Lab ID
A04DMW713D0004 Tot	F2H090401-001	A04DMW713D0004 Diss	F2H090401-012
A04DMW708DD0004 Tot	F2H090401-002	A04DMW708DD0004 Diss	F2H090401-013
A04BMW704DD0004 Tot	F2H090401-003	A04BMW704DD0004 Diss	F2H090401-014
A04BMW605D0004 Tot FDUP	F2H090401-004	A04BMW605D0004 Diss FDUP	F2H090401-015
A04BMW260004 Tot	F2H090401-005	A04BMW260004 Diss	F2H090401-016
A04BMW707DD0004 Tot	F2H090401-006	A04BMW707DD0004 Diss	F2H090401-017
A04DMW604D0004 Tot	F2H090401-007	A04DMW604D0004 Diss	F2H090401-018
A04DMW709DD0004 Tot	F2H090401-008	A04DMW709DD0004 Diss	F2H090401-019
A04DMW710D0004 Tot	F2H090401-009	A04DMW710D0004 Diss	F2H090401-020
A04DMW710DD0004 Tot	F2H090401-010	A04DMW710DD0004 Diss	F2H090401-021
DUPLICATE 02 FDUP Tot	F2H090401-011	DUPLICATE 02 FDUP Diss	F2H090401-022

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

Dear Mr. Van Keuren,

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America, Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic*

Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240). The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	X	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

The laboratory narrative noted that all samples were prepared using 500 milliliter sample aliquots except for sample A04BMW704DD0004. The sample volume for A04BMW704DD0004 is 100 milliliters because of high total solids. The minimal detectable concentration (MDC) for A04BMW704DD0004 is elevated.

Samples F2H090401-003-007, 007MS, 007MSD, 010, 011, 015, 016, 018MS, 018MSD and 020-022 were analyzed using 400 minute count times. All other samples were analyzed using 240 minute count times.

All isotopic uranium results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were not recorded for all field samples. The sampling time for A04DMW604D0004 is not reported on the COC.

Custody seals were present and intact on the sample coolers. Custody seals were not present on the sample containers.

The laboratory reported the sample ID for laboratory ID F2H090401-007 as A04DMW604DD004 Tot and F2H090401-018 as A04DMW604D0004 Diss. The field ID as reported on the COC is A04DMW604D004. The laboratory narrative noted that the ID on the sample bottles was A04DMW604D0004. The field samplers confirmed that the correct ID is A04DMW604D0004. The data validation memo uses A04DMW604D0004. The sample ID was corrected on the EDD.

The field samplers confirmed that 3 other sample IDs on the COC are incorrect. The incorrect IDs are A04DMW709DD004, A04DMW710D004 and A04DMW710DD004. The correct IDs are A04DMW709DD0004, A04DMW710D0004 and A04DMW710DD0004. The data validation memo used the correct IDs. The sample IDs were corrected on the EDD. These corrections apply to the total and dissolved fractions.

Sample Preservation and Holding Times

Samples were collected on 08/03/2012 and 08/06/2012. The condition upon receipt form indicates that the aqueous metal samples for were not properly preserved. Sample A04BMW704DD0004 had a pH of 7 at sample receipt. The laboratory adjusted the pH to < 2 with nitric acid and allowed the sample to equilibrate for 24 hours prior to sample preparation. All other sample pHs were < 2.

The analytical holding time for the isotopic analyses was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 2226014 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2H130000-014B	0.013 U	0.022	0.035	1.217
U-235	F2H130000-014B	-0.0024 U	0.0048	0.043	-0.999
U-238	F2H130000-014B	0.0 U	0.0038	0.021	0.000

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 2226015 are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2H130000-015B	0.006 U	0.016	0.035	0.727
U-235	F2H130000-015B	-0.0 U	0.0048	0.026	0.000
U-238	F2H130000-015B	0.006 U	0.016	0.035	0.727

MDA- Minimal Detectable Activity

All method blank results are reported as non-detected (U).

No results are qualified based upon method blank results.

No equipment field blank samples were submitted.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2226014 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 109.8% and 99.7% respectively. U-235 is not a spiked isotope.

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2226015 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 100.6% and 98.5% respectively. U-235 is not a spiked isotope.

All LCS recoveries are within the QAPP acceptance criteria.

Matrix Spike Sample Results

The laboratory analyzed samples A04DMW604D0004 Tot (F2H090401-007) and A04DMW604D0004 Diss (F2H090401-018) as matrix spike/matrix spike duplicate pairs. U-235 is not a spiked isotope. All MS/MSD recoveries are not within the laboratory derived recovery acceptance criteria. The U-234 laboratory derived acceptance criteria are 65-146% and the U-238 laboratory acceptance criteria are 68-143%.

A04DMW604D0004 Tot		
Radionuclide	MS % Rec	MSD % Rec
U-234	50%	135%
U-238	51%	118%

A04DMW604D0004 Diss		
Radionuclide	MS % Rec	MSD % Rec
U-234	90%	71%
U-238	109%	88%

The MS recoveries for U-234 and U-238 for sample A04DMW604D0004 Tot are below the laboratory derived acceptance criteria. The MSD recoveries for A04DMW604D0004 Tot are within the laboratory derived acceptance criteria. The MS and MSD U-232 tracer recoveries are acceptable. The laboratory noted that the native sample concentration is greater than 4X the U-234 and U-238 spike concentrations. All MS/MSD RPDs are less than 20%. No results are qualified based upon MS/MSD recoveries.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples DUPLICATE 02 Tot (F2H090401-011) and A04BMW605D0004 Tot (F2H090401-04) are a field duplicate pair. Results are summarized below.

Analyte	DUPLICATE 02 Tot			A04BMW605D0004 Tot		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	80.5	7.1	0.1	85.8	7.6	0.1
U-235	3.88	0.65	0.06	3.75	0.66	0.06
U-238	78.7	7.0	0.09	82.6	7.3	0.05

TPU – Total Propagated Uncertainty

Samples DUPLICATE 02 Diss (F2H090401-022) and A04BMW605D0004 Diss (F2H090401-015) are a field duplicate pair. Results are summarized below.

Analyte	DUPLICATE 02 Diss			A04BMW605D0004 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	91.3	8.1	0.1	78.7	7.0	0.1
U-235	4.58	0.77	0.12	3.67	0.63	0.10
U-238	89.8	8.0	0.1	77.5	6.9	0.1

TPU – Total Propagated Uncertainty

No results are qualified based upon the field duplicate results. All relative percent differences (RPDs) are less than 50%.

Laboratory Duplicates

The matrix spike/matrix spike duplicate results (MS/MSD) were analyzed as the laboratory duplicate pair. The relative percent differences are calculated from sample concentrations.

The laboratory analyzed sample A04DMW604D0004 Tot (F2H090401-007) as the laboratory MS/MSD pair for analytical batch 2226014.

Analyte	A04DMW604D0004 Tot MS			A04DMW604D0004 Tot MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	43.9	3.98	0.034	38.4	3.49	0.098
U-235	2.06	0.401	0.082	1.69	0.35	0.091
U-238	43.2	3.92	0.090	38.7	3.52	0.115

TPU – Total Propagated Uncertainty

No results are qualified based upon the MS/MSD duplicate precision. The relative percent differences (RPDs) are less than 40%.

The laboratory analyzed sample A04DMW604D0004 Diss (F2H090401-018) as the laboratory MS/MSD pair for analytical batch 2226015.

Analyte	A04DMW604D0004 Diss MS			A04DMW604D0004 Diss MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	39.1	3.55	0.031	40.4	3.66	0.074
U-235	2.06	0.38	0.039	2.2	0.38	0.040
U-238	39.4	3.57	0.089	40.8	3.70	0.032

TPU – Total Propagated Uncertainty

No results are qualified based upon the MS/MSD duplicate precision. The RPDs are less than 40%.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A04DMW713D0004 Tot (F2H090401-001) Batch 2226014

U-232 Tracer concentration: 70.87 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.09 DPM
U-232 Tracer Gross Counts: 380
U-232 Tracer Background Counts: 1.50
U-232 Tracer net counts: 378.5
Count Time: 240 minutes
Detector Efficiency: 26.99%

U-232 Tracer recovered = $(378.50)/(240)(0.2699) = 5.843$ DPM
U-232 Tracer % Recovery = $(5.843 \text{ DPM}/7.09 \text{ DPM}) * 100 = 82.41\%$. The laboratory reported 82.46%.

The U-234 concentration for A04DMW713D0004 Tot (F2H090401-001) Batch 2226014

U-234 gross counts: 8.00
U-234 background counts: 0.5000
U-234 net counts: 7.5000
Count time: 240 minutes
Detector Efficiency: 26.99%
Tracer Recovery: 82.41%
Sample volume: 0.5001 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(7.500)/(2.22)(0.5001)(240)(0.2699)(0.8241) = 0.1263$ pCi/L. The laboratory reported 0.1267 pCi/L.

The U-232 tracer recovery for DUPLICATE 02 Tot (F2H090401-011) Batch 2226014

U-232 Tracer concentration: 70.87 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.09 DPM
U-232 Tracer Gross Counts: 394
U-232 Tracer Background Counts: 2.917
U-232 Tracer net counts: 391.08
Count Time: 400 minutes
Detector Efficiency: 27.07%

U-232 Tracer recovered = $(391.08)/(400)(0.2707) = 3.611$ DPM
U-232 Tracer % Recovery = $(3.611 \text{ DPM}/7.09 \text{ DPM}) * 100 = 50.94\%$. The laboratory reported 50.97%.

The U-238 concentration for DUPLICATE 02 Tot (F2H090401-011) Batch 2226014

U-238 gross counts: 4823
U-238 background counts: 0.4167

U-238 net counts: 4822.58
Count time: 400 minutes
Detector Efficiency: 27.07%
Tracer Recovery: 50.94%
Sample volume: 0.5004 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(4822.58)/(2.22)(0.5004)(400)(0.2707)(0.5094) = 78.70$ pCi/L. The laboratory reported 78.66 pCi/L.

The U-232 tracer recovery for A04DMW604D0004 Diss (F2H090401-018) Batch 2226015

U-232 Tracer concentration: 70.87 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.09 DPM
U-232 Tracer Gross Counts: 349
U-232 Tracer Background Counts: 1.000
U-232 Tracer net counts: 348
Count Time: 240 minutes
Detector Efficiency: 27.32%

U-232 Tracer recovered = $(348)/(240)(0.2732) = 5.307$ DPM

U-232 Tracer % Recovery = $(5.307 \text{ DPM}/7.09 \text{ DPM}) * 100 = 74.85\%$. The laboratory reported 74.90%.

The U-238 concentration for A04DMW604D0004 Diss (F2H090401-018) Batch 2226015

U-238 gross counts: 1826
U-238 background counts: 0.500
U-238 net counts: 1825.5
Count time: 240 minutes
Detector Efficiency: 27.32%
Tracer Recovery: 74.90%
Sample volume: 0.5004 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(1826.5)/(2.22)(0.5004)(240)(0.2732)(0.7485) = 33.50$ pCi/L. The laboratory reported 33.46 pCi/L.

U-238 matrix spike recovery for A04DMW604D0004 Tot (F2H090401-007):

A04DMW604D0004 Tot (F2H090401-007) U-238 concentration 35.2 pCi/L

A04DMW604D0004 Tot (F2H090401-007S) U-238 matrix spike concentration 43.20 pCi/L

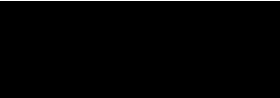
U-238 spike concentration 6.7756 pCi/L

$(43.2 \text{ pCi/L} - 35.2 \text{ pCi/L}) / (6.7756 \text{ pCi/L}) * 100 = 118.1\%$. The laboratory reported 118.3%.

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

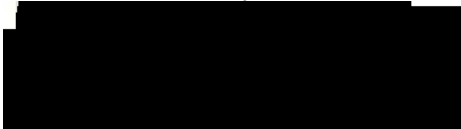
Sincerely,

Kestrel Environmental Technologies, Inc.



Timothy Lewis
Validator

Reviewed By:



Deborah L. Smith

Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F2H090401

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04DMW713D0004 Tot	Aqueous	A
A04DMW708DD0004 Tot	Aqueous	A
A04BMW704DD0004 Tot	Aqueous	A
A04BMW605D0004 Tot FDUP	Aqueous	A
A04BMW260004 Tot	Aqueous	A
A04BMW707DD0004 Tot	Aqueous	A
A04DMW604D0004 Tot	Aqueous	A
A04DMW709DD0004 Tot	Aqueous	A
A04DMW710D0004 Tot	Aqueous	A
A04DMW710DD0004 Tot	Aqueous	A
DUPLICATE 02 FDUP Tot	Aqueous	A
A04DMW713D0004 Diss	Aqueous	A
A04DMW708DD0004 Diss	Aqueous	A
A04BMW704DD0004 Diss	Aqueous	A
A04BMW605D0004 Diss FDUP	Aqueous	A
A04BMW260004 Diss	Aqueous	A
A04BMW707DD0004 Diss	Aqueous	A
A04DMW604D0004 Diss	Aqueous	A
A04DMW709DD0004 Diss	Aqueous	A
A04DMW710D0004 Diss	Aqueous	A
A04DMW710DD0004 Diss	Aqueous	A
DUPLICATE 02 FDUP Diss	Aqueous	A

A - Accept all data without qualification.



October 09, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2H090401
Site Name: Guterl Steel
Samples Collected: 08/03/2012 and 08/06/2012
22 Aqueous Samples

Total and Dissolved Uranium

Sample ID	Lab ID	Sample ID	Lab ID
A04DMW713D0004 Tot	F2H090401-001	A04DMW713D0004 Diss	F2H090401-012
A04DMW708DD0004 Tot	F2H090401-002	A04DMW708DD0004 Diss	F2H090401-013
A04BMW704DD0004 Tot	F2H090401-003	A04BMW704DD0004 Diss	F2H090401-014
A04BMW605D0004 Tot	F2H090401-004	A04BMW605D0004 Diss	F2H090401-015
FDUP		FDUP	
A04BMW260004 Tot	F2H090401-005	A04BMW260004 Diss	F2H090401-016
A04BMW707DD0004 Tot	F2H090401-006	A04BMW707DD0004 Diss	F2H090401-017
A04DMW604D0004 Tot	F2H090401-007	A04DMW604D0004 Diss	F2H090401-018
A04DMW709DD0004 Tot	F2H090401-008	A04DMW709DD0004 Diss	F2H090401-019
A04DMW710D0004 Tot	F2H090401-009	A04DMW710D0004 Diss	F2H090401-020
A04DMW710DD0004 Tot	F2H090401-010	A04DMW710DD0004 Diss	F2H090401-021
DUPLICATE 02 FDUP	F2H090401-011	DUPLICATE 02 FDUP	F2H090401-022
Tot		Diss	

Tot- Total

Diss- Dissolved (field filtered)

FD- Field Duplicate

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America, Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

All results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were not recorded for all field samples. The sampling time for A04DMW604D0004 is not reported on the COC.

Custody seals were present and intact on the sample coolers. Custody seals were not present on the sample containers.

The laboratory reported the sample ID for laboratory ID F2H090401-007 as A04DMW604DD004 Tot and F2H090401-018 as A04DMW604D0004 Diss. The field ID as reported on the COC is A04DMW604D004. The laboratory narrative noted that the ID on the sample bottles was A04DMW604D0004. The field samplers confirmed that the correct ID is A04DMW604D0004. The data validation memo uses A04DMW604D0004. The sample ID was corrected on the EDD.

The COC noted that the laboratory did not receive a sample bottle for A04BMW707DD0004 total uranium. The client used an aliquot from the total isotopic uranium sample.

The field samplers confirmed that 3 other sample IDs on the COC were incorrect. The incorrect IDs are A04DMW709DD004, A04DMW710D004 and A04DMW710DD004. The correct IDs are A04DMW709DD0004, A04DMW710D0004 and A04DMW710DD0004. The data validation memo used the correct IDs. The sample IDs were corrected on the EDD. These corrections apply to both the total and dissolved fractions.

Sample Preservation and Holding Times

Samples were collected on 08/03/2012 and 08/06/2012. The condition upon receipt form indicates that the aqueous metal samples for were not properly preserved. Sample A04BMW704DD004 had a pH of 7 at sample receipt. The laboratory adjusted the pH to < 2 with nitric acid and allowed the sample to equilibrate for 24 hours prior to sample preparation. All other sample pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. The analytical holding time was met. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recoveries were 100% and 96%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL), 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04DMW604D0004 Tot was analyzed as a MS/MSD pair associated with preparation batch 2223062. The MS/MSD recoveries are 97.6% and 99.3% respectively.

Sample A04DMW604D0004 Diss was analyzed as a MS/MSD pair associated with preparation batch 2223063. The MS/MSD recoveries are 97.0% and 96.8% respectively.

All MS/MSD recoveries are within the 70-130% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to

determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 20\%$.

Sample A04DMW604D0004 Tot was analyzed as a MS/MSD pair associated with preparation batch 2223062. The MS/MSD RPD is 1.6%.

Sample A04DMW604D0004 Diss was analyzed as a MS/MSD pair associated with preparation batch 2223063. The MS/MSD RPD is 0.2%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A04BMW605D0004 and DUPLICATE 02, total and dissolved fractions, are two field duplicate pairs. The field duplicate RPDs are less than 50%. The RPDs are 1.9% and 0.0% respectively.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 85-115%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. The IDL is 0.23 ug/L. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04DMW604D0004 Tot was analyzed as the ICP-MS serial dilution sample with batch 2223062. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

Sample A04DMW604D0004 Diss was analyzed as the ICP-MS serial dilution sample with batch 2223063. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon the serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the RL. The RL is adjusted for sample volume and sample dilution.

In those circumstances where dissolved results are greater than total results no total and dissolved results differ by more than 20%.

Calculations

Sample A04DMW604D0004 Tot (F2H090401-007), reported in laboratory data package F2H090401 (batch 2223062), was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 108 ug/L

MS uranium concentration: 1083 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1083 \text{ ug/L} - 108 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 97.5\%$. The laboratory reported 97.6%.

Serial Dilution:

Sample uranium concentration: 108 ug/L

Serial dilution concentration of the 5X dilution: $(20.74 \text{ ug/L} * 5) = 103.7 \text{ ug/L}$

ICP-MS Serial Dilution Percent Difference = $((108 - 103.7) / (108)) * 100 = 3.98\%$. The laboratory reported 3.94%.

Sample A04DMW604D0004 Diss (F2H090401-018), reported in laboratory data package F2H090401 (batch 2223063), was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Duplicate Recovery:

Sample uranium concentration: 105 ug/L

MS uranium concentration: 1073 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1073 \text{ ug/L} - 105 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 96.8\%$. The laboratory reported 96.8%.

Serial Dilution:

Sample uranium concentration: 105.1 ug/L

Serial dilution concentration of the 5X dilution: $(21.36 \text{ ug/L} * 5) = 106.8 \text{ ug/L}$

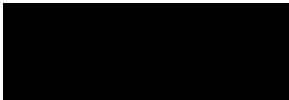
ICP-MS Serial Dilution Percent Difference = $((105.1 - 106.8) / (105.1)) * 100 = 1.7\%$. The laboratory reported 1.6%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

Sincerely,

Kestrel Environmental Technologies, Inc.



Timothy Lewis
Validator

Reviewed By:



Deborah L. Smith

Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS US EPA 6020A

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F2H090401

Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary

Sample ID	Matrix	Qualifier
A04DMW713D0004 Tot	Aqueous	A
A04DMW708DD0004 Tot	Aqueous	A
A04BMW704DD0004 Tot	Aqueous	A
A04BMW605D0004 Tot FDUP	Aqueous	A
A04BMW260004 Tot	Aqueous	A
A04BMW707DD0004 Tot	Aqueous	A
A04DMW604D0004 Tot	Aqueous	A
A04DMW709DD0004 Tot	Aqueous	A
A04DMW710D0004 Tot	Aqueous	A
A04DMW710DD0004 Tot	Aqueous	A
DUPLICATE 02 FDUP Tot	Aqueous	A
A04DMW713D0004 Diss	Aqueous	A
A04DMW708DD0004 Diss	Aqueous	A
A04BMW704DD0004 Diss	Aqueous	A
A04BMW605D0004 Diss FDUP	Aqueous	A
A04BMW260004 Diss	Aqueous	A
A04BMW707DD0004 Diss	Aqueous	A
A04DMW604D0004 Diss	Aqueous	A
A04DMW709DD0004 Diss	Aqueous	A
A04DMW710D0004 Diss	Aqueous	A
A04DMW710DD0004 Diss	Aqueous	A
DUPLICATE 02 FDUP Diss	Aqueous	A

A - Accept all data without qualification.



November 30, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2J250431
Site Name: Guterl Steel
Samples Collected: 10/22/2012, 10/23/2012 and 10/24/2012
22 Aqueous Samples

Isotopic Uranium

Samples Collected: (Client IDs)

Sample ID	Lab ID	Sample ID	Lab ID
A04BMW704DD0005 Tot	F2J250431-001	A04BMW704DD0005 Diss	F2J250431-012
A04DMW710D0005 Tot	F2J250431-002	A04DMW710D0005 Diss	F2J250431-013
A04DMW708DD0005 Tot	F2J250431-003	A04DMW708DD0005 Diss	F2J250431-014
A04DMW710DD0005 Tot	F2J250431-004	A04DMW710DD0005 Diss	F2J250431-015
A04DMW713D0005 Tot	F2J250431-005	A04DMW713D0005 Diss	F2J250431-016
A04DMW604D0005 Tot	F2J250431-006	A04DMW604D0005 Diss	F2J250431-017
FDUP		FDUP	
DUPLICATE 03 Tot	F2J250431-007	DUPLICATE 03 Diss	F2J250431-018
FDUP		FDUP	
A04DMW709DD0005 Tot	F2J250431-008	A04DMW709DD0005 Diss	F2J250431-019
A04BMW707DD0005 Tot	F2J250431-009	A04BMW707DD0005 Diss	F2J250431-020
A04BMW605D0005 Tot	F2J250431-010	A04BMW605D0005 Diss	F2J250431-021
A04BMW260005 Tot	F2J250431-011	A04BMW260005 Diss	F2J250431-022

Tot- Total

Diss- Dissolved (field filtered)

FDUP- Field Duplicate

A data evaluation was performed on the isotopic uranium analytical data from total and dissolved samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America, Earth City, MO, reported that the samples were prepared in accordance with Department of Energy (DOE) Health and Safety Laboratories-300 (HASL) Alpha Spectroscopy according to laboratory standard operating procedure (SOP) *Isotopic*

Uranium, Americium, Curium, Plutonium, Thorium and Uranium in Various Matrices by EIChroM® Separation Resins (STL-RC-240). The target radionuclides are U-234, U-235 and U-238. The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007*, the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) 2004* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	Initial Calibrations
	X	Initial Calibration Verifications
	X	Daily Pulser Checks
	X	Blank Results
	X	Sample Specific Tracer Recoveries
	X	Laboratory Control Samples
	X	Matrix Spike Results
	X	Field Replicate Results
	X	Laboratory Duplicate Results
	X	Radionuclide Quantitation and Minimal Detectable Activities
	X	Spectrometry Resolution
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the total and dissolved isotopic uranium analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site. Dissolved samples were field filtered.

All samples were prepared using 500 milliliter sample aliquots.

Sample A04DMW713D0005 Tot was analyzed using an 800 minute count time. All other total sample aliquots were analyzed using 400 minute counts. All dissolved sample aliquots were analyzed using 600 minute count times.

The laboratory narrative noted that the contract required detection limits for A04BMW605D0005 Tot, A04BMW260005 Tot and A04BMW605D0005 Diss were not met. These samples had high activities above the minimal detectable concentration (MDC).

All isotopic uranium results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples except the blind field duplicate samples; DUPLICATE 03 Total and Dissolved fractions.

Custody seals were present and intact on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 10/22/2012, 10/23/2012 and 10/24/2012. The condition upon receipt form indicates that the aqueous metal samples for were not properly preserved. Sample A04DMW713D0005 Tot had a pH of 7 at sample receipt. The laboratory adjusted the pH to < 2 with nitric acid and allowed the sample to equilibrate for 24 hours prior to sample preparation. All other sample pHs were < 2.

The analytical holding time for the isotopic analyses was met.

No results are qualified based upon sample preservation and analytical holding times.

Initial Calibration Results

All criteria were met.

Alpha Spectroscopy Background

All criteria were met.

Daily Pulser Checks

All criteria were met.

Laboratory and Field Blank Analyses

Aqueous method blank results associated with preparation batch 2300025 total are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2J260000-025B	0.0024	0.0089	0.022	0.5383
U-235	F2J260000-025B	0.010	0.015	0.014	1.4117
U-238	F2J260000-025B	0.0066	0.012	0.022	1.0729

MDA- Minimal Detectable Activity

Aqueous method blank results associated with preparation batch 2306013 dissolved are summarized below.

Radionuclide	Sample ID	Conc pCi/L	Total Uncertainty pCi/L	MDA pCi/L	Z-Factor
U-234	F2K010000-013B	0.0066	0.017	0.032	0.7785
U-235	F2K010000-013B	-0.0032	0.011	0.031	-0.5935
U-238	F2K010000-013B	-0.020	0.021	0.050	-1.9441

MDA- Minimal Detectable Activity

All method blank results are reported as non-detected (U).

No results are qualified based upon method blank results.

No equipment field blank samples were submitted.

Sample Specific Chemical Tracer Recoveries

The laboratory did tabulate the radioisotope tracer recoveries on the report of analyses form 1s. The tracer acceptance range is 40%-110%. Results associated with tracer recoveries less than 40% and greater than 20% are qualified as estimated (J). Results associated with tracer recoveries less than 20% are qualified as rejected (R). Tracer recoveries that are not within the 40%-110% acceptance criteria are summarized below.

Sample ID	Tracer Recovery
None	

No results are qualified based upon tracer recoveries.

Laboratory Control Samples

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2300025 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 101.2% and 109.8% respectively. U-235 is not a spiked isotope.

LCS recoveries that exceed the laboratory derived acceptance criteria for preparation batch 2306013 are summarized below.

Radionuclide	STF ID	Lab ID	% Deviation Range	% Deviation
None				

The U-234 and U-238 LCS recoveries are 100.1% and 98.9% respectively. U-235 is not a spiked isotope.

All LCS recoveries are within the QAPP acceptance criteria. The laboratory derived acceptance criteria are 84-120% for U-234 and 83-121% for U-238.

Matrix Spike Sample Results

The laboratory analyzed samples A04DMW604D0005 Tot (F2J250431-006) and A04DMW604D0005 Diss (F2J250431-017) as matrix spike/matrix spike duplicate pairs. U-235 is not a spiked isotope. All MS/MSD recoveries are not within the laboratory derived recovery acceptance criteria. The U-234 laboratory derived acceptance criteria are 65-146% and the U-238 laboratory acceptance criteria are 68-143%.

A04DMW604D0005 Tot		
Radionuclide	MS % Rec	MSD % Rec
U-234	74.4%	79.3%
U-238	94.4%	101.1%

A04DMW604D0005 Diss		
Radionuclide	MS % Rec	MSD % Rec
U-234	150.4%	144.4%
U-238	120.9%	152.6%

The MS recovery for U-234 for sample A04DMW604D0005 Diss is above the laboratory derived acceptance criteria. The MSD recovery for U-238 for sample A04DMW604D0005 Diss is above the laboratory derived acceptance criteria. The MS and MSD U-232 tracer recoveries are acceptable. The laboratory noted that the native sample concentration is greater than 4X the U-234 and U-238 spike concentrations.

Using professional judgment no results are qualified based upon MS/MSD recoveries. Trace recoveries were within the acceptance criteria and the MS/MSD results for the total fractions are within the method acceptance criteria.

The laboratory re-extracted and re-analyzed the sample batch associated the high MS/MSDs. All results are reported from the re-extraction re-analyses.

All MS/MSD RPDs are less than 20%.

Field Replicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples DUPLICATE 03 Tot (F2J250431-007) and A04DMW604D0005 Tot (F2J250431-006) are a field duplicate pair. Results are summarized below.

Analyte	DUPLICATE 03 Tot			A04DMW604D0005 Tot		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	33.6	3.1	0.092	36.1	3.3	0.077
U-235	2.1	0.38	0.086	1.65	0.35	0.042
U-238	34.5	3.2	0.078	35.4	3.3	0.065

TPU – Total Propagated Uncertainty

Samples DUPLICATE 03 Diss (F2J250431-018) and A04DMW604D0005 Diss (F2J250431-017) are a field duplicate pair. Results are summarized below.

Analyte	DUPLICATE 03 Diss			A04DMW604D0005 Diss		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	34.6	3.1	0.058	32.2	2.9	0.059
U-235	1.8	0.29	0.023	1.7	0.28	0.064
U-238	34.3	3.0	0.050	32.6	2.9	0.058

TPU – Total Propagated Uncertainty

No results are qualified based upon the field duplicate results. All relative percent differences (RPDs) are less than 50%.

Laboratory Duplicates

The matrix spike/matrix spike duplicate results (MS/MSD) were analyzed as the laboratory duplicate pair. The relative percent differences are calculated from sample concentrations.

The laboratory analyzed sample A04DMW604D0005 Tot (F2J250431-006) as the laboratory MS/MSD pair for analytical batch 2300025.

Analyte	A04DMW604D0005 Tot MS			A04DMW604D0005 Tot MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	41.0	3.73	0.099	41.3	3.76	0.097
U-235	2.11	0.41	0.083	2.46	0.44	0.098
U-238	41.8	3.80	0.098	42.3	3.84	0.129

TPU – Total Propagated Uncertainty

No results are qualified based upon the MS/MSD duplicate precision. The relative percent differences (RPDs) are less than 40%.

The laboratory analyzed sample A04DMW604D0005 Diss (F2J250431-017) as the laboratory MS/MSD pair for analytical batch 2306013.

Analyte	A04DMW604D0005 Diss MS			A04DMW604D0005Diss MSD		
	Result pCi/L	TPU	MDA	Result pCi/L	TPU	MDA
U-234	42.0	3.72	0.022	41.6	3.69	0.062
U-235	2.11	0.34	0.028	1.97	0.33	0.028
U-238	40.8	3.62	0.061	43.0	3.80	0.022

TPU – Total Propagated Uncertainty

No results are qualified based upon the MS/MSD duplicate precision. The RPDs are less than 40%.

Radionuclide Quantitation and Implied Detection Limits

The laboratory reported the results with analytical uncertainties.

Some results are reported as negative results. Based upon *US Army Corp Guidance "USACE, RADIONUCLIDE DATA QUALITY EVALUATION GUIDANCE, May 2009"* "Negative results that have uncertainties greater than the absolute value of the result, qualify the result "U" and "for negative results that have uncertainties smaller than their absolute value, qualify the data "R" as rejected." These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

All reported negative results are qualified as non-detected (U) or non-detected estimated (UJ). No negative results are qualified based upon the analytical uncertainties.

If a result is greater than its MDA, but less than its uncertainty, the probability that the result is greater than the MDA is greater than the probability that the result is less than the MDA. These results are qualified as estimated (J). These results are summarized below.

Sample ID	Radionuclide	Result pCi/L	2 Sigma	MDA
None				

Spectrometry Resolution

Alpha spectra for all field samples and QC samples were reviewed. Peaks for the field samples are properly identified, well defined and adequately resolved.

No results are qualified due to spectral resolution.

Calculations

The U-232 tracer recovery for A04DMW708DD0005 Tot (F2J250431-003) Batch 2300025

U-232 Tracer concentration: 70.78 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.08 DPM
U-232 Tracer Gross Counts: 628
U-232 Tracer Background Counts: 0.4167
U-232 Tracer net counts: 627.5
Count Time: 400 minutes
Detector Efficiency: 27.73%

U-232 Tracer recovered = $(627.50)/(400)(0.2773) = 5.657$ DPM
U-232 Tracer % Recovery = $(5.657 \text{ DPM}/7.08 \text{ DPM}) * 100 = 79.90\%$. The laboratory reported 80.00%.

The U-234 concentration for A04DMW708DD0005 Tot (F2J250431-003) Batch 2300025

U-234 gross counts: 651
U-234 background counts: 2.9167
U-234 net counts: 648
Count time: 400 minutes
Detector Efficiency: 27.73%
Tracer Recovery: 80.00%
Sample volume: 0.5003 Liter
1 picocurie = 2.22 counts/minute

U-234 Concentration: = $(648)/(2.22)(0.5003)(400)(0.2773)(0.8000) = 6.58$ pCi/L. The laboratory reported 6.59 pCi/L.

The U-232 tracer recovery for DUPLICATE 02 Tot (F2H090401-011) Batch 2226014

U-232 Tracer concentration: 70.87 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.09 DPM
U-232 Tracer Gross Counts: 394
U-232 Tracer Background Counts: 2.917
U-232 Tracer net counts: 391.08
Count Time: 400 minutes
Detector Efficiency: 27.07%

U-232 Tracer recovered = $(391.08)/(400)(0.2707) = 3.611$ DPM
U-232 Tracer % Recovery = $(3.611 \text{ DPM}/7.09 \text{ DPM}) * 100 = 50.94\%$. The laboratory reported 50.97%.

The U-238 concentration for DUPLICATE 02 Tot (F2H090401-011) Batch 2226014

U-238 gross counts: 4823
U-238 background counts: 0.4167

U-238 net counts: 4822.58
Count time: 400 minutes
Detector Efficiency: 27.07%
Tracer Recovery: 50.94%
Sample volume: 0.5004 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(4822.58)/(2.22)(0.5004)(400)(0.2707)(0.5094) = 78.70$ pCi/L. The laboratory reported 78.66 pCi/L.

The U-232 tracer recovery for A04DMW708DD0005 Diss (F2J250431-014) Batch 2306013

U-232 Tracer concentration: 70.78 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.08 DPM
U-232 Tracer Gross Counts: 989
U-232 Tracer Background Counts: 8.125
U-232 Tracer net counts: 980.9
Count Time: 600 minutes
Detector Efficiency: 28.58%

U-232 Tracer recovered = $(980.9)/(600)(0.2858) = 5.720$ DPM
U-232 Tracer % Recovery = $(5.720 \text{ DPM}/7.08 \text{ DPM}) * 100 = 80.79\%$. The laboratory reported 80.90%.

The U-238 concentration for A04DMW708DD0005 Diss (F2J250431-014) Batch 2306013

U-238 gross counts: 991
U-238 background counts: 3.750
U-238 net counts: 987.25
Count time: 600 minutes
Detector Efficiency: 28.58%
Tracer Recovery: 80.90%
Sample volume: 0.5002 Liter
1 picocurie = 2.22 counts/minute

U-238 Concentration: = $(987.25)/(2.22)(0.5002)(600)(0.2858)(0.8090) = 6.41$ pCi/L. The laboratory reported 6.41 pCi/L.

The U-232 tracer recovery for A04DMW604D0005 Diss (F2J250431-017S) Batch 2306013

U-232 Tracer concentration: 70.78 DPM/mL (DPM = disintegrations/minute)
U-232 Tracer volume: 0.10 mL
U-232 Tracer added: 7.08 DPM
U-232 Tracer Gross Counts: 766
U-232 Tracer Background Counts: 0.000
U-232 Tracer net counts: 766

Count Time: 600 minutes
Detector Efficiency: 27.69%

U-232 Tracer recovered = $(766)/(600)(0.2769) = 4.610$ DPM
U-232 Tracer % Recovery = $(4.610 \text{ DPM}/7.08 \text{ DPM}) * 100 = 65.11\%$. The laboratory reported 65.20%.

The U-238 concentration for A04DMW604D0005 Diss (F2J250431-017S) Batch 2306013

U-238 gross counts: 4913
U-238 background counts: 1.25
U-238 net counts: 4911.75
Count time: 600 minutes
Detector Efficiency: 27.69%
Tracer Recovery: 65.20%
Sample volume: 0.5004 Liter
1 picocurie = 2.22 counts/minute

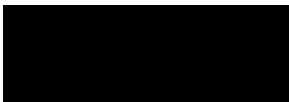
U-238 Concentration: = $(4911.75)/(2.22)(0.5004)(600)(0.2769)(0.6520) = 40.81$ pCi/L. The laboratory reported 40.81 pCi/L.

U-238 matrix spike recovery for A04DMW604D0005 Diss (F2J250431-017S):
A04DMW604D0005 Diss (F2J250431-017) U-238 concentration 32.6 pCi/L
A04DMW604D0005 Diss (F2J250431-017S) U-238 matrix spike concentration 40.8 pCi/L
U-238 spike concentration 6.7756 pCi/L
 $(40.8 \text{ pCi/L} - 32.6 \text{ pCi/L}) / (6.7756 \text{ pCi/L}) * 100 = 121.0\%$. The laboratory reported 120.9%.

Table 1 summarizes the evaluated aqueous sample results. Result tables are appended to this submittal. Qualifiers were entered onto the laboratory submitted EDD and the qualified data tables were submitted to Shaw Environmental and Infrastructure electronically.

Sincerely,

Kestrel Environmental Technologies, Inc.



Timothy Lewis
Validator

Reviewed By:



Deborah L. Smith

Attachments: Table 1 Uranium Isotope results

Guterl Specialty Steel
F2J250431

**Table 1 – Total and Dissolved Isotopic Uranium
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04BMW704DD0005 Tot	Aqueous	A
A04DMW710D0005 Tot	Aqueous	A
A04DMW708DD0005 Tot	Aqueous	A
A04DMW710DD0005 Tot	Aqueous	A
A04DMW713D0005 Tot	Aqueous	A
A04DMW604D0005 Tot FDUP	Aqueous	A
DUPLICATE 03 Tot FDUP	Aqueous	A
A04DMW709DD0005 Tot	Aqueous	A
A04BMW707DD0005 Tot	Aqueous	A
A04BMW605D0005 Tot	Aqueous	A
A04BMW260005 Tot	Aqueous	A
A04BMW704DD0005 Diss	Aqueous	A
A04DMW710D0005 Diss	Aqueous	A
A04DMW708DD0005 Diss	Aqueous	A
A04DMW710DD0005 Diss	Aqueous	A
A04DMW713D0005 Diss	Aqueous	A
A04DMW604D0005 Diss FDUP	Aqueous	A
DUPLICATE 03 Diss FDUP	Aqueous	A
A04DMW709DD0005 Diss	Aqueous	A
A04BMW707DD0005 Diss	Aqueous	A
A04BMW605D0005 Diss	Aqueous	A
A04BMW260005 Diss	Aqueous	A

A - Accept all data without qualification.



November 21, 2012

Shaw E&I
5050 Section Avenue
Cincinnati, Ohio 45212

From: Kestrel Environmental Technologies, Inc.

RE: Project No.: 140416
Purchase Order No.: 714182
Lab Name: Test America, Earth City, MO
Lab Work Order: F2J250431
Site Name: Guterl Steel
Samples Collected: 10/22/2012, 10/23/2012 and 10/24/2012
22 Aqueous Samples

Total and Dissolved Uranium

Samples Collected: (Client IDs)

Sample ID	Lab ID	Sample ID	Lab ID
A04BMW704DD0005 Tot	F2J250431-001	A04BMW704DD0005 Diss	F2J250431-012
A04DMW710D0005 Tot	F2J250431-002	A04DMW710D0005 Diss	F2J250431-013
A04DMW708DD0005 Tot	F2J250431-003	A04DMW708DD0005 Diss	F2J250431-014
A04DMW710DD0005 Tot	F2J250431-004	A04DMW710DD0005 Diss	F2J250431-015
A04DMW713D0005 Tot	F2J250431-005	A04DMW713D0005 Diss	F2J250431-016
A04DMW604D0005 Tot	F2J250431-006	A04DMW604D0005 Diss	F2J250431-017
FDUP		FDUP	
DUPLICATE 03 Tot	F2J250431-007	DUPLICATE 03 Diss	F2J250431-018
FDUP		FDUP	
A04DMW709DD0005 Tot	F2J250431-008	A04DMW709DD0005 Diss	F2J250431-019
A04BMW707DD0005 Tot	F2J250431-009	A04BMW707DD0005 Diss	F2J250431-020
A04BMW605D0005 Tot	F2J250431-010	A04BMW605D0005 Diss	F2J250431-021
A04BMW260005 Tot	F2J250431-011	A04BMW260005 Diss	F2J250431-022

Tot- Total

Diss- Dissolved (field filtered)

FDUP- Field Duplicate

A data evaluation was performed on the total uranium analyses, both total and dissolved fractions, from samples collected by Shaw Environmental and Infrastructure at the Guterl Steel site.

The laboratory, Test America, Earth City, MO, reported that the samples were prepared in accordance with US EPA SW-846 Method 3010 Modified (acid digestion). Total and dissolved uranium results were determined in accordance with US EPA SW-846 Method 6020A; Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The dissolved samples were field filtered.

The data evaluation was conducted in accordance with the *Former Guterl Specialty Steel Corporation, Lockport, NY, Quality Assurance Project Plan (QAPP) June 2007, Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 SOP # HW-2, September 2006, US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (OSWER 9240.1-45* and in conjunction with the individual method and the laboratory established criteria. The following items were evaluated:

All parameters require USEPA Region 2 data validation. The following items were evaluated:

Qualified		Parameters
Yes	No	
	X	Chain of Custody (COC) Documents
	X	Preservation and Technical Holding Time
	X	ICP-MS Tuning
	X	Initial Calibration
	X	Continuing Calibration
	X	Low Level Initial Calibration Verification (CRDL)
	X	Blank Analyses
	X	Interference Check Sample Results
	X	Matrix and Matrix Spike Duplicate Recoveries
	X	Laboratory Duplicate Precision
	X	Laboratory Control Samples (Blank Spike)
	X	Field Duplicate Precision
	X	ICP-MS Serial Dilutions
	X	ICP-MS Internal Standard Recoveries
	X	Sample Quantitation Verification

NA Not Applicable

Table 1 summarizes the recommendations that are based upon the following information:

Summary

A data evaluation was performed on the reported 6020 total and dissolved uranium elemental analytical data from samples collected by Shaw Environmental and Infrastructure at the Guterl Specialty Steel site.

All results are reported without qualification.

Chain of Custody Documents

The chain of custody (COC) was properly signed and dated. The sampling dates and sampling times were recorded for all field samples except the blind field duplicate samples; DUPLICATE 03 Total and Dissolved fractions.

Custody seals were present and intact on the sample coolers. Custody seals were not present on the sample containers.

Sample Preservation and Holding Times

Samples were collected on 10/22/2012, 10/23/2012 and 10/24/2012. The condition upon receipt form indicates that the aqueous metal samples for were not properly preserved. Sample A04DMW713D0005 Tot had a pH of 7 at sample receipt. The laboratory adjusted the pH to < 2 with nitric acid and allowed the sample to equilibrate for 24 hours prior to sample preparation. All other sample pHs were < 2.

The analytical holding time for ICP-MS analysis is 180 days. ICP-MS analyses were completed within the analytical holding time.

No results are qualified based upon sample preservation and analytical holding times.

ICP-MS Tuning

The tuning solution results were within the method acceptance criteria, resolution better than 0.1 atomic mass units (amu) for each tuning isotope and relative standard deviations less than 5.0%.

Initial Calibration Results

The laboratory did provide initial calibration verification (ICV) data for the ICP-MS analyses. All ICV results were between the 90-110% method acceptance criteria. No results are qualified based upon the initial calibration results.

Continuing Calibration Results

All ICP-MS bracketing continuing calibration results met the method acceptance criteria, 90-110%.

The laboratory analyzed an ICP-MS elements standard at or near 2 X the laboratory's reporting limit, 1.0 ug/L. The laboratory has labeled this standard as the CRDL (contract required detection limit standard) on the summary forms. The uranium CRDL standard concentration is 1.0 ug/L. The CRDL recoveries were 94.8% and 105.2%.

No results are qualified based upon CRDL standard recoveries.

Laboratory and Field Blank Analyses

Positive ICP-MS instrument blank results and positive preparation blank results are summarized below:

Analyte	Type of Blank	IDL	MDL	Blank Conc
None				

CCB – Continuing Calibration Blank

MB – Prep Blank

All uranium method blank and instrument blank results are reported as non-detected (U) at the method detection limit (MDL), 0.23 ug/L.

All samples were collected from dedicated samplers. No field equipment blank samples were provided.

ICP-MS Interference Check Sample Results

ICP-MS interference check standards are analyzed to evaluate spectral background interferences and to evaluate potential interelement interferences.

All ICP-MS interference check sample acceptance criteria are 80-120% recoveries for the ICSA and ICSAB solutions.

ICSA and ICSAB solutions for ICP-MS analyses were analyzed at the beginning of the analytical sequence. Samples were analyzed immediately following the ICSA and ICSAB analyses. All ICSA and ICSAB recoveries were within the 80-120% acceptance criteria.

Matrix Spike Results

Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to evaluate analytical precision and accuracy in the sample matrix.

Sample A04DMW604D0005 Tot was analyzed as a MS/MSD pair associated with preparation batch 2300080. The MS/MSD recoveries are 105.6% and 104.7% respectively.

Sample A04DMW604D0005 Diss was analyzed as a MS/MSD pair associated with preparation batch 2300077. The MS/MSD recoveries are 107.5% and 107.6% respectively.

All MS/MSD recoveries are within the 70-130% QAPP acceptance criteria.

No results are qualified based upon the MS/MSD results.

Laboratory Duplicates

The laboratory did not analyze a laboratory duplicate sample. The MS/MSD results are evaluated to determine analytical precision in the sample matrix.

The QAPP acceptance relative percent difference (RPD) for laboratory duplicate samples is $\leq 20\%$.

Sample A04DMW604D0005 Tot was analyzed as a MS/MSD pair associated with preparation batch 2300080. The MS/MSD RPD is 0.7%.

Sample A04DMW604D0005 Diss was analyzed as a MS/MSD pair associated with preparation batch 2300077. The MS/MSD RPD is 0.1%.

No results are qualified based upon laboratory duplicate precision.

Field Duplicates

Field duplicates are evaluated to determine precision of both the sampling and analytical procedures. The QAPP acceptance criteria for aqueous samples are $\leq 50\%$ relative percent difference (RPD) for field duplicate samples.

Samples A04DMW604D0005 and DUPLICATE 03, total and dissolved fractions, are two field duplicate pairs. The field duplicate RPDs are less than 50%. The RPDs are 0.8% and 2.6% respectively.

LCS Results

LCS samples are analyzed to evaluate accuracy of the analytical method on a controlled matrix. The percent recoveries should be within the QAPP acceptance criteria.

The QAPP LCS recovery acceptance criterion for ICP-MS analyses is 85-115%.

LCS results that exceed the QAPP acceptance criteria are summarized below.

Elements	Spike Conc ug/L	Result ug/L	% Recovery	Action
None				

No results are qualified based upon the LCS results.

ICP-MS Serial Dilution Results

Serial dilutions are analyzed to determine potential matrix interferences in the sample. ICP-MS results that are greater than 50X the instrument detection limit (IDL) should have a % difference (%D) less than 10%. The IDL is 0.23 ug/L. If the %D exceeds 10% results are qualified as estimated (J).

Sample A04DMW604D0005 Tot was analyzed as the ICP-MS serial dilution sample with batch 2300080. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

Sample A04DMW604D0005 Diss was analyzed as the ICP-MS serial dilution sample with batch 2300077. ICP-MS serial dilution results that exceed 10% D are summarized below.

Elements	Sample Result ug/L	Serial Dil ug/L	% D	Action
None				

No results are qualified based upon the serial dilution results.

ICP-MS Internal Standard Recoveries

All internal standard recoveries were within the method acceptance criteria of 60-125%.

No results are qualified based upon ICP-MS internal standard recoveries.

Method Detection Limit Results/Practical Quantitation Limits

Non-detected results are reported as non-detected (U) at the RL. The RL is adjusted for sample volume and sample dilution.

In those circumstances where dissolved results are greater than total results no total and dissolved results differ by more than 20%.

Calculations

Sample A04DMW604D0005 Tot (F2J250431-006), reported in laboratory data package F2J250431 (batch 2300080), was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Recovery:

Sample uranium concentration: 112 ug/L

MS uranium concentration: 1170 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1170 \text{ ug/L} - 112 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 105.8\%$. The laboratory reported 105.6%.

Serial Dilution:

Sample uranium concentration: 112 ug/L

Serial dilution concentration of the 5X dilution: $(21.0 \text{ ug/L} * 5) = 105.0 \text{ ug/L}$

ICP-MS Serial Dilution Percent Difference = $((112 - 105.0) / (112)) * 100 = 6.25\%$. The laboratory reported 6.41%.

Sample A04DMW604D0005 Diss (F2J250431-017), reported in laboratory data package F2J250431 (batch 2300077), was analyzed as the batch matrix spike sample (MS) and as the serial dilution sample.

Matrix Spike Duplicate Recovery:

Sample uranium concentration: 111 ug/L

MS uranium concentration: 1190 ug/L

MS spike concentration: 1000 ug/L

MS % recovery = $((1190 \text{ ug/L} - 111 \text{ ug/L}) / 1000 \text{ ug/L}) * 100 = 107.9\%$. The laboratory reported 107.5%.

Serial Dilution:

Sample uranium concentration: 111 ug/L

Serial dilution concentration of the 5X dilution: $(20.4 \text{ ug/L} * 5) = 102 \text{ ug/L}$

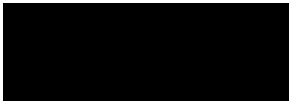
ICP-MS Serial Dilution Percent Difference = $((111-102)/(111)) * 100 = 8.1\%$. The laboratory reported 8.0%.

The laboratory included supporting documentation Method Detection Limits Form 10, Interelement Correction Factors Form 11, Linear Ranges Form 12, Sample Preparation Summary Form 13, Analysis Run Log Form 14, sample preparation log books and analytical sequence run logs.

Table 1 summarizes the qualified sample results.

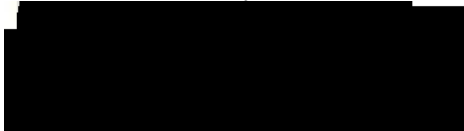
Sincerely,

Kestrel Environmental Technologies, Inc.



Timothy Lewis
Validator

Reviewed By:



Deborah L. Smith

Attachments: Table 1 – Total Uranium in Total and Dissolved Fractions by ICP-MS US EPA 6020A

Data Validation Qualifiers Definitions

U- The analyte was not detected.

R- Unusable result; rejected. The analyte may or may not be present in the sample.

J- The analyte is present but the reported concentration is estimated. The reported result may not be accurate or precise.

UJ- The analyte was not detected. The quantitation limit may not be accurate or precise.

Guterl Specialty Steel
F2J250431

**Table 1 – Total and Dissolved Uranium by ICP-MS
Recommendation Summary**

Sample ID	Matrix	Qualifier
A04BMW704DD0005 Tot	Aqueous	A
A04DMW710D0005 Tot	Aqueous	A
A04DMW708DD0005 Tot	Aqueous	A
A04DMW710DD0005 Tot	Aqueous	A
A04DMW713D0005 Tot	Aqueous	A
A04DMW604D0005 Tot FDUP	Aqueous	A
DUPLICATE 03 Tot FDUP	Aqueous	A
A04DMW709DD0005 Tot	Aqueous	A
A04BMW707DD0005 Tot	Aqueous	A
A04BMW605D0005 Tot	Aqueous	A
A04BMW260005 Tot	Aqueous	A
A04BMW704DD0005 Diss	Aqueous	A
A04DMW710D0005 Diss	Aqueous	A
A04DMW708DD0005 Diss	Aqueous	A
A04DMW710DD0005 Diss	Aqueous	A
A04DMW713D0005 Diss	Aqueous	A
A04DMW604D0005 Diss FDUP	Aqueous	A
DUPLICATE 03 Diss FDUP	Aqueous	A
A04DMW709DD0005 Diss	Aqueous	A
A04BMW707DD0005 Diss	Aqueous	A
A04BMW605D0005 Diss	Aqueous	A
A04BMW260005 Diss	Aqueous	A

A - Accept all data without qualification.

APPENDIX E

IDW Bill of Lading

(Provided on same CD as Appendix A)

is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Carrier's No.

SCAC.

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at _____, date _____ from _____

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)

FROM:

US Ecology Texas
Consignee

Shipper USACE Buffalo District

Street 3.5 miles South on Petronila Road

Street 695 Ohio Street

Destination Robstown, TX Zip 78380

Origin Lockport, NY Zip 14094

Route:

Delivering Carrier

Trailer Initial/Number

U.S. DOT Hazmat Reg. Number

Remit C.O.D. to:

Address:

City: _____ State: _____ Zip: _____

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".
Note. - where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Per

PLACARDS REQUIRED

COD

AMT:

\$

Charges Advanced

\$

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

C. O. D. FEE:Prepaid ☐

Collect ☐ \$

FREIGHT CHARGES☐ Prepaid ☐ Collect

☐ YES ☐ NO - FURNISHED BY CARRIER
DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

DATE: 12/16/11

CARRIER: HAZMAT

PER:

EME

TELE

Monitor

Permanent post office address of shipper

HAZMAT

ENVIRONMENTAL GROUP, INC
60 Commerce Drive, Buffalo, NY 14218
www.hazmatinc.comFAX (716) 827-7217
(716) 827-7200

DATE

511650

NYDEC #9A-278
EPA ID# NYD980769947

PICK UP

DELIVERY

NAME

ATI ALLVAC

STREET

695 OHIO ST.

CITY

STATE

ZIP CODE

LOCKPORT, NEW YORK

CONTACT NAME

PHONE

KEVIN CROWIN 716-472-0434

NAME

US ECOLOGY

STREET

3277 COUNTY RD. 69

CITY

STATE

ZIP CODE

ROBSTOWN, TEXAS

CONTACT NAME

PHONE

12-19-11 15:00

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE

If damaged at pickup site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

K

Pursuant to 6NYCRR 372.2 (b) (2) (iii) HazMat certifies that it is Authorized to deliver this shipment of manifested waste to the TSDF listed on this Bill of Lading. Shipment valuation limits apply from HazMat Rules Publication 101, Item 848.

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE

If damaged at delivery site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

PURCHASE ORDER NO.

WORK ORDER NUMBER

MANIFEST NUMBER

H.M. NUMBER

LOAD NUMBER

TRACTOR

935

TRAILER

B-140

ROLL OFF BOX

DRIVER NUMBER

2070

EQUIPMENT

MATERIAL DESCRIPTION/MANIFEST NUMBER

QUANTITY

Product unloading station and/or tank approved by:

EQUIPMENT TYPE

UNIT# DROPPED

UNIT# PICKED UP

CONDITION REPORT

NON-HAZ

64
pm

CONSIGNEE'S SIGNATURE

Compressor used

YES

NO

In-Transit Heat used:

YES

NO

Analysis/C of A:

YES

NO

PICK UP

DELIVERY

PICK UP DATE

12-16-11

ARRIVAL TIME

6700 AM

RELEASE TIME

AM

DAY #2 DATE

ARRIVAL TIME

AM

RELEASE TIME

AM

TRAILER EMPTY UPON ARRIVAL

☐ YES

(if not, explain below—)

DIP MEASUREMENT (Tankers Only) _____ INCHES

COMMENTS: (EXPLAIN ALL DELAYS)

DRIVER

DAY #1 DATE

ARRIVAL TIME

AM

RELEASE TIME

AM

DAY #2 DATE

ARRIVAL TIME

AM

RELEASE TIME

AM

DAY #3 DATE

ARRIVAL TIME

AM

RELEASE TIME

AM

TRAILER CLEAN AND EMPTY UPON DEPARTURE

☐ YES☐ NO

(if not, explain below—)

COMMENTS: (Explain all delays or discrepancies))

HAZMAT MATERIALS USED (ex. overpacks, etc.):

☐ YES ☐ NO

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

SHIPPER'S SIGNATURE

Date

12/16/11

CONSIGNEE'S SIGNATURE

Date

GENERATOR COPY

NON-HAZARDOUS SOLID WASTE

The Environmental Services Source

BILL OF LADING

Page 1 of 1

24 Hour Emergency Number (908) 354-0210

Generator's Name and Mailing Address

USACE BUFFALO DISTRICT

1776 NIAGARA STREET
BUFFALO, NY 14201

Generator's Phone (716) 472-0434

Transporter 1 Company Name

CLEAN VENTURE INC.

Transporter 2 Company Name

Designated Facility Name and Site Address

10.

US EPA ID Number

Cycle Chem Inc.
217 South First Street
Elizabeth, NJ 07206

INJD0002200046

BOL

695 OHIO STREET
LOCKPORT NY 14094

State Trans. ID-NJDEPE 16755

Decal No.-

Transporter's Phone ()

State Trans. ID-NJDEPE

Decal No.-

Transporter's Phone ()

Facility's Phone (908) 355-5800

US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)

Containers
No. Type

Total
Quantity

Unit
Wt/Vol

Waste No.

a. Non-DOT CHEMICAL PROCESS LIQUID Non-RCRA

6

DM

2560

P

ID72

b.

c.

d.

J. Additional Descriptions for Materials Listed Above

a.

c.

b.

d.

CCI Generator # and Product Codes: 985022/935287/143324/291184 (1)REM002-1 IDW WATER

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and are non-hazardous by USEPA & applicable state regulations.

PLACARDS
REQUIRED

PLACARDS
SUPPLIED

☐ YES ☐ NO- FURNISHED BY CARRIER

Month Day Year

10 10 13

Month Day Year

01 8 13

Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest.

Printed/Typed Name

Signature

Month Day Year



8-1 LOCKPORT PLANT / SCALE #24

TRUCK PASS

38104

TICKET NUMBER 6926

INBOUND 32560 lb
LOOP ID 38

INBOUND WEIGHMASTERS INITIALS

35120 lb Gross
32560 lb Tare
2560 lb Net

OUTBOUND WEIGHMASTERS INITIALS

WARNINGSECURITY EMPLOYEES SURVEILLANCE EQUIPMENT
AND PERSONNEL TO DETECT ILLEGAL ACTIVITY.
WE PROSECUTE FOR ALL ILLEGAL ACTS.PRINT
DRIVER'S NAME

CARRIER'S NAME CLEAN VENTURE

LICENSE
TRACTOR

AM335E

STATE

TRAILER

1

STATE

I agree to comply
with conditions of
this Pass

DRIVER'S

RADIATION DETECTION SYSTEM

1/08/13 GR-526 EXPLORANIUM RC4110

PASS - ☒ New RADCOMMLevel 1 _____ Counts _____
Level 2 _____ Counts _____
Level 3 _____ Counts _____
Level 4 _____ Counts _____GR - 110 Manual Check ☐

Comments:

DEPT. NAME	DOOR NO.	DEPT. TIME		NO. OF B/L's	WEIGHT	SIGNATURE REQUIRED SHIPPER OR RECEIVER	ENTRY GATE
		IN	OUT				DATE/TIME
1							11:56AM 01/08/2013
2							GATE OPERATOR WALKER
3							EXIT GATE
4							DATE/TIME 01:08PM 01/08/2013
CO-DRIVERS MUST BE CLEARED BY TRAFFIC.							GATE OPERATOR
REMARKS OR MATERIAL DESCRIPTION							SAFETY EQUIP. ISS
INBOUND							<input type="checkbox"/> HARDHAT
1 empty							<input type="checkbox"/> GLASSES
2							<input type="checkbox"/> HAS OWN
OUTBOUND							
3 6 DRUMS For U.S.A. corp. ENG.							
4							

***** MATERIAL INFORMATION *****

INBOUND FREIGHT

VENDOR NAME:

P.O. #: USAGE

OUTBOUND FREIGHT

DESTINATION:

VENDOR WEIGHTS WHEN AVAILABLE

GROSS:

TARE:

NET:

PASSENGERS ARE NOT PERMITTED BEYOND GATE

APPENDIX F

Evaluation of High Frequency Monitoring Data

Appendix F

Evaluation of High Frequency Monitoring Data

Introduction

A series of supplemental sampling events were conducted between August 2011 and October 2012 to determine if there was seasonal variability in the uranium (U) concentrations observed in the groundwater at Guterl, and if seasonal variations were present could they be correlated to seasonal variations in the groundwater chemistry. To accomplish these goals, 10 wells were selected for quarterly sampling and for high-frequency monitoring of water levels with pressure transducers (In-Situ™ Troll Level Loggers) and other geochemical parameters with multi-parameter water quality transducers (In-Situ™ Troll 9500s). The wells that were included in these sampling events were shallow/deep well pairs MW-26/MW-707DD, MW-604D/MW-709DD, MW-605D/MW-704DD, MW-710D/MW-710DD, and MW-713D/MW-708DD. This set included seven wells installed during the DGI field work (the 700-series wells) and three wells installed during previous investigations (MW-26, MW-604D, and MW-605D).

Uranium Concentrations

The total uranium (filtered) results from the DGI sampling event and the four quarterly sampling events are shown on Figure F-1. The uranium concentrations were generally highest in the samples from the three existing wells that were included in the quarterly sampling – MW-26, MW-604D, and MW-605D. These wells are aligned northwest to southeast, roughly along the center axis of the plume, which generally corresponds to the predominant regional fracture traces. The groundwater seeps with the highest uranium concentrations are located downgradient of the uranium groundwater plume axis defined by these wells. Based on the sampling results shown on Figure F-1, the total uranium concentrations appear to be fairly stable and there is not any apparent seasonal variation that is consistent between individual monitoring wells.

To evaluate the quarterly sampling results relative to previously collected groundwater data for the site, a plot of isotopic ^{238}U (filtered) was made that includes the quarterly sampling results and the previously collected results for wells MW-26, MW-604D, and MW-605D, and is shown on Figure F-2. This comparison was made using the isotopic ^{238}U data because total uranium data were not available from the two sampling events in 2007. The DGI and quarterly isotopic ^{238}U sample results fall within the range of concentrations previously detected for each well.

Groundwater Elevation

The quarterly groundwater elevation measurements are shown on Figure F-3. Figure F-4 shows the groundwater elevations recorded in the wells equipped with the Troll Level-Logger

transducers and Figure F-5 shows the correlation between the manual groundwater elevation measurements and the transducer data. The groundwater elevation in the quarterly wells is between 585 and 600 feet (MSL) in all the wells with the exception of MW-707DD and MW-710DD. There does not generally appear to be any significant seasonal variation in the groundwater elevations. The groundwater elevation in MW-707DD is consistently much lower than the groundwater elevation in MW-26, which is the shallow well immediately adjacent to it. The rock core from MW-707DD was observed to have very few fractures, the measured hydraulic conductivity was low, and the well is slow to recharge during sampling. It appears that the groundwater elevation in MW-707DD is more influenced by deeper fractures which appear to produce less water than the overlying shallow fractures. Similarly, there is a considerable difference in the groundwater elevations measured in well pair MW-710D and MW-710DD, indicating limited vertical hydraulic connection in that area. Well pair MW-604D and MW-709DD track fairly closely, with the groundwater elevation being only slightly lower in MW-709DD during each sampling event. The groundwater elevations in well pair MW-605D and MW-704DD are nearly identical, indicating good vertical connectivity in that area.

The sharp drops and slow increases in groundwater elevation at MW-707DD correspond to purging of the well during sampling events and are indicative of the slow recharge in that well. The sharp spikes noted in the other well records are the result of measurements that were recorded while the transducers were removed during sampling and maintenance. The sharp drop in groundwater elevation in the fall and sharp increase in the spring noted in MW-710DD corresponds to the timing of the seasonal lowering of the pool elevation in the Erie Canal. Well MW-710DD is located at the downgradient edge of the site and is upgradient of the main seep location noted in the canal. Figure F-5 indicates a good correlation between the manual groundwater elevation measurements and the transducer data. It should be noted that the data points selected from the transducer data sets for Figure F-5 and the correlation plots for the other parameters were based on an estimation of the readings that were most representative of conditions at the time of sampling, since some of the transducer measurements were affected by movement of the transducers during sampling or purging of the wells. There were also measurements that occurred outside the range of anticipated conditions. These results do not always appear on the correlation figures due to the display ranges selected.

Conductivity

Figure F-6 shows the conductivity measurements taken during the quarterly sampling events using the YSI™ water quality meter. The transducer conductivity measurements are shown on Figure F-7 and the correlation between the quarterly measurements and the transducer data is shown on Figure F-8. There does not appear to be any systematic seasonal variation, except perhaps in the transducer data from MW-26 and MW-604 shown on Figure F-7. There appears to be an increase in conductivity in those two wells between February and July. Both are

shallow wells located in the center of the plume area. This may be due to increased precipitation and recharge during the spring and early summer. Also, the data show short-term reactions to precipitation events, which is indicative of ion loading of recharge through the site soils. The highest conductivity readings in both the quarterly and transducer measurements were in MW-704DD. The lowest conductivity readings were in MW-605D. Interestingly, these wells are in adjacent locations and have almost identical groundwater elevation measurements. Based on the conductivity variation in MW-704DD seen in Figure F-7, it appears that the conductivity values in that well are reduced by the removal of water during the quarterly sampling events and slowly recover with time. This indicates that groundwater from the shallow zone around the screen in MW-605D might be mixing with deeper groundwater in the screened zone in MW-704DD during the sampling events. Figure F-8 shows there is fairly good correlation between the quarterly and transducer conductivity measurements. It should be noted that the measurements from MW-707DD were extremely high in both the quarterly and transducer data sets; this well exhibits high total dissolved solids derived from high cation and anion concentrations unique to this well. The readings appear to be outside the design limits of the instruments (off-scale) and, therefore, were not shown on Figures F-6 and F-7.

pH

The quarterly pH measurements are shown on Figure F-9, the transducer pH data are shown on Figure F-10, and the correlation between the quarterly data from the YSI™ water quality meter and the transducer data is shown on Figure F-11. The transducer data from MW-604D, MW-605D, and MW-708DD are not shown because all three sensors appear to have malfunctioned during the monitoring period (all three recorded pH readings in excess of 12 standard units (SUs)). The quarterly pH measurements from the May 2012 sampling event (shown on Figure F-10) are also suspect: the readings from wells MW-604D, MW-605D, MW-713D, and MW-704DD were all below pH=7, which is lower than any of the other readings in those wells or the other wells during the DGI or the Supplemental Sampling. Figure F-11 indicates there is not very good correlation between the quarterly pH measurements and the transducer data. However, disregarding the May 2012 quarterly measurements, there is little variation in pH.

ORP

The ORP data are shown on Figures F-12 and F-13, and the correlation between the quarterly YSI™ data and transducer data is shown on Figure F-14. The quarterly ORP measurements indicate an increase in ORP during the summer (May sampling), but this is not reflected in the ORP readings from the transducers. The transducer data indicate that the ORP is fairly stable during the monitoring period, but there does appear to be a consistent decrease in the readings from July to October. This is also seen in the quarterly measurements. The decrease noted in the transducer data is most pronounced in wells MW-26, MW-604D, and MW-605D. These three

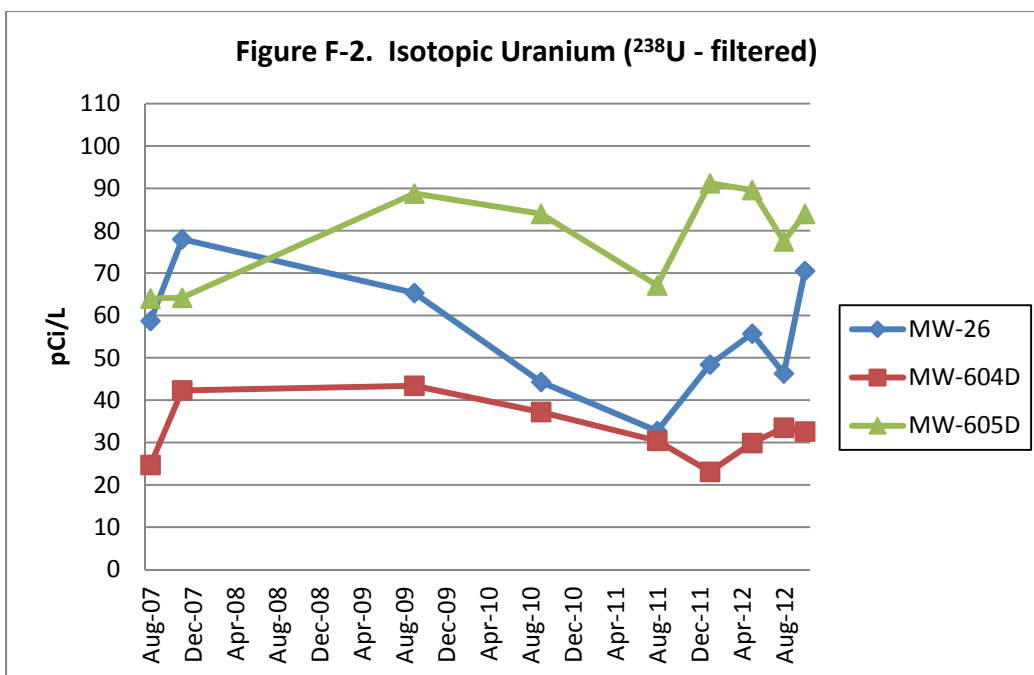
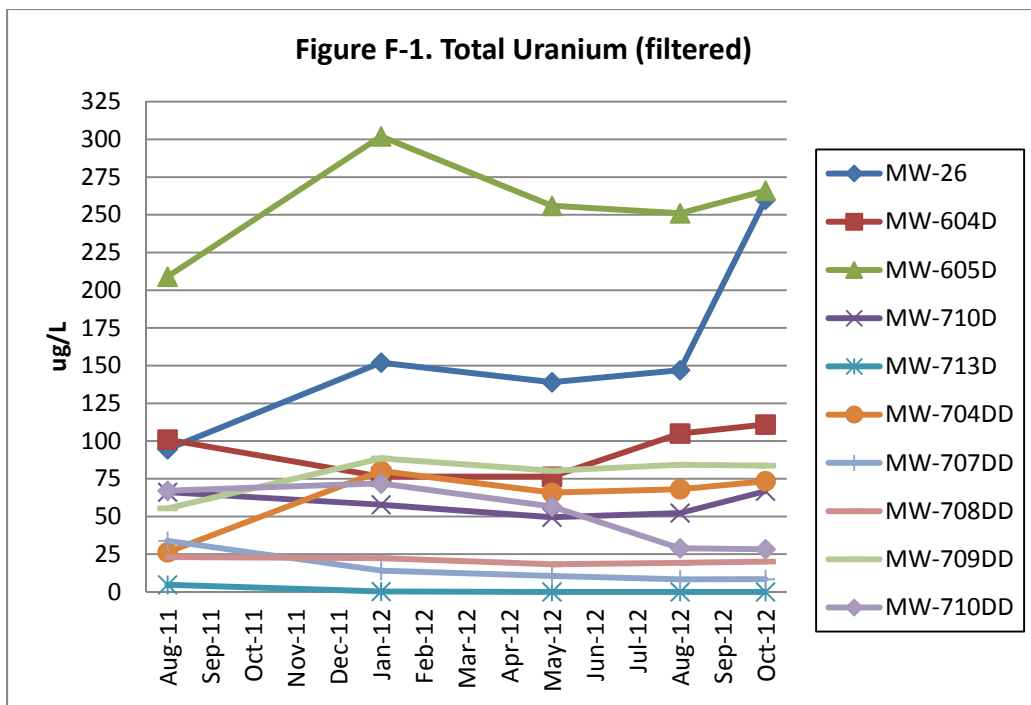
wells also had uranium concentration increases in the same period. Figure F-14 indicates there is fairly good correlation between the quarterly and transducer ORP measurements.

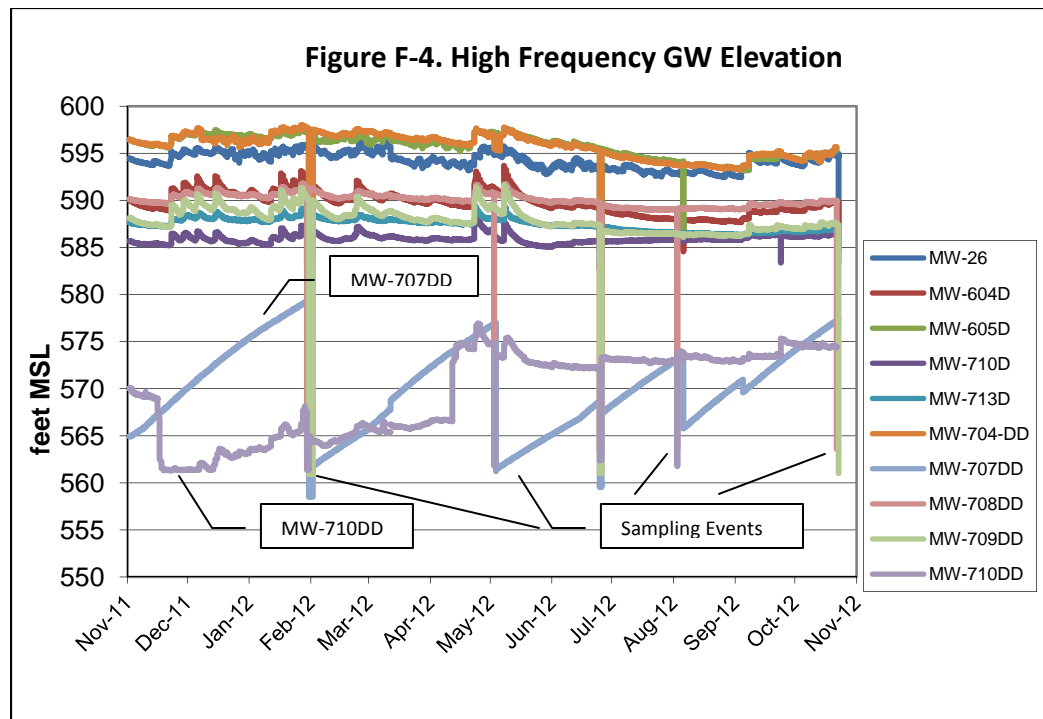
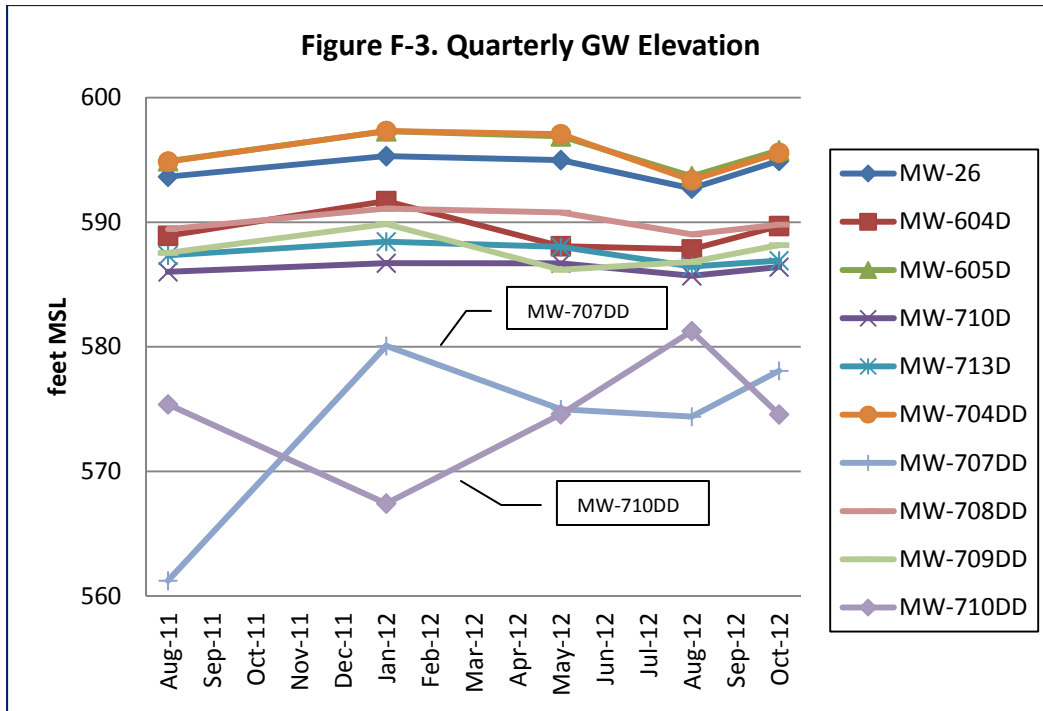
DO

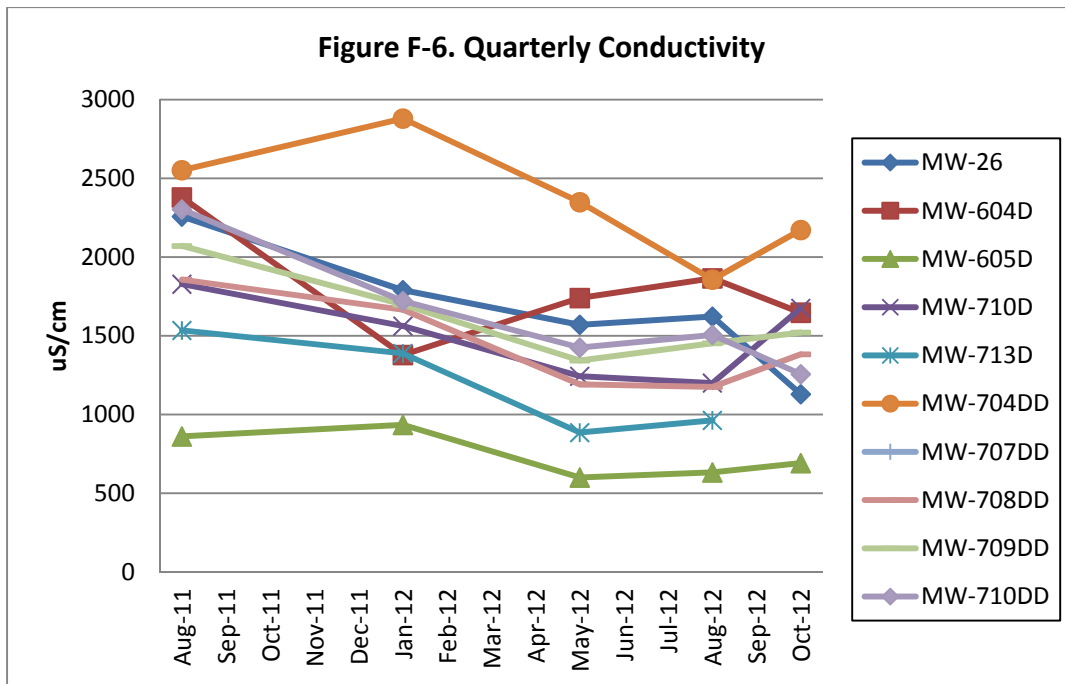
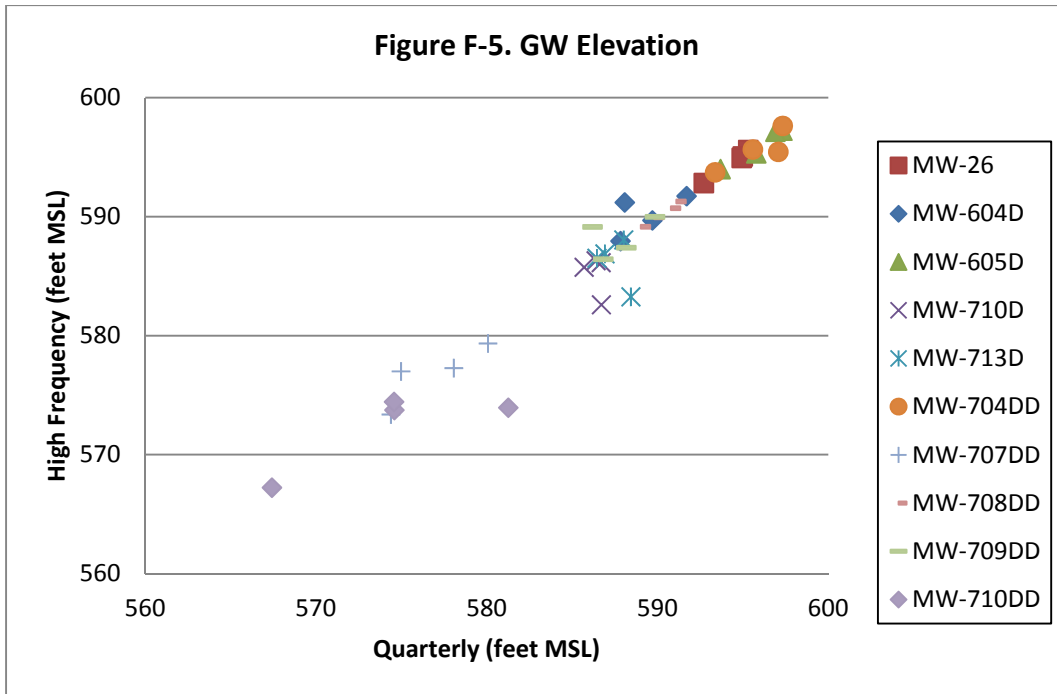
The quarterly DO data are shown on Figures F-15. A review of the DO data indicates its usability is limited. The quarterly DO measurements show a large variation between wells and within some wells. These large variations might not be indicative of actual conditions. The transducer DO sensors appear to have been functioning, but the values recorded by the data loggers are outside the range of anticipated values - mostly small negative numbers were recorded for DO concentration and percent DO saturation. There was also not any apparent correlation between the quarterly and transducer DO data. Therefore, the transducer DO data are not presented. No discernable seasonal variation was apparent in the quarterly DO data.

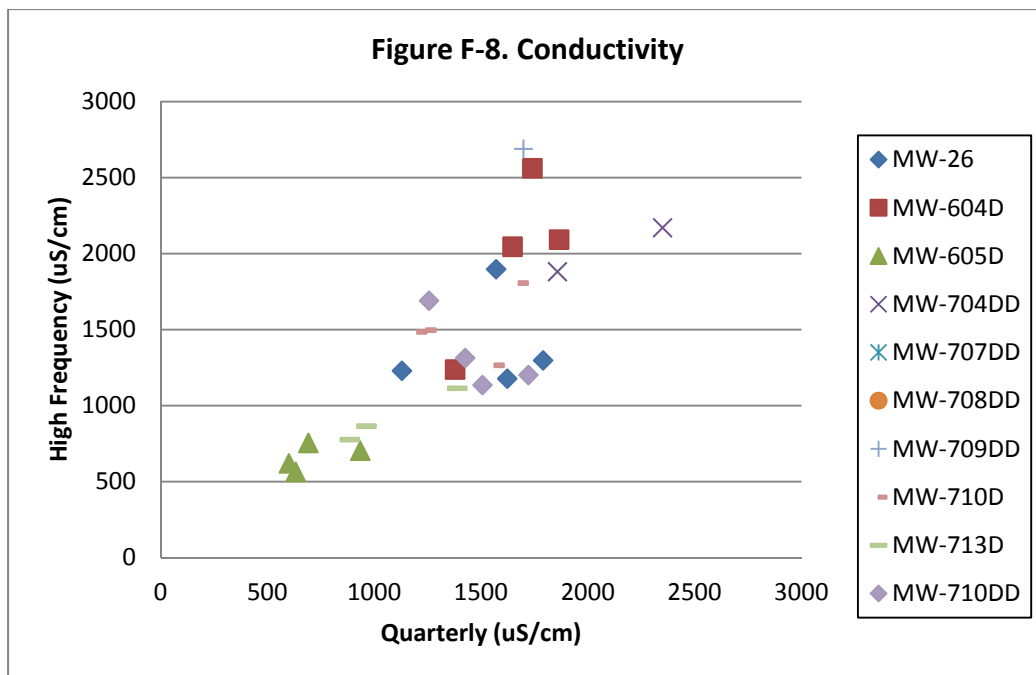
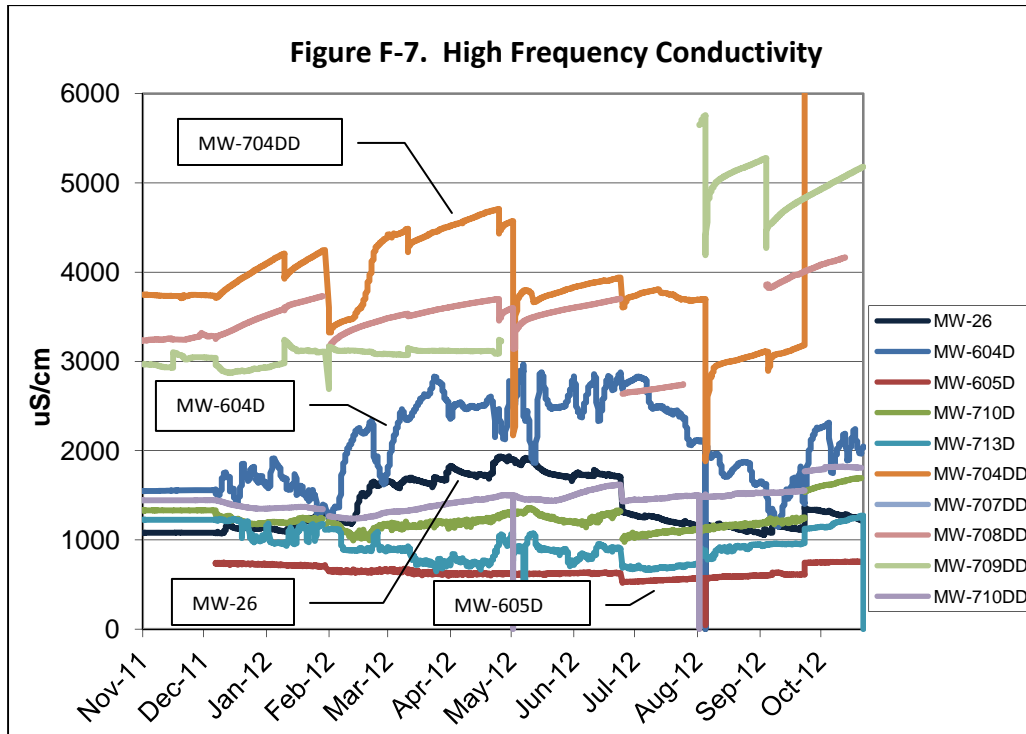
Conclusion

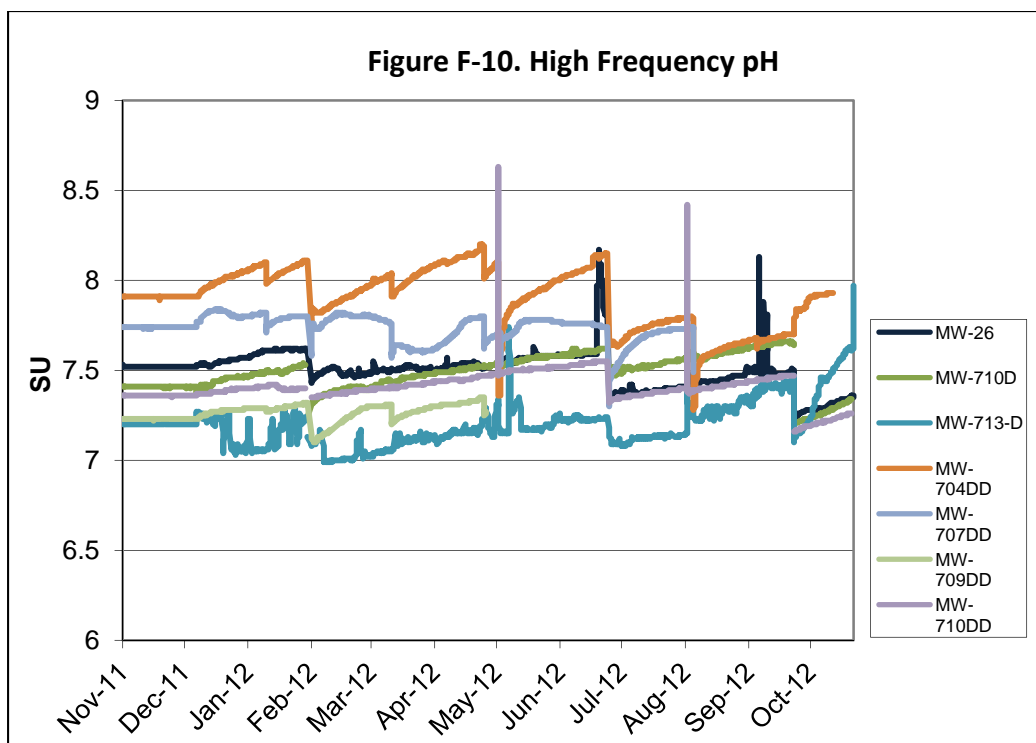
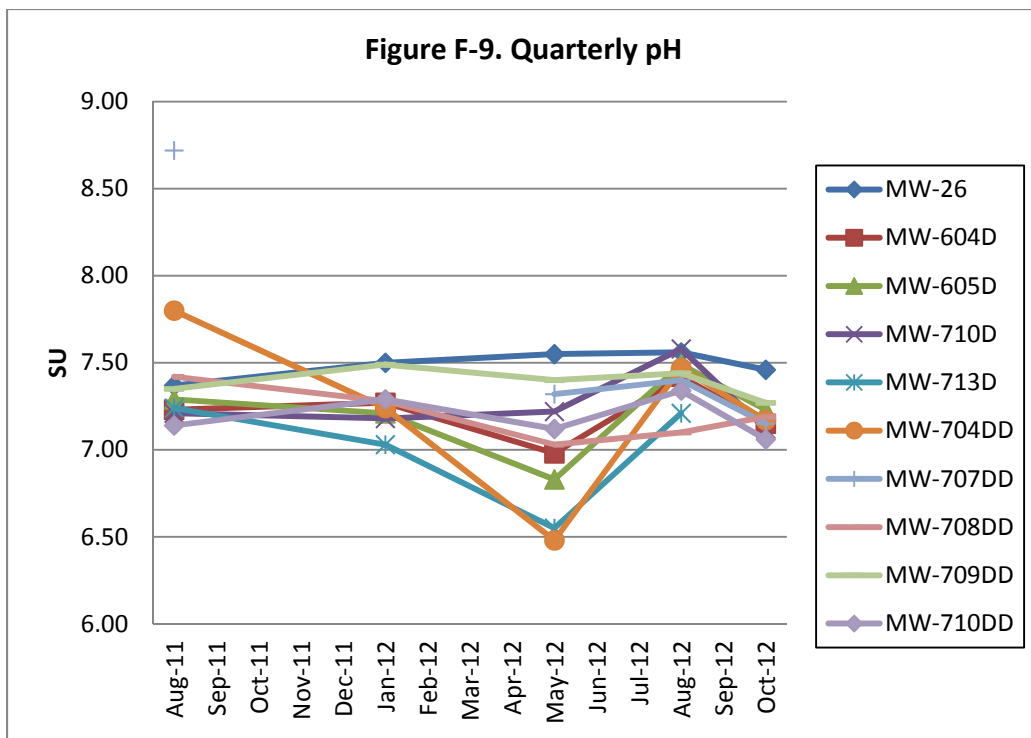
The quarterly sampling and high-frequency monitoring conducted during the supplemental sampling period indicate that the concentrations of uranium and other parameters are fairly stable in the wells monitored. There were not any discernable seasonal variations that were consistent between wells; however, the data show short-term specific conductivity reactions to precipitation events, which is indicative of ion loading of recharge through the site soils.

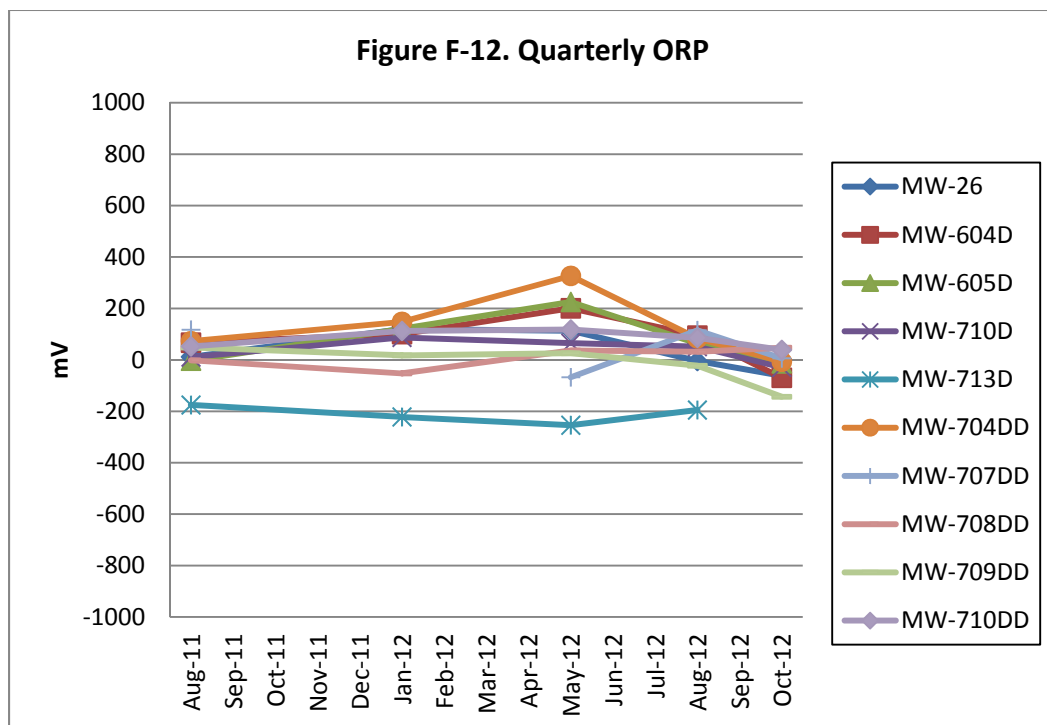
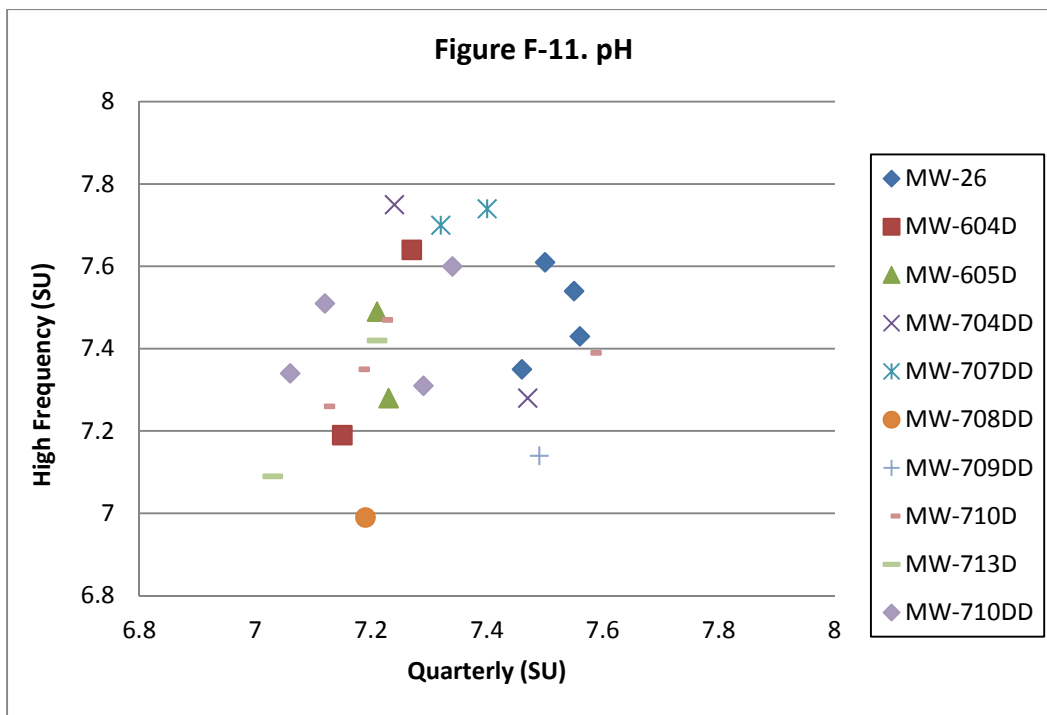


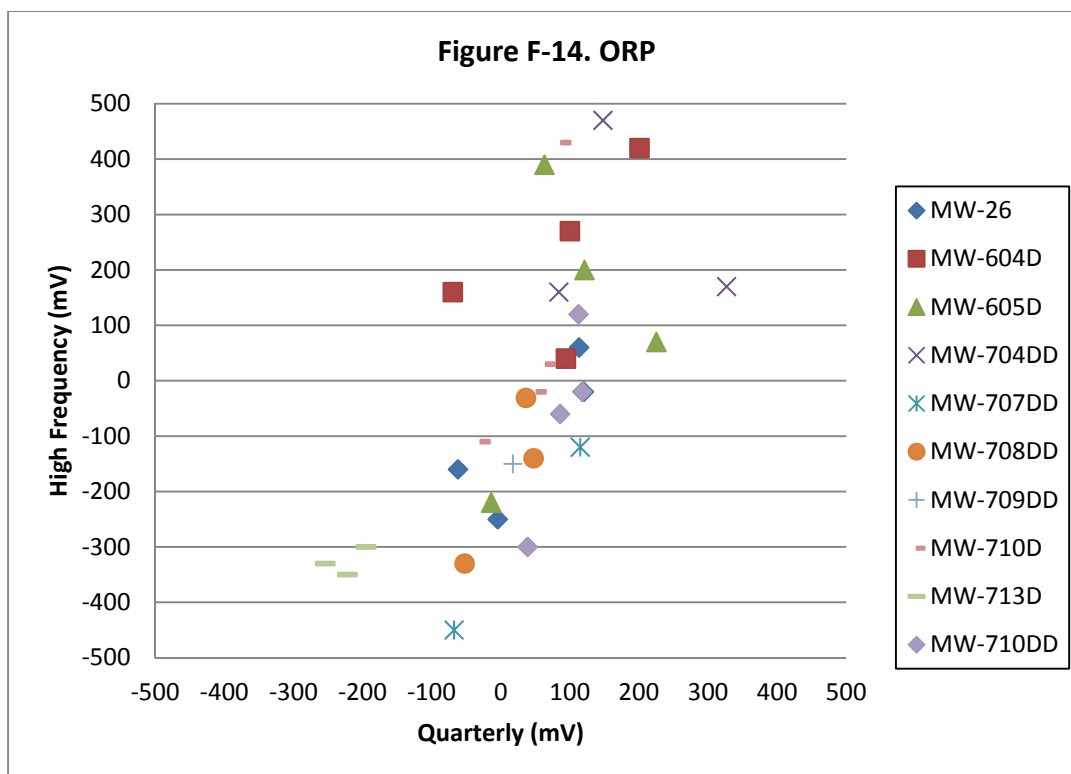
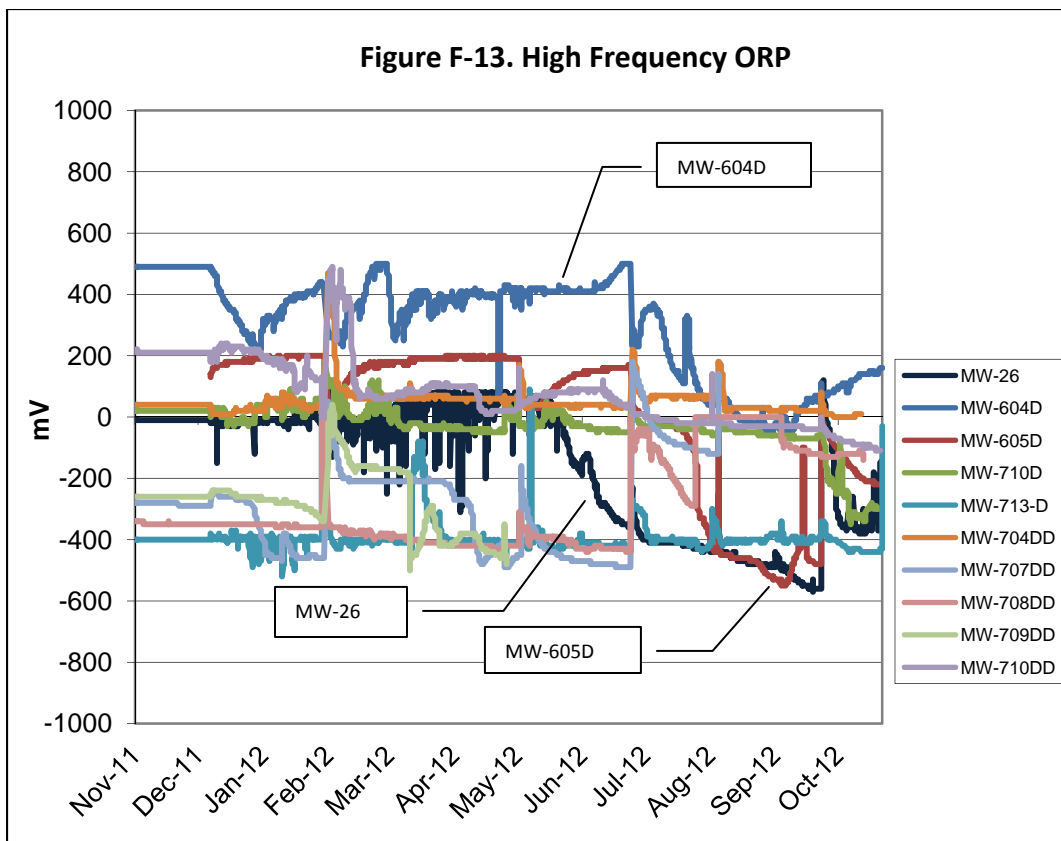


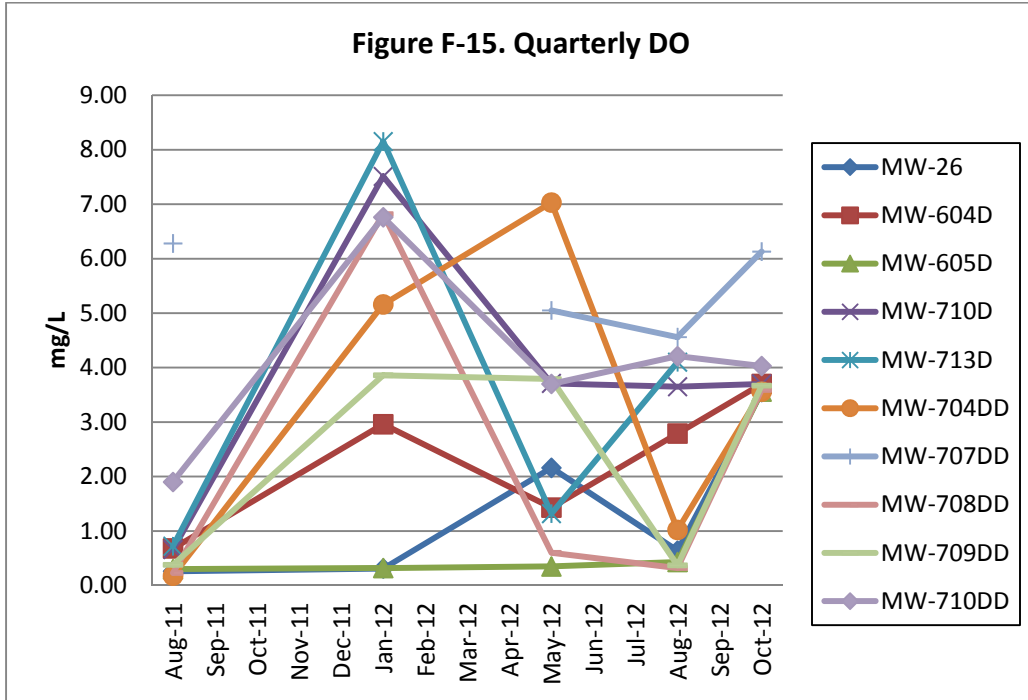












APPENDIX G

Evaluation of Uranium Concentration Trends

Appendix G

Evaluation of Uranium Concentration Trends

Time trends in uranium concentrations at 18 wells were evaluated using graphical and statistical methods to determine if any significant trends are present. The wells selected for evaluation had four or more sample events and uranium (U) concentrations above 10 µg/L in one or more samples that were obtained over an approximately 5-year monitoring period. This concentration screening value was developed in a previous evaluation based on $^{234}\text{U}/^{238}\text{U}$ ratios. Samples with uranium concentrations below 10 µg/L have isotopic ratios that indicate a natural background source, whereas most samples with uranium concentrations above 10 µg/L have ratios that suggest a local contaminant source for the majority of the detected uranium. An additional 12 wells that were sampled four or more times are part of the monitoring network. Samples from these wells have on average less than 10 µg/L U and are not discussed here because they most likely represent background concentrations. A set of seven new wells that were sampled five times over a 1.2 year period are also evaluated here, although the monitoring period is too short to yield valid trends.

The 18 impacted wells were grouped for plotting purposes into four categories based on ranges of uranium concentrations so that the trends can be clearly seen on the trend plots. These categories are 10-15, 15-30, 30-90, and >90 µg/L U. This grouping allows three to six wells per plot, as shown on Figures G-1 through G-4. Most of the wells were sampled five times (November 2007, September 2009, September 2010, August 2011, and October 2012). Three of the wells with higher U concentrations (MW-26, MW-604D, and MW-605D) have more recent quarterly samples so nine samples are available for these wells.

The U concentrations shown on the plots were calculated by converting the activities (as pCi/L) of each of the ^{234}U , ^{235}U , and ^{238}U isotopes to mass (as µg/L) based on their specific activity constants (as Ci/g) and summed. Analyses of filtered (0.45 micron) samples were used in the evaluation. Duplicate results were averaged together for plotting purposes. Figures G-1 through G-4 do not appear to show any consistent trends over the 5-year monitoring period.

An additional perspective is provided in Figure G-5, which shows mean U concentrations for each of the five sample events calculated from the 18 impacted wells. Error bars are set equal to plus and minus one standard deviation for each sample event. This plume-wide mean perspective shows that the standard deviations in U concentrations at each sample event are of the same magnitude as the mean concentrations at each sample event, and that the differences in means between events is much less than the standard deviations of the individual means. These results imply that any trend in the plume-wide averages, if present, would not be detectable over the 5-year monitoring period.

Kendall-Tau Test of Trend

Kendall's tau, which is equivalent to the Mann-Kendall test, is used here as a trend estimator as recommended by the EPA. It compares repeated measurements of an analyte concentration over time, and tests the null hypothesis that the measurements exhibit no temporal trend. It is a nonparametric test, which means that it is based on the direction of change in concentration (up or down) over time rather than the magnitude of the change over time.

To perform the test, the *signs* (positive for increases, negative for decreases) of all possible pairs of data points are summed. For instance, if there are four sequential measurements (1, 2, 3, and 4), then the signs of 1 versus 2, 1 versus 3, 1 versus 4, 2 versus 3, 2 versus 4, and 3 versus 4 are summed. If there is no real trend, then the number of positive and negative signs will be roughly equal, although some differences would be expected due to chance. However, if there are many more increases than decreases between the pairs, then a real upward trend is indicated, and if there are many more decreases than increases between the pairs, then a real downward trend is indicated.

The test returns a *tau* coefficient that equals the sum of the signs divided by the total number of sample pairs available. If the concentrations consistently increase at each successive sample event, then *tau* equals +1, if the concentrations consistently decrease at each successive sample event, then *tau* equals -1, and if the number of positive and negative signs are equal, then *tau* equals zero. For all other arrangements *tau* lies between -1 and 1. The *tau* coefficient is converted to a *p*-value based on the normal distribution. The *p*-value can be thought of as the probability of the null hypothesis of no trend being true. The test was performed at a 95 percent confidence level, at which there is only a 5 percent chance of incorrectly accepting the null hypothesis (no trend is present) when a trend actually is present. At this confidence level, *p*-values below 0.05 indicate a statistically significant trend, whereas *p*-values above 0.05 indicate that any apparent trend is likely due to chance and is not significant.

Trends at all 30 wells (impacted and unimpacted wells sampled four or more times) were tested. Test results are shown in Table G-1. Of the 30 wells that were monitored for approximately 5 years, MW-3 and MW-602D are the only ones that show significant trends. MW-3 is a background well with a significant downward trend, and MW-602D is an impacted well with a significant downward trend.

Table G-1 also shows the results of the seven new wells based on four or five quarterly samples with a monitoring period of 0.7 to 1.2 years (note: no isotopic U data were obtained for well MW-707DD in August 2011 because the well was dry). These results are provided for completeness and are not considered to be evidence for any real trends because the component of

variance due to analytical uncertainties is larger than the variance due to any trends. These results show three significant downward trends and one significant upward trend. Given that a stable plume has been in existence for several decades, it is unlikely that trends, if present, at these locations would be detectable over a 1.2 year monitoring period.

In summary, the graphical and statistical results of trend evaluations at the 30 wells that have been monitored for 5 years indicate that no statistically significant trends in uranium concentrations are detectable.

Table G-1. Kendall-Tau Trend Test Results

Well	Number of Samples	Monitor Period (Yrs)	Tau	Direction	p-Value	Significant?	Category (U range in ug/L)
MW-1	5	4.9	0.00	None	1.000	No	<10
MW-14	4	3.8	0.00	None	1.000	No	<10
MW-15	4	3.8	-0.67	Down	0.174	No	<10
MW-17	4	3.8	0.67	Up	0.174	No	<10
MW-21	5	5.0	0.00	None	1.000	No	<10
MW-23	5	4.9	-0.40	Down	0.327	No	<10
MW-3	4	3.8	-1.00	Down	0.042	Yes	<10
MW-5	4	3.8	0.00	None	1.000	No	<10
MW-6	4	3.7	0.00	None	1.000	No	<10
MW-600D	5	4.9	-0.20	Down	0.624	No	<10
MW-603D	5	4.9	0.40	Up	0.327	No	<10
MW-8	4	3.7	0.33	Up	0.497	No	<10
MW-19	5	4.9	0.60	Up	0.142	No	10-15
MW-20	5	4.9	-0.20	Down	0.624	No	10-15
MW-606DR	4	3.7	0.00	None	1.000	No	10-15
MW-607D	5	4.9	0.40	Up	0.327	No	10-15
MW-11	5	4.9	0.60	Up	0.142	No	15-30
MW-16	5	4.9	0.20	Up	0.624	No	15-30
MW-2	5	4.9	0.20	Up	0.624	No	15-30
MW-24	5	4.9	0.60	Up	0.142	No	15-30
MW-601D	5	4.9	-0.20	Down	0.624	No	15-30
MW-9	5	4.9	0.40	Up	0.327	No	15-30
MW-13D	5	4.9	0.40	Up	0.327	No	30-90
MW-22	5	4.9	-0.20	Down	0.624	No	30-90
MW-4	5	4.9	0.00	None	1.000	No	30-90
MW-18	5	4.9	-0.20	Down	0.624	No	>90
MW-26	9	4.9	0.08	Up	0.751	No	>90
MW-602D	5	4.9	-0.80	Down	0.050	Yes	>90
MW-604D	9	4.9	-0.60	Down	0.751	No	>90
MW-605D	9	4.9	0.40	Up	0.677	No	>90

New Wells

MW-704DD	5	1.2	0.40	Up	0.327	No	30-90
MW-707DD	4	0.7	-1.00	Down	0.042	Yes	10-15
MW-708DD	5	1.2	-0.60	Up	0.142	No	15-30
MW-709DD	5	1.2	0.80	Up	0.050	Yes	30-90
MW-710D	5	1.2	0.20	Up	0.624	No	30-90
MW-710DD	5	1.2	-1.00	Down	0.014	Yes	30-90
MW-713D	5	1.2	-0.80	Down	0.050	Yes	< 10

