



EA Engineering, Science,
and Technology, Inc.

23 August, 2000

TO: Charles Basham, USACE-Baltimore District (4 copies)
Ray Pilon, USACE-Buffalo District (13 copies)
Gordy Porter, EA Engineering Project Manager
Jeff Smith, EA Engineering, Site Manager

FROM: Sandra Staigexwald, EA Engineering, Task Manager

RE: Expansion of LOOW Phase II RI (Response to Phase II RI Letter 03)

Preliminary results from the field screening analysis program described in **Final Addendum** to the Work Plan for Phase I RI for the LOOW, Niagara County, New York, for **Phase II Remedial Investigation** (dated June 2000) indicate the presence of chemical constituents at concentrations exceeding the NYSDEC TAGM values, or exhibiting an increasing trend in concentration at the following areas of investigation:

Area 10 1100
Area 10 J(+15)0
Area 2 ES
Area 4 K200

Due to the reported constituents, it was recommended that the sampling at these grids be expanded. As per the letter dated 16 August 2000 ("Phase II RI Letter 03"), approval was issued by Mr. Charles Basham, Design Team Leader, USACE-Baltimore, to add additional points to the referenced grids.

It was also decided that sampling and analysis of existing wells, and sampling of the ponded area 50 ft south of Building 30A-01 at Component 2 will be performed. Approval for this is also cited in the letter dated 20 July 2000.

Attached is the approval letter from the USACE dated 16 August 2000 (see Attachment 1), as well as inserts for each section of the **Final Addendum** to the Site Specific Sampling and Analysis Plan for the Phase I RI at the Former LOOW Niagara County, New York for **Phase II Remedial Investigation**. Each of the inserts describe the approved additions to the sampling and analysis plan for each area, and should be inserted into the readers copy of the Final Plan.

Attachments:

- Attachment 1-Approval letter dated 16 August 2000 from USACE
- Attachment 2-Additions to the Sampling B-6, Area 10
- Attachment 3-Additions to the SAP B-4, Areas 2 and 20
- Attachment 4- Additions to the SAP B-S, Areas 4, 7, 8, 11
- Attachment 5- Simplified SAP for Component 2 Ground-Water Sampling
- Attachment 6- Simplified SAP for Component 2 Surface Water Sampling



ATTACHMENT 1

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. Box 1715
Baltimore, MD 21203-1715

16 August 2000

Civil HTRW Section
Engineering Division

Mr. H. Gordon Porter
EA Engineering, Science, and Technology, Inc.
15 Loveton Circle
Sparks, Maryland 21152

SUBJECT: Phase II RI Letter 03

Dear Mr. Porter:

Reference is made to Delivery Order 0115, Lake Ontario Ordnance Works (LOOW) Site Wide Remedial Investigation Phase 2 under your contract DACA31-94-D-0015.

The Government has identified the need to include additional sampling and analysis on the Somerset Property. Specifically, we require sampling and analysis of the existing wells on the property and surface sampling of the ponded area 50 feet South of building 30A-01 (referred to by the property owner, Mr. Syms, as the location of the "frog kill"). You are requested to amend the final work plans accordingly. The cost associated for this testing shall be accounted for in accordance with the Scope of Work, paragraph 5.e. "Variations in Estimated Quantities (Analytical)".

Based on results of preliminary field investigations, the Government has identified the need for additional soil borings at LOOW. Specifically, the following amendments to the final work plans are approved:

- a) Three additional borings at the South-West corner of Grid JO, Area 10 due to increasing trends in PAHs.
- b) Three additional borings on the South -West corner of grid II 00, Area 10, due to increasing trends in PAHs
- c) Three additional borings on the North-West corner of grid ES, Area 2, due to the presence of PCBs.
- d) Three additional borings on the North-West side of Grid K200, Area 4, due to increasing trend in PAHs..

You are requested to amend the final work plans to reflect these adjustments. The costs associated for this work shall be accounted for in accordance with the Scope of Work, paragraph 5.d. "Variations in Estimated Quantities (Field Days, Monitoring Wells, and Transportation)".

I consider that all of the above work is in accordance with the Scope of Work. Please contact me immediately should clarification on the above is required.

Sincerely,

Charles E. Basham, P.E.
Design Team Leader

Copy Furnished:
US Army Corps of Engineers- Buffalo District
ATTN: CELRB-PM (Mr. Ray Pilon)
1776 Niagara Street
Buffalo, NY 14203

Attachment 2 (reference letter dated 23 Aug 2000 and USACE letter dated 16 August 2000)

16 AUGUST 2000 ADDITIONS TO THE SAMPLING AND ANALYSIS PLAN (SAP) FOR AREA 10

INSERTION LOCATION: Insert page between Table B-6-2 and B-6-3

CHANGES TO ORIGINAL SAP:

Phase II Investigation at Area 10 Grid 1100

Due to PAH concentrations reported in the surface sample collected from original grid location A1, three additional locations will be added to assess the horizontal extent of the reported constituents. The locations will be designated and placed as follows (see figure B-6-1 for location of 1100 grid within Area 10):

New location A99 shall be placed 25 ft west of I100A1

New location B99 shall be placed 2.5 ft west of I100B1

New location Z1 shall be placed 25 ft south of I100A1

Varying slightly from the original sampling strategy for the 1100 grid (see Table B-6-2), a surface sample only will be collected from each of the new locations and will be screened only for PAHs. The surface sample interval will be 0.0 to 0.5 ft bgs.

Phase II Investigation at Area 10 Grid J(+15)0

Due to the elevated PAH concentrations reported in the surface soil sample collected from location A1, three additional locations will be added to assess the horizontal extent of PAHs. The locations will be designated and placed as follows (see Figure B-6-1 for location of J(+15)0 grid within Area 10):

New location Z1 shall be placed 25 ft south of J(+15)0A1

New location Z99 shall be placed approximately 35 ft southwest of J(+15)0A1, on the slope of the Central Drainage Ditch(CDD) but not at the bottom of the ditch

New location A99 shall be placed approximately 25 ft west of (J+15)0A1, on the slope of the Central Drainage Ditch(CDD) but not at the bottom of the ditch

Varying slightly from the original sampling strategy for the J(+15)0 grid (see Table B-6-2), a surface sample only will be collected from each of the new locations and will be screened only for PAHs. The surface sample interval will be 0.0 to 0.5 ft bgs.

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Attachment 3 (reference letter dated 23 Aug 2000 and USACE letter dated 16 August 2000)

16 AUGUST 2000 ADDITIONS TO THE SAP FOR AREAS 2 AND 20

INSERTION LOCATION: Insert page between Table B-4- 1 and B-4-2

CHANGES TO ORIGINAL SAP:

Phase II Investigation at Area 2 Grid ES

Due to elevated PCB concentrations reported in the surface soil sample collected from original grid location C 1, three additional locations will be added to assess the horizontal extent of the reported constituents. The locations will be designated and placed as follows (see figure B-4-1 for location of ES grid within Area 2):

New location D1 shall be placed approximately 12.5 ft north of ESC1

New location D99 shall be placed approximately 25 ft northwest of ESC1

New location C99 shall be placed approximately 12.5 ft west of ESC1

Care will be taken to place the additional sampling locations such that they are not in the road or in the drainage swale adjacent to and south of the road. The general vicinity of ESC1 will be visually surveyed to determine if foundation drains exist where PCB laden sediment might accumulate. If found, a sample from the drain may be collected in lieu of the direct push sampling locations described above. In accordance with the original sampling strategy for the ES grid (see Table B-4-2), one surface and one semi-subsurface sample will be collected from each of the new locations and will be screened for PCBs.

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Attachment 4 (reference letter dated 23 Aug 2000 and USACE letter dated 16 August 2000)

16 AUGUST 2000 ADDITIONS TO THE SAP FOR AREAS 4, 7, 8, AND 11

INSERTION LOCATION: Insert page between Table B-5-1 and B-5-2

CHANGES TO ORIGINAL SAP:

Phase II Investigation at Area 4 Grid K200

Due to elevated PAH concentrations reported in soil samples collected from original grid locations C 1 and B 1, three additional locations will be added to assess the horizontal extent of the reported constituents. The locations will be designated and placed as follows (see figure B-5-1 for location of K200 grid within Area 4):

New location D1 shall be placed 25 ft north of K200C1

New location C99 shall be placed 25 ft west of K200C1

New location B99 shall be placed 25 ft west of K200B 1

In accordance with the original sampling strategy for the K200 grid (see Table B-5-2), one surface and one semi-subsurface sample will be collected from each of the new locations and will be screened for PAHs. The semi-subsurface sample interval will be 3.5 to 4.0 ft bgs, or at the discretion of the field geologist based on possible observations of elevated organic vapor concentrations or soil staining.

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Attachment 5 (reference letter dated 23 Aug 2000 and USACE letter dated 16 August 2000)

16 AUGUST 2000 ADDITIONS TO THE SAP FOR COMPONENT 2 GROUND-WATER SAMPLING.

INSERTION LOCATION: Insert pages after Table B-14-1

GROUND-WATER SAMPLING OF EXISTING WELLS ON COMPONENT 2 WAS NOT INCLUDED IN THE ORIGINAL INVESTIGATION. THIS WILL SUBSTITUTE AS THE ORIGINAL SAP FOR COMPONENT 2 GROUND WATER SAMPLING OF EXISTING WELLS

Because sampling of existing wells Component 2 was not included in the original Phase II investigation, a SAP does not currently exist. By owner request and approval by USACE, ground water sampling of Component 2 existing wells has being added to Phase II RI. The investigation shall include the following:

Well Reconnaissance:

According to the Preliminary Contaminant Assessment Report (Acres 1992), there are ten existing wells at Component 2, Somerset Property(see Figure 1).

Those wells are:

MWS-41 and D
MWS-3S, I and D
MWS-21 and D
MWS-1S, I and D

Where S, I, and D represent shallow, intermediate, and deep screening intervals, respectively. A reconnaissance of existing wells at Component 2 will be performed to determine the condition of the well. The wells will be checked for breaks and blockages in the well casing, evidence of frost heaving, lock integrity and PVC riser integrity. In addition, the depth to the bottom of the well, and to the water table will be measured and recorded. Attached are two tables, from ACRES Preliminary Contamination Assessment Report (1992), which provide information from well installation and water level measurements, respectively (see Table B-15-1 and Table B-15-2).

Well Development:

Assuming water is present, wells deemed secure and intact based on the visual survey described above will be redeveloped. Development will be performed according to the SOP established for Phase II RI.

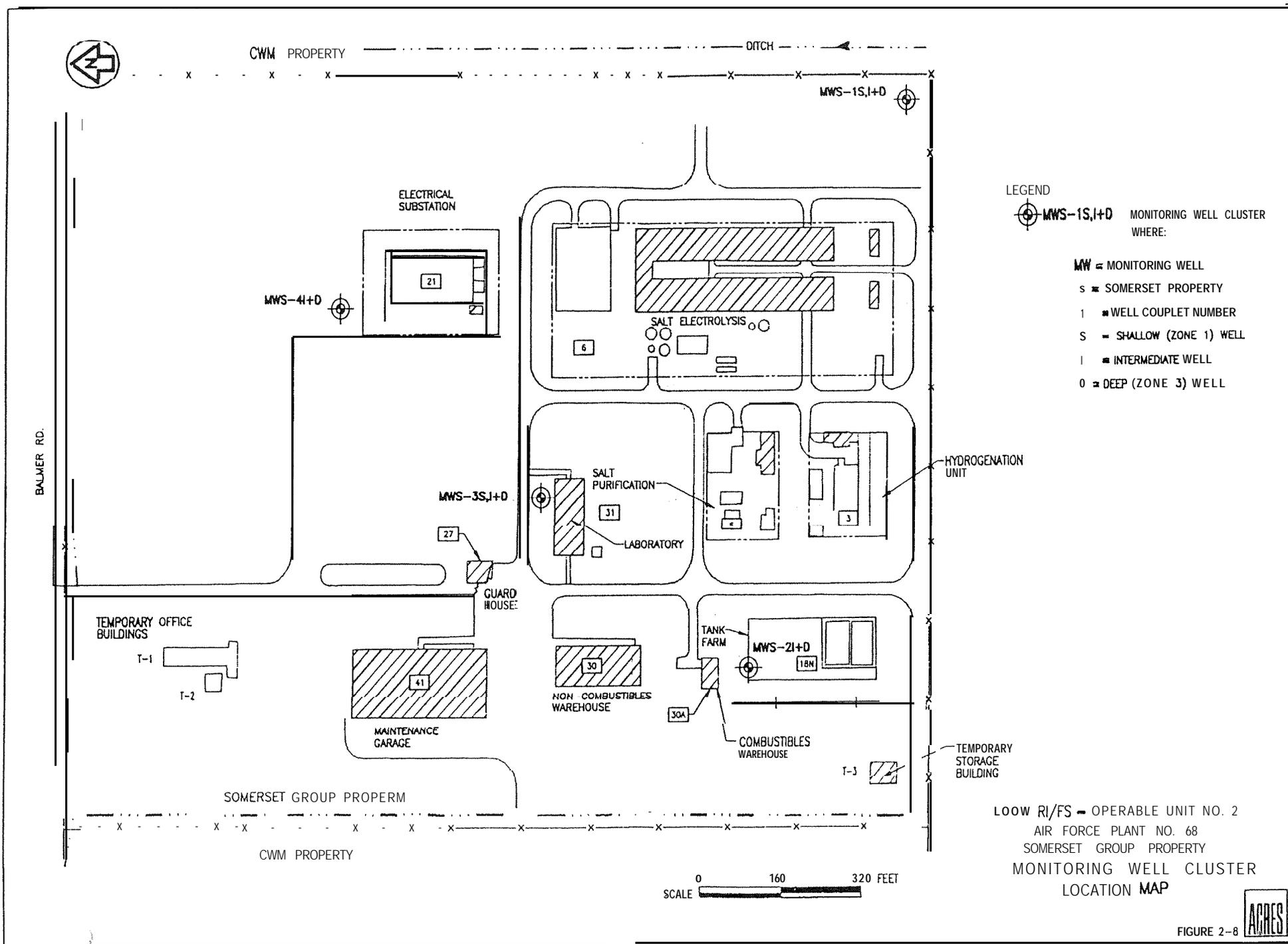
Ground-Water Samulinp:

A ground-water sample will be collected from each well in accordance with the SOPs established in the Phase II RI. The sampling strategy can be found in Table B-15-3. The samples will be sent to STL Laboratories for analysis of full suite parameters as listed in Table B-15-4.

Well Surveying:

The locations of the existing monitoring wells will be surveyed in reference to the NY State Plane Coordinate System with an accuracy if +/- 3 ft. The elevation of the PVC stick-up reference will be surveyed in reference to Mean Sea Level with an accuracy of +/- 0.05 ft.

FIGURE 1 MAP OF FORMER LOOW COMPONENT 2 SITE



**TABLE B-15-1 FORMER LOOW COMPONENT 2
WELL INFORMATION**

WELL ID	COORDINATE LOCATION		ELEVATION			TOTAL DEPTH		TOP OF UPPER CLAY FT	TOP OF MIDDLE SILT TILL FT	TOP OF LOWER CLAY FT	TOP OF SILT/SAND FT	TOP OF BASAL RED TILL FT	TOP OF SCREEN FT	BOTTOM OF SCREEN FT	TOP OF SAND PACK FT	TOP OF BENTONITE SEAL FT
	NORTH	S	T	GROUND SURFACE	BRASS DISK	PVC RISER	FT									
MWS-1S	10560	8451.8	313.3	313.95	315.96	14.0	299.3	-			-	-	3.8	8.8	2.7	1.0
MWS-1I	10566	8447.3	313.3	313.93	315.86	35.0	278.3	18.0	28		-	-	29.4	34.4	27.2	25.4
MWS-1D	10560	8442.1	313.3	314.05	316.23	54.0	259.3	18.0	28.5	34.8	37.5	50.7	39.0	49.0	37.0	35.0
MWS-2I	10747	7704.3	310.8	311.51	313.82	49.0	261.8	18.1	31.6		-	-	34.5	46.5	32.1	30.0
MWS-2D	10739	7700.2	310.8	311.50	313.43	62.0	248.8	18.1	31.5	48.5	52.3	60.8	54.5	59.5	52.2	50.1
MWS-3s	11122	7907.2	310.4	310.78	312.83	10.0	300.4				-	-	5.0	10.0	3.9	2.0
MWS-3I	11129.0	7906.9	310.4	310.85	312.93	37.0	273.4	22.0	29.5	36.0	-	-	30.0	35.0	28.0	25.0
MWS-3D	11129.0	7911.5	310.4	310.73	312.82	66.0	244.4	23.5	31.2	35.6	39.1	64.0	42.2	62.2	40.2	37.6
MWS-4I	11433	8176.3	309.2	309.93	312.26	42.0	267.2	23.2	31.5	40.4			29.6	39.6	27.6	25.7
MWS-4D	11427	8177.9	309.2	309.92	312.18	56.0	253.2	23.2	31.5	45.5	48.9	53.3	50.0	55.0	48.3	46.3

Source: ACRES Preliminary Contamination Assessment Report 1992

NOTE: Coordinates cited above are not referenced to N.Y. State Plane.

**TABLE B-15-2 FORMER LOOW COMPONENT 2
GROUND-WATER ELEVATIONS**

Well ID	Reference Elevation (ft MSL)	January 22, 1992		February 19, 1992	
		Water Level (ft BTOR)	Water Elevation (ft MSL)	Water Level (ft BTOR)	Water Elevation (ft MSL)
MWS-1S	315.96	Dry	-	Dry	-
MWS-1I	315.86	17.39	298.47	16.12	299.74
MWS-1D	316.26	18.53	297.70	17.75	298.48
MWS-2I	313.82	17.37	296.45	14.68	299.14
MWS-2D	313.43	15.98	297.45	15.22	298.21
MWS-3S	312.83	4.58	308.25	4.55	308.28
MWS-3I	312.93	14.29	298.64	12.20	300.73
MWS-3D	312.82	15.29	297.53	14.51	298.31
MWS-3I	312.26	12.60	299.66	10.39	301.87
MWS-3D	312.18	14.28	297.90	14.70	297.48

Source ACRES Preliminary Contamination Assessment Report 1992

**TABLE B-15-3 SUMMARY OF PHASE II EXPANSION SAMPLING OF EXISTING WELLS AND SURFACE WATER/SEDIMENT LOCATIONS
FOR FORMER LOOW COMPONENT 2**

Sampling Location	SOIL (FIELD SCREENING)			SOIL (LABORATORY ANALYSIS)			GROUND WATER		SURFACE WATER	
	Number of Grid Locations	Number of Samples / Location	Field Screening Analysis	Number of Locations	Number of Samples / Location	Analysis	Number of Wells	Analysis	Number of Samples	Analysis
Ponded Area South of Bldg 30A-1	None	None	None	1	2	Full Suite	None	None	2	Full Suite
MWS-1S	None	None	None	None	None	None	1	Full Suite	None	None
MWS-1I	None	None	None	None	None	None	1	Full Suite	None	None
MWS-1D	None	None	None	None	None	None	1	Full Suite	None	None
MWS-2I	None	None	None	None	None	None	1	Full Suite	None	None
MWS-2D	None	None	None	None	None	None	1	Full Suite	None	None
MWS-3S	None	None	None	None	None	None	1	Full Suite	None	None
MWS-3I	None	None	None	None	None	None	1	Full Suite	None	None
MWS-3D	None	None	None	None	None	None	1	Full Suite	None	None
MWS-4I	None	None	None	None	None	None	1	Full Suite	None	None
MWS-4D	None	None	None	None	None	None	1	Full Suite	None	None

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TABLE B-15-4 GROUNDWATER SAMPLE COLLECTION PLAN FOR FORMER LOOW COMPONENT 2

Analyte	EPA SW846 Method	Sample Container	Preservative	Recommended Holding Time	Laboratory Analytical Samples		Laboratory QA Samples					
					Groundwater	Wastewater	Ground Water Duplicate	Waste Water Duplicate	Ground water ms/msd	Waste water ms/msd	Ground water Equipment Blanks	Waste water Equipment Blanks
TCL voc	8260B	(3) 40-mL Volatile Bottles	Cool, 4 c HCl to pH < 2	14 days	10	0	1	0	0	0	0	0
TCL svoc	8270C	2-L Amber	Cool, 4 c	Extract: 14 days Analyze: 40 days	10	0	1	0	0	0	0	0
PAHs	8310	2-L Amber	Cool, 4 c	Extract: 7 days Analyze: 40 days	10	0	1	0	0	0	0	0
TAL Metals (ICP), Total	6010B	1-L Nalgene	Cool, 4 c HNO3 to pH < 2	6 months	10	0	1	0	0	0	0	0
TAL Metals (ICP), Dissolved	6010B	1-L Nalgene	Cool, 4 c HNO3 to pH < 2	6 months	10	0	1	0	0	0	0	0
TAL Metals (GFAA/TRACE ICP) Total	7000 Series	1-L Nalgene	Cool, 4 c HNO3 to pH < 2	6 months Hg: 28 days	10	0	1	0	0	0	0	0
TAL Metals (GFAA/TRACE ICP) Dissolved	7000 Series	1-L Nalgene	Cool, 4 c HNO3 to pH < 2	6 months Hg: 28 days	10	0	1	0	0	0	0	0
Boron and Lithium Total	6010B	1-L Nalgene	Cool, 4 c HNO3 to pH < 2	6 months	10	0	1	0	0	0	0	0
Boron and Lithium, Dissolved	6010B	1-L Nalgene	Cool, 4 c HNO3 to pH > 12	6 months	10	0	1	0	0	0	0	0

NOTE: Up to 5 percent of samples will be submitted as duplicates. Up to 5 percent of samples will be submitted as MS/MSD

TABLE B-15-4 (Continued)

Analyte	EPA SW846 Method	Sample Container	Preservative	Recommended Holding Time	Laboratory Analytical Samples		Laboratory QA Samples					
					Groundwater	Wastewater	Ground Water Duplicate	Waste Water Duplicate	Ground water ms/msd	Waste water ms/msd	Ground water Equipment Blanks	Waste water Equipment Blanks
Cyanide	9012A	250-mL Nalgene	Cool, 4 c NaOH to pH > 12	14 days	10	0	1	0	0	0	0	0
Explosives	8330	2-L Amber	Cool, 4 c	Extract: 14 days Analyze: 40 days	10	0	1	0	0	0	0	0
Pesticides/PCB	8081A/ 8082	2-L Amber	Cool, 4 c	Extract: 14 days Analyze: 40 days	10	0	1	0	0	0	0	0

NOTE: Up to 5 percent of samples will be submitted as duplicates. Up to 5 percent of samples will be submitted as MS/MSD.

Attachment 6 (reference letter dated 23 August 2000 and USACE letter dated 16 August 2000)

16 AUGUST 2000 ADDITIONS TO THE SAP FOR COMPONENT 2 SURFACE WATER SAMPLING.

INSERTION LOCATION: Insert pages after Table B-1 5-4.

COMPONENT 2 SURFACE WATER SAMPLING WAS NOT INCLUDED IN THE ORIGINAL INVESTIGATION. THIS WILL SUBSTITUTE AS THE ORIGINAL SAP FOR COMPONENT 2 SURFACE WATER SAMPLING:

Because Component 2 Surface Water Sampling was not included in the original Phase II investigation, a SAP does not currently exist. By owner request and approval by USACE, surface water sampling of Component 2 has being added to Phase II RI. The investigation shall include the following:

The ponded area, located approximately 50 ft south of building 30A-1 at Component 2, will be sampled for both surface water and sediment according to the SOPs established for the Work Plan for Phase I Remedial Investigation for the Lake Ontario Ordnance Works (August 1998). The sampling strategy can be found in Table B-15-3. The samples collected will be sent to STL Laboratories for full suite parameters as listed in Table B-15-5 and Table B-15-6.

TABLE B-15-5 SURFACE WATER SAMPLE COLLECTION PLAN FOR FORMER LOOW COMPONENT 2

Analyte	EPA SW846 Method	Sample Container	Preservative	Recommended Holding Time	Laboratory Analytical Samples		Laboratory QA Samples						
					Surfacewater	Wastewater	Ground Water Duplicate	Waste Water Duplicate	Ground water ms/msd	Waste water ms/msd	Ground water Equipment Blanks	Waste water Equipment Blanks	
													2
TCL VOC	8260B	(3) 40-mL Volatile Bottles	Cool, 4 C HCl to pH < 2	14 days	0	0	0	0	0	0	0	0	0
TCL SVOC	8270C	2-L Amber	Cool, 4 C	Extract: 14 days Analyze: 40 days	0	0	0	0	0	0	0	0	0
PAHs	830	2-L Amber	Cool, 4 C	Extract: 7 days Analyze: 40 days	0	0	0	0	0	0	0	0	0
TAL Metals (ICP), Total	6010B	1-L Nalgene	Cool, 4 C HNO3 to pH < 2	6 months	0	0	0	0	0	0	0	0	0
TAL Metals (ICP), Dissolved	6010B	1-L Nalgene	Cool, 4 C HNO3 to pH < 2	6 months	0	0	0	0	0	0	0	0	0
TAL Metals (GFAA/TRACE ICP) Total	7000 Series	1-L Nalgene	Cool, 4 C HNO3 to pH < 2	6 months Hg: 28 days	0	0	0	0	0	0	0	0	0
TAL Metals (GFAA/TRACE ICP) Dissolved	7000 Series	1-L Nalgene	Cool, 4 C HNO3 to pH < 2	6 months Hg: 28 days	0	0	0	0	0	0	0	0	0
Boron and Lithium, Total	6010B	1-L Nalgene	Cool, 4 C HNO3 to pH < 2	6 months	0	0	0	0	0	0	0	0	0
Boron and Lithium, Dissolved	6010B	1-L Nalgene	Cool, 4 C HNO3 to pH > 12	6 months	0	0	0	0	0	0	0	0	3

NOTE: 1 to 5 percent of samples will be submitted as duplicates. Up to 5 percent of samples will be submitted as MS/MSD.

TABLE B-15-5 (Continued)

Analyte	EPA SW846 Method	Sample Container	Preservative	Recommended Holding Time	Laboratory Analytical Samples		Laboratory QA Samples								
					Surfacewater	Wastewater	Ground Water Duplicate	Waste Water Duplicate	Ground water ms/msd	Waste water ms/msd	Ground water Equipment Blanks	Waste water Equipment Blanks			
													2	0	0
Cyanide	9012A	250-mL Nalgene	Cool, 4 C NaOH to pH > 12	14 days	2	0	0	0	0	0	0	0	0	0	0
Explosives	8330	2-L Amber	Cool, 4 C	Extract: 14 days Analyze: 40 days	2	3	0	0	0	0	0	0	0	0	0
Pesticides/PCB	8081A/ 8082	2-L Amber	Cool, 4 C	Extract: 14 days Analyze: 40 days	2	0	0	0	0	0	0	0	0	0	0

NOTE: Up to 5 percent of samples will be submitted as duplicates. Up to 5 percent of samples will be submitted as MS/MSD.

TABLE B-15-6 SEDIMENT SOIL SAMPLE PLAN FOR FORMER LOOW COMPONENT 2

Analyte	EPA SW846 Method	Sample Container	Preservative	Recommended Holding Time	Laboratory Analytical Samples				Laboratory QA Samples						
					Sediment Soil	Semi-surface Soil	Sub-surface Soil	Sludge	Surface Soil Duplicates	Sub-surface Soil Duplicates ¹	Sludge Duplicates	Soil ms/msd	Sludge ms/msd	Soil Equipment Blanks	Sludge Equipment Blanks
TCL voc	5035/8260B	3 EnCore Samplers	Cool, 4 c	Preserve: 48 hrs. Analyze: 14 days	2	0	0	0	0	0	0	0	0	0	0
TCL SVOC	8270C	(2) 4-oz. soil jars*	Cool, 4 c	Extract: 14 days Analyze: 40 days	2	0	0	0	0	0	0	0	0	0	0
PAH	8310	G container Teflon-lined cap	Cool, 4 c	Extract: 14 days Analyze: 40 days	2	0	0	0	0	0	0	0	0	0	0
TAL Metals (ICP)	6010B	(2) 4-oz. soil jars*	None	6 months	2	0	0	0	0	0	0	0	0	0	0
TAL Metals (GFAA /TRACE ICP)	7000 Series	(2) 4-oz. Soil jars	None	6 months Hg: 28 days	2	0	0	0	0	0	0	0	0	0	0
Boron and Lithium	6010B	(2) 4-oz. soil jars*	None	6 months	2	0	0	0	0	0	0	0	0	0	0
Cyanide	9012A	(2) 4-oz. soil jars*	None	Extract: 14 days Analyze: 40 days	2	0	0	0	0	0	0	0	0	0	0
Explosives	8330	(2) 4-oz. soil jars*	Cool, 4 c	Extract: 14 days Analyze: 40 days	2	0	0	0	0	0	0	0	0	0	0

NOTE: ¹ Up to 5 percent of samples will be submitted as duplicates. Up to 5 percent of samples will be submitted as MS/MSD

TABLE B-1 5-6 (Continued)

Analyte	EPA SW846 Method	Sample Container	Preservative	Recommended Holding Time	Laboratory Analytical Samples				Laboratory QA Samples						
					Sedi-ment Soil	Semi-Sub-surface Soil	Sub-surface Soil	Sludge	Surface Soil Duplicates	Sub-surface Soil Duplicates ¹	Sludge Duplicates	Soil ms/msd	Sludge ms/msd	Soil Equipment Blanks	Sludge Equipment Blanks
Pesticides/PCB	8081A/ 8082	(2) 4-oz soil jars*	Cool, 4 C	Extract: 14 days Analyze: 40 days	2	0	0	0	0	0	0	0	0	0	0
Total Organic Carbon (TOC)	Modified 9060	(1) 4-oz Soil jar	Cool, 4 C	28 days	0	0	0	0	0	0	0	0	0	0	0

NOTE: Up to 5 percent of samples will be submitted as duplicates. Up to 5 percent of samples will be submitted as MS/MSD.

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