

Appendix A
Background Evaluation

**Final
Background Evaluation for the
Occidental Chemical Corporation Property
At Formerly Used Defense Site
Former Lake Ontario Ordnance Works (LOOW)
Niagara County, New York**

March 2013

Prepared for:



**US Army Corps
of Engineers®**

BUILDING STRONG®
U.S. Army Corps of Engineers
Baltimore District

Contract W912QR-08-D-0012
Delivery Order 0008
FUDS Project No. C02NY0025

Prepared by:

ERT, Inc.
6100 Frost Place, Suite A
Laurel, Maryland 20707
(301) 361-0620

EA Engineering, Science, and Technology, Inc.
225 Schilling Circle, Suite 400
Hunt Valley, Maryland 21031
(410) 771-4950

BACKGROUND EVALUATION

1.0 SOIL

1.1 BACKGROUND SOIL DATA

Soil samples were collected from background locations during Phase I and II of the RI (USACE/EA 1999 and 2002). Two subsurface soil samples (to 14 ft below ground surface [bgs]), one surface soil sample (0 to 0.5 bgs), and one “shallow” subsurface soil sample (0 to 2 ft. bgs) were collected during the Phase I RI and submitted for target compound and target analyte list analyses. During the Phase II RI, 15 surface soil (0 to 0.5 ft bgs) and 15 subsurface soil samples (ranging to 20 ft bgs) were submitted for analysis of metals, polycyclic aromatic hydrocarbons (PAHs), and total organic carbon. The data tables from the Phase I and Phase II RI Reports are attached to this appendix for reference (Attachment 1).

A test for outliers within the metals background dataset was performed during Phase III of the RI (USACE/EA2008) prior to using the dataset for the background evaluation. The data was checked for outliers using a simple inter-quartile test (Iglewicz and Hoaglin, 1993). In this test the first quartile (Q1) is subtracted from the third quartile (Q3) and the result multiplied by a factor (3) and added to Q3 to determine a limit.

$$L = Q3 + 3(Q3 - Q1)$$

where:

- $Q1$ = first quartile of the data
- $Q3$ = third quartile of the data
- L = the limit above which value may be an outlier.

Data values that exceeded the limit were considered potential outliers. The potential outlier was then investigated to determine if there was scientific rationale for removing it from the background data set, such as a likely impact form site activities, or lab or transcription errors.

Results of the inter-quartile test performed during the previous RI phase are included in Attachment 1 for reference.

The test identified several metals results as potential outliers. However, upon review of historical site activities and potential sampling or analytical errors, only three results from surface soil samples were identified as outliers that should be removed from the data set: selenium within background location BGKD 12, and arsenic and lead within location BKGD 17 (USACE/EA 2008).

Location BGKD 12 was located within a hunting preserve. Selenium is a component in gun metal and may have been present in higher concentrations due to site use. Location BKGD 17 was located adjacent to a fruit orchard. Lead arsenate has historically been used as a pesticide and may have contributed to the elevated lead and arsenic reported at this location.

Because selenium, arsenic, and lead were reported as outliers and the elevated concentrations may be linked to site use, these three concentrations were removed from the data set prior to use in the background evaluation.

1.2 OCCIDENTAL CHEMICAL CORPORATION PROPERTY (OCCP) BACKGROUND EVALUATION FOR METALS IN SOIL

A statistical comparison of the OCCP site soil data against the background soil data set was performed to evaluate whether the reported concentrations at OCCP were consistent with site background concentrations. Areas of the OCCP that were investigated included Exposure Unit 8 [EU 8], areas of concern (AOCs) 3, 4, and 5 (Locations 3, 4, and 7, respectively), as well as AOCs 2 and 6 (Pond 1 and Pond 2, respectively). Each of these were evaluated separately with regard to background. The information was considered in the human health risk assessment (HHRA) and screening level ecological risk assessment (SLERA) in evaluating uncertainties and contributors to risk.

1.2.1 EU 8 - Metals Background Evaluation

For EU 8, if constituents were reported with four to seven detected concentrations, a comparison of the maximum site concentration to the 95% upper prediction limit (UPL) of the next observation of the background data set was conducted. Constituents with eight or more detected concentrations underwent a background screen using hypothesis testing. Hypothesis testing consisted of the quantile test in conjunction with the Wilcoxon Rank Sum test. Both tests were conducted with the null hypothesis that site concentrations are less than or equal to background. If the null hypothesis was rejected for either the quantile test or Wilcoxon Rank Sum tests at the 95% significance level, then it was concluded that the site data exceeded background. Figure 1 describes the procedure used to assess whether reported metals in soil collected from EU 8

exceeded background concentrations. Statistical computations were conducted using ProUCL 4.1 (USEPA 2011). The outputs from ProUCL are included in Attachment 2 to this Appendix. No statistical evaluation was performed on those metals detected less than four detected sample results. However, if the metal was detected less than four times and one of those detections exceeded risk-based comparison criterion, the metal was carried through the HHRA. Similarly, for metals that were detected in the site data, but were not detected in the background data set, statistical evaluation to support the background evaluation was not performed, but if a reported concentration exceeded risk-based criteria, it was carried through the risk assessment as well.

For the EU 8 metals background evaluation, surface soil (SS), subsurface soil (SO), and total soil (TS) (combined surface and subsurface soil) data sets were evaluated against the corresponding background data sets for SS, SO, and TS.

Conclusions as to whether concentrations of inorganics exceeded background are presented in Table 1. For some analytes there were multiple statistical evaluations performed: Wilcoxon Rank Sum and quantile test; that resulted in differing conclusions with regard to whether the analyte exceeded background. While this is due to the size and concentration distribution of the data sets, this leads to some uncertainty in the final conclusion with regard to whether these analytes exceeded background. Therefore, as a conservative measure, analytes with differing conclusions with regard to background were retained for evaluation of risk, if concentrations exceeded risk based screening criterion.

The background evaluation is utilized in discussing the nature and extent of site constituents, as well as in evaluating contributions to human health and ecological risk. These are discussed in other sections of the RI report.

1.2.2 Areas of Concern 3, 4, and 5 - Metals Background Evaluation

Separate background evaluations were performed for site soil data associated with AOCs 3, 4, and 5. A limited number of soil samples were collected from each of these AOCs (e.g., up to three surface and subsurface soil samples). Because this RI represents the first evaluation of these areas, and because the data set is limited, the maximum reported concentration from the surface soil, subsurface soil, and total soil data sets from samples collected within each area of interest was compared to the 95% UPL of the background data set for each soil matrix (SS, SO, and TS).

Summaries of the statistics for the AOC 3, 4, and 5 data sets are included in Tables 2, 3, and 4, respectively. The background evaluation is utilized in discussing the nature and extent of site

constituents, as well as in evaluating contributions to human health, for which comparison to background is performed prior to assessment of risk to maintain consistency with other HHRAs conducted for LOOW.

1.3 POLYNUCLEAR AROMATIC HYDROCARBON BACKGROUND EVALUATION

PAHs were detected, although infrequently, in surface soil from EU 8 and AOCs 3 and 5. To evaluate the reported site concentrations with regard to background, the 95% UPL of the next observation of the background data set for the reported PAHs was compared to the maximum concentration reported for EU 8 and each area of interest. The 95% UPL was calculated using ProUCL 4.1. Tables 5, 6, and 7 present the summary of results for the EU 8, AOC 3, and AOC 5 PAH background evaluation, respectively.

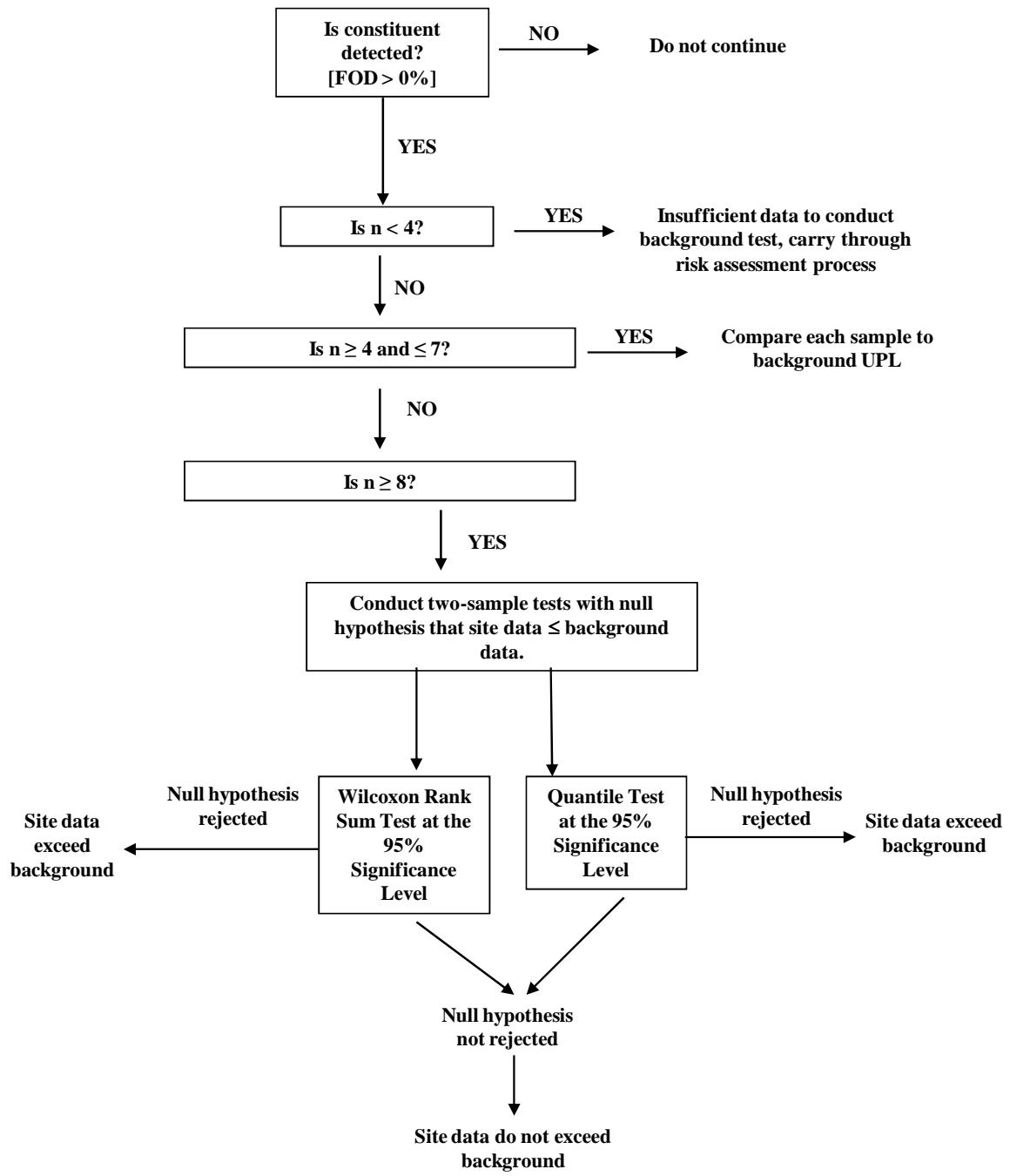


Figure 1. Decision Tree for Comparison to Background Soil Metals Data, EU 8 – Probable Storage Area

2.0 SURFACE WATER AND SEDIMENT

Surface water and sediment samples collected in 2001 from one of the pond locations were analyzed for radiological parameters. An evaluation of constituents reported in surface water and sediment at background sampling locations was performed as part of an RI being conducted at the Niagara Falls Storage Site (NFSS), which is located adjacent to and south of the former LOOW WWTP (USACE 2007). The NFSS background data was utilized to evaluate whether reported radiological parameters in surface water and sediment collected at OCCP could potentially be attributable to background. Table 8 presents the comparison.

3.0 REFERENCES

- USACE/EA, 2008. *Report of the Results for the Remedial Investigation of Underground Utility Lines Formerly Used by the Department of Defense, Former Lake Ontario Ordnance Works (LOOW), Niagara County, New York.* Prepared by EA Engineering, Science and Technology, Inc (EA). September.
- USACE/EA, 2002. *Report of the Results for the Phase II Remedial Investigation at the Former Lake Ontario Ordnance Works (LOOW), Niagara County, New York.* Prepared by EA Engineering, Science and Technology, Inc (EA). February.
- USACE/EA, 1999. *Report for Phase I Remedial Investigation at the Former Lake Ontario Ordnance Works, Niagara County, NY.* Prepared by EA. July.
- USACE/SAIC, 2007. *Remedial Investigation Report for the Niagara Falls Storage Site.* December.
- USEPA, 2011. ProUCL. Software developed by USEPA. Obtained on the Internet at <http://www.epa.gov/nerlesd1/tsc/software.htm>. Las Vegas Technical Support Center for Monitoring and Site Characterization. March.

TABLES

TABLE 1 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR EXPOSURE UNIT 8, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Background Data | | | | | | Site Data | | | Hypothesis Tests | | | Conclusion |
|------|--------|-----------|-----------------|----|----------|--------------|--------|----------------------|-----------|----------|--------------|------------------|------------------------|------------------|---|
| | | | Unit | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Wilcoxon Rank Sum Test | Quantile Test | |
| EU8 | SO | ALUMINUM | MG/KG | 18 | 18 | 19100 | 11000 | 18891 | 18 | 18 | 17700 | 11100 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | ANTIMONY | MG/KG | 18 | 7 | 0.76 | 0.314 | 0.771 | 18 | 0 | NA | 0.823 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | ARSENIC | MG/KG | 18 | 18 | 6.8 | 3.87 | 6.026 | 18 | 18 | 5.2 | 3.47 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | BARIUM | MG/KG | 18 | 18 | 173 | 99 | 165.9 | 18 | 18 | 168 | 107 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | BERYLLIUM | MG/KG | 18 | 18 | 0.98 | 0.554 | 0.983 | 18 | 12 | 0.73 | 0.915 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | BORON | MG/KG | 18 | 17 | 9.3 | 4.76 | 9.049 | 18 | 5 | 19.2 | 20 | NA | NA | Exceeds Background UPL |
| EU8 | SO | CADMIUM | MG/KG | 18 | 4 | 0.18 | 0.0456 | 0.146 | 18 | 9 | 1.5 | 0.382 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | CALCIUM | MG/KG | 18 | 18 | 58900 | 40000 | 58900 | 18 | 18 | 86500 | 39000 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | CHROMIUM | MG/KG | 18 | 18 | 25.8 | 16.1 | 26.95 | 18 | 17 | 319 | 50.6 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SO | COBALT | MG/KG | 18 | 18 | 16.7 | 10.9 | 17.41 | 18 | 18 | 12.9 | 9.01 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | COPPER | MG/KG | 18 | 18 | 49.3 | 28.4 | 54.56 | 18 | 18 | 38.5 | 28.5 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | IRON | MG/KG | 18 | 18 | 33000 | 22000 | 33957 | 18 | 18 | 29700 | 22200 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | LEAD | MG/KG | 18 | 18 | 11.8 | 6.09 | 11.36 | 18 | 18 | 29.2 | 6.42 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | LITHIUM | MG/KG | 18 | 18 | 36.8 | 24 | 37.9 | 18 | 18 | 23.3 | 18.8 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | MAGNESIUM | MG/KG | 18 | 18 | 14800 | 9660 | 14962 | 18 | 18 | 11400 | 7380 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | MANGANESE | MG/KG | 18 | 18 | 979 | 692 | 971.7 | 18 | 18 | 1790 | 726 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | MERCURY | MG/KG | 18 | 4 | 0.03 | 0.0258 | 0.0378 | 18 | 9 | 0.07 | 0.0513 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | NICKEL | MG/KG | 18 | 18 | 38 | 22.2 | 35.71 | 18 | 18 | 23.4 | 17.5 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | POTASSIUM | MG/KG | 18 | 18 | 3200 | 1600 | 2942 | 18 | 18 | 4240 | 2030 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SO | SELENIUM | MG/KG | 18 | 1 | 0.23 | 0.117 | 0.23 | 18 | 9 | 1.6 | 0.923 | Reject H0 | Reject H0 | Exceeds Background |
| EU8 | SO | SILVER | MG/KG | 18 | 0 | NA | 0.0783 | 0.2 | 18 | 8 | 0.12 | 0.537 | NA | Do Not Reject H0 | Detected in Site but not in Background ² |
| EU8 | SO | SODIUM | MG/KG | 18 | 18 | 331 | 209 | 331 | 18 | 18 | 730 | 218 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | THALLIUM | MG/KG | 18 | 0 | NA | 0.115 | 0.5 | 18 | 8 | 0.67 | 0.423 | NA | Do Not Reject H0 | Detected in Site but not in Background ² |
| EU8 | SO | VANADIUM | MG/KG | 18 | 18 | 35.2 | 21.9 | 36.17 | 18 | 18 | 35.1 | 23.8 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SO | ZINC | MG/KG | 18 | 18 | 266 | 61.8 | 266 | 18 | 18 | 354 | 68 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | ALUMINUM | MG/KG | 16 | 16 | 18400 | 11600 | 18922 | 37 | 37 | 32800 | 10100 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | ANTIMONY | MG/KG | 16 | 6 | 0.94 | 0.292 | 0.747 | 37 | 15 | 10.1 | 2.74 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | ARSENIC | MG/KG | 15 | 15 | 11.4 | 4.4 | 8.322 | 37 | 36 | 27.1 | 5.71 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | BARIUM | MG/KG | 16 | 16 | 279 | 124 | 251 | 37 | 37 | 9710 | 1370 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SS | BERYLLIUM | MG/KG | 16 | 16 | 1 | 0.636 | 1.05 | 37 | 28 | 4.3 | 0.713 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | BORON | MG/KG | 16 | 12 | 10.1 | 3.05 | 14.23 | 37 | 4 | 57.2 | 52 | NA | NA | Exceeds Background UPL |
| EU8 | SS | CADMIUM | MG/KG | 16 | 8 | 0.53 | 0.0953 | 0.474 | 37 | 27 | 184 | 11.3 | Reject H0 | Reject H0 | Exceeds Background |
| EU8 | SS | CALCIUM | MG/KG | 16 | 16 | 45200 | 8610 | 29113 | 37 | 37 | 196000 | 14700 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | CHROMIUM | MG/KG | 16 | 16 | 24.3 | 17.3 | 26.33 | 37 | 36 | 4960 | 218 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SS | COBALT | MG/KG | 16 | 16 | 57.4 | 12 | 33.57 | 37 | 36 | 43.3 | 8.19 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | COPPER | MG/KG | 16 | 16 | 34.7 | 18.3 | 36.07 | 37 | 37 | 4790 | 359 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SS | IRON | MG/KG | 16 | 16 | 36400 | 21000 | 37075 | 37 | 37 | 182000 | 30500 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | LEAD | MG/KG | 15 | 15 | 55.2 | 16.4 | 39.42 | 37 | 37 | 2760 | 496 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SS | LITHIUM | MG/KG | 16 | 16 | 27.9 | 15.7 | 29.12 | 37 | 35 | 36.3 | 11.2 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | MAGNESIUM | MG/KG | 16 | 16 | 10200 | 4470 | 9538 | 37 | 37 | 97300 | 12500 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SS | MANGANESE | MG/KG | 16 | 16 | 6650 | 817 | 2679 | 37 | 37 | 1390 | 286 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | MERCURY | MG/KG | 16 | 9 | 0.27 | 0.0588 | 0.207 | 37 | 27 | 0.62 | 0.0974 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | NICKEL | MG/KG | 16 | 16 | 37.5 | 18.5 | 34.61 | 37 | 36 | 699 | 59.4 | Reject H0 | Do Not Reject H0 | Exceeds Background |
| EU8 | SS | POTASSIUM | MG/KG | 16 | 16 | 1820 | 898 | 1727 | 37 | 37 | 4540 | 845 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | SELENIUM | MG/KG | 15 | 7 | 0.37 | 0.211 | 0.392 | 37 | 25 | 24 | 1.8 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | SILVER | MG/KG | 16 | 2 | 0.27 | 0.11 | 0.27 | 37 | 23 | 1.6 | 0.579 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | SODIUM | MG/KG | 16 | 16 | 286 | 125 | 215.6 | 37 | 28 | 1470 | 162 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | THALLIUM | MG/KG | 16 | 0 | NA | 0.129 | 0.5 | 37 | 5 | 1.8 | 0.914 | NA | NA | Detected in Site but not in Background ² |
| EU8 | SS | VANADIUM | MG/KG | 16 | 16 | 34 | 22.3 | 35.18 | 37 | 34 | 220 | 21.7 | NA | Do Not Reject H0 | Does Not Exceed Background |
| EU8 | SS | ZINC | MG/KG | 16 | 16 | 78 | 52.6 | 80.8 | 37 | 36 | 52300 | 8410 | Reject H0 | Do Not Reject H0 | Exceeds Background |

TABLE 1 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR EXPOSURE UNIT 8, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Background Data | | | | | | Site Data | | | | Hypothesis Tests | | | Conclusion |
|------|--------|-----------|-----------------|----|----------|--------------|--------|----------------------|-----------|----------|--------------|--------|------------------|----------------------|---|------------|
| | | | Unit | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | | |
| EU8 | TS | ALUMINUM | MG/KG | 34 | 34 | 19100 | 11300 | 18487 | 55 | 55 | 32800 | 10400 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | ANTIMONY | MG/KG | 34 | 13 | 0.94 | 0.304 | 0.733 | 55 | 15 | 10.1 | 2.11 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | ARSENIC | MG/KG | 33 | 33 | 11.4 | 4.11 | 7.077 | 55 | 54 | 27.1 | 4.98 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | BARIUM | MG/KG | 34 | 34 | 279 | 111 | 204.7 | 55 | 55 | 9710 | 954 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | BERYLLIUM | MG/KG | 34 | 34 | 1 | 0.593 | 0.996 | 55 | 40 | 4.3 | 0.779 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | BORON | MG/KG | 34 | 29 | 10.1 | 3.96 | 14.65 | 55 | 9 | 57.2 | 41.5 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | CADMIUM | MG/KG | 34 | 12 | 0.53 | 0.069 | 0.257 | 55 | 36 | 184 | 7.7 | Reject H0 | Reject H0 | Exceeds Background | |
| EU8 | TS | CALCIUM | MG/KG | 34 | 34 | 58900 | 25200 | 58900 | 55 | 55 | 196000 | 22700 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | CHROMIUM | MG/KG | 34 | 34 | 25.8 | 16.7 | 26.17 | 55 | 53 | 4960 | 163 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | COBALT | MG/KG | 34 | 34 | 57.4 | 11.4 | 25.36 | 55 | 54 | 43.3 | 8.46 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | COPPER | MG/KG | 34 | 34 | 49.3 | 23.7 | 46.72 | 55 | 55 | 4790 | 251 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | IRON | MG/KG | 34 | 34 | 36400 | 21500 | 34744 | 55 | 55 | 182000 | 27800 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | LEAD | MG/KG | 33 | 33 | 55.2 | 10.8 | 26.03 | 55 | 55 | 2760 | 336 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | LITHIUM | MG/KG | 34 | 34 | 36.8 | 20.1 | 34.84 | 55 | 53 | 36.3 | 13.7 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | MAGNESIUM | MG/KG | 34 | 34 | 14800 | 7220 | 13874 | 55 | 55 | 97300 | 10800 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | MANGANESE | MG/KG | 34 | 34 | 6650 | 751 | 6650 | 55 | 55 | 1790 | 430 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | MERCURY | MG/KG | 34 | 13 | 0.27 | 0.0413 | 0.168 | 55 | 36 | 0.62 | 0.0823 | Do Not Reject H0 | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | NICKEL | MG/KG | 34 | 34 | 38 | 20.5 | 34.73 | 55 | 54 | 699 | 45.7 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | POTASSIUM | MG/KG | 34 | 34 | 3200 | 1270 | 2498 | 55 | 55 | 4540 | 1230 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | SELENIUM | MG/KG | 33 | 8 | 0.37 | 0.16 | 0.31 | 55 | 34 | 24 | 1.51 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | SILVER | MG/KG | 34 | 2 | 0.27 | 0.0931 | 0.27 | 55 | 31 | 1.6 | 0.565 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | SODIUM | MG/KG | 34 | 34 | 331 | 170 | 301.8 | 55 | 46 | 1470 | 180 | Reject H0 | Do Not Reject H0 | Exceeds Background | |
| EU8 | TS | THALLIUM | MG/KG | 34 | 0 | NA | 0.122 | 0.5 | 55 | 13 | 1.8 | 0.753 | NA | Do Not Reject H0 | Detected in Site but not in Background ² | |
| EU8 | TS | VANADIUM | MG/KG | 34 | 34 | 35.2 | 22.1 | 34.94 | 55 | 52 | 220 | 22.4 | NA | Do Not Reject H0 | Does Not Exceed Background | |
| EU8 | TS | ZINC | MG/KG | 34 | 34 | 266 | 57.5 | 266 | 55 | 54 | 52300 | 5680 | Reject H0 | Do Not Reject H0 | Exceeds Background | |

1. The 95% Upper Prediction Limit for Next Observation (ProUCL 4.1) was used to evaluate metals with 4 to 7 detections in the site data set.

2. The number of detections in the site data versus the background data may be due to the lower reporting limit in the more recently collected site data. However, as a conservative approach, thallium, which had detected concentrations in the surface and subsurface soil is considered to exceed background and was carried through the human health risk assessment.

Hexavalent Chromium was not analyzed for in background samples.

When the quantile test and Wilcoxon Rank Sum test result in different conclusions, there is some uncertainty in the result.

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

TABLE 2 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR AREA OF CONCERN 3, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Unit | Background Data | | | | Site Data | | | Hypothesis Tests | | Conclusion | | |
|--------------------------|-----------|-----------------|--------------|-----------------|-----------|--------------|--------------|----------------------|----------|----------|------------------|---------------|---------------|----------------------|-------------------------------|
| | | | | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | |
| Area of Concern 3 | SO | ALUMINUM | MG/KG | 18 | 18 | 19100 | 11000 | 18891 | 2 | 2 | 8990 | 7860 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | ANTIMONY | MG/KG | 18 | 7 | 0.76 | 0.314 | 0.771 | 2 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | ARSENIC | MG/KG | 18 | 18 | 6.8 | 3.87 | 6.026 | 2 | 2 | 3.7 | 3.5 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | BARIUM | MG/KG | 18 | 18 | 173 | 99 | 165.9 | 2 | 2 | 91.1 | 89.75 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | BERYLLIUM | MG/KG | 18 | 18 | 0.98 | 0.554 | 0.983 | 2 | 2 | 0.56 | 0.495 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | BORON | MG/KG | 18 | 17 | 9.3 | 4.76 | 9.049 | 2 | 0 | NA | 7.7 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | CADMIUM | MG/KG | 18 | 4 | 0.18 | 0.0456 | 0.146 | 2 | 2 | 0.091 | 0.081 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | CALCIUM | MG/KG | 18 | 18 | 58900 | 40000 | 58900 | 2 | 2 | 46700 | 31650 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | CHROMIUM | MG/KG | 18 | 18 | 25.8 | 16.1 | 26.95 | 2 | 2 | 15.2 | 13.2 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | COBALT | MG/KG | 18 | 18 | 16.7 | 10.9 | 17.41 | 2 | 2 | 7.6 | 6.95 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | COPPER | MG/KG | 18 | 18 | 49.3 | 28.4 | 54.56 | 2 | 2 | 26.6 | 22.4 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | IRON | MG/KG | 18 | 18 | 33000 | 22000 | 33957 | 2 | 2 | 19100 | 17250 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | LEAD | MG/KG | 18 | 18 | 11.8 | 6.09 | 11.36 | 2 | 2 | 5.6 | 4.8 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | LITHIUM | MG/KG | 18 | 18 | 36.8 | 24 | 37.9 | 2 | 2 | 17.9 | 16.85 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | MAGNESIUM | MG/KG | 18 | 18 | 14800 | 9660 | 14962 | 2 | 2 | 7050 | 6945 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | MANGANESE | MG/KG | 18 | 18 | 979 | 692 | 971.7 | 2 | 2 | 823 | 775 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | MERCURY | MG/KG | 18 | 4 | 0.035 | 0.0258 | 0.0378 | 2 | 0 | NA | 0.017 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | NICKEL | MG/KG | 18 | 18 | 38 | 22.2 | 35.71 | 2 | 2 | 17.3 | 15.7 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | POTASSIUM | MG/KG | 18 | 18 | 3200 | 1600 | 2942 | 2 | 2 | 1270 | 1135 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | SELENIUM | MG/KG | 18 | 1 | 0.23 | 0.117 | 0.23 | 2 | 2 | 1.3 | 1.035 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | SO | SILVER | MG/KG | 18 | 0 | NA | 0.0783 | 0.2 | 2 | 0 | NA | 0.024 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | SODIUM | MG/KG | 18 | 18 | 331 | 209 | 331 | 2 | 0 | NA | 100.1 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | THALLIUM | MG/KG | 18 | 0 | NA | 0.115 | 0.5 | 2 | 1 | 0.11 | 0.13 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | VANADIUM | MG/KG | 18 | 18 | 35.2 | 21.9 | 36.17 | 2 | 2 | 21.5 | 18.95 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SO | ZINC | MG/KG | 18 | 18 | 266 | 61.8 | 266 | 2 | 2 | 38 | 34.95 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | ALUMINUM | MG/KG | 16 | 16 | 18400 | 11600 | 18922 | 2 | 2 | 10030 | 8990 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | ANTIMONY | MG/KG | 16 | 6 | 0.94 | 0.292 | 0.747 | 2 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | ARSENIC | MG/KG | 15 | 15 | 11.4 | 4.4 | 8.322 | 2 | 2 | 3.4 | 2.95 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | BARIUM | MG/KG | 16 | 16 | 279 | 124 | 251 | 2 | 2 | 107 | 97 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | BERYLLIUM | MG/KG | 16 | 16 | 1 | 0.636 | 1.05 | 2 | 2 | 0.52 | 0.455 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | BORON | MG/KG | 16 | 12 | 10.1 | 3.05 | 14.23 | 2 | 0 | NA | 6.25 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | CADMNIUM | MG/KG | 16 | 8 | 0.53 | 0.0953 | 0.474 | 2 | 2 | 0.59 | 0.3385 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | SS | CALCIUM | MG/KG | 16 | 16 | 45200 | 8610 | 29113 | 2 | 2 | 2815 | 2707.5 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | CHROMIUM | MG/KG | 16 | 16 | 24.3 | 17.3 | 26.33 | 2 | 2 | 13.3 | 13 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | COBALT | MG/KG | 16 | 16 | 57.4 | 12 | 33.57 | 2 | 2 | 4.55 | 4.075 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | COPPER | MG/KG | 16 | 16 | 34.7 | 18.3 | 36.07 | 2 | 2 | 22.7 | 18.625 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | IRON | MG/KG | 16 | 16 | 36400 | 21000 | 37075 | 2 | 2 | 14750 | 14275 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | LEAD | MG/KG | 15 | 15 | 55.2 | 16.4 | 39.42 | 2 | 2 | 49.9 | 29.725 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | SS | LITHIUM | MG/KG | 16 | 16 | 27.9 | 15.7 | 29.12 | 2 | 2 | 16.3 | 14.8 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | MAGNESIUM | MG/KG | 16 | 16 | 10200 | 4470 | 9538 | 2 | 2 | 2335 | 2092.5 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | MANGANESE | MG/KG | 16 | 16 | 6650 | 817 | 2679 | 2 | 2 | 235 | 179 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | MERCURY | MG/KG | 16 | 9 | 0.27 | 0.0588 | 0.207 | 2 | 0 | NA | 0.0788 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | NICKEL | MG/KG | 16 | 16 | 37.5 | 18.5 | 34.61 | 2 | 2 | 10.55 | 10.375 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | POTASSIUM | MG/KG | 16 | 16 | 1820 | 898 | 1727 | 2 | 2 | 703.5 | 637.75 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | SELENIUM | MG/KG | 15 | 7 | 0.37 | 0.211 | 0.392 | 2 | 2 | 1.3 | 0.91 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | SS | SILVER | MG/KG | 16 | 2 | 0.27 | 0.11 | 0.27 | 2 | 2 | 0.39 | 0.2105 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | SS | SODIUM | MG/KG | 16 | 16 | 286 | 125 | 215.6 | 2 | 0 | NA | 36.075 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | THALLIUM | MG/KG | 16 | 0 | NA | 0.129 | 0.5 | 2 | 2 | 0.15 | 0.145 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | VANADIUM | MG/KG | 16 | 16 | 34 | 22.3 | 35.18 | 2 | 2 | 20.1 | 18.05 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | SS | ZINC | MG/KG | 16 | 16 | 78 | 52.6 | 80.8 | 2 | 2 | 158 | 94.45 | NA | NA | Exceeds Background UPL |

TABLE 2 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR AREA OF CONCERN 3, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Unit | Background Data | | | | Site Data | | | Hypothesis Tests | | Conclusion | | |
|--------------------------|-----------|-----------------|--------------|-----------------|-----------|--------------|---------------|----------------------|----------|----------|------------------|---------------|---------------|----------------------|-------------------------------|
| | | | | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | |
| Area of Concern 3 | TS | ALUMINUM | MG/KG | 34 | 34 | 19100 | 11300 | 18487 | 4 | 4 | 10030 | 8425 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | ANTIMONY | MG/KG | 34 | 13 | 0.94 | 0.304 | 0.733 | 4 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | ARSENIC | MG/KG | 33 | 33 | 11.4 | 4.11 | 7.077 | 4 | 4 | 3.7 | 3.225 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | BARIUM | MG/KG | 34 | 34 | 279 | 111 | 204.7 | 4 | 4 | 107 | 93.375 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | BERYLLIUM | MG/KG | 34 | 34 | 1 | 0.593 | 0.996 | 4 | 4 | 0.56 | 0.475 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | BORON | MG/KG | 34 | 29 | 10.1 | 3.96 | 14.65 | 4 | 0 | NA | 6.975 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | CADMIUM | MG/KG | 34 | 12 | 0.53 | 0.069 | 0.257 | 4 | 4 | 0.59 | 0.2098 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | TS | CALCIUM | MG/KG | 34 | 34 | 58900 | 25200 | 58900 | 4 | 4 | 46700 | 17179 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | CHROMIUM | MG/KG | 34 | 34 | 25.8 | 16.7 | 26.17 | 4 | 4 | 15.2 | 13.1 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | COBALT | MG/KG | 34 | 34 | 57.4 | 11.4 | 25.36 | 4 | 4 | 7.6 | 5.5125 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | COPPER | MG/KG | 34 | 34 | 49.3 | 23.7 | 46.72 | 4 | 4 | 26.6 | 20.513 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | IRON | MG/KG | 34 | 34 | 36400 | 21500 | 34744 | 4 | 4 | 19100 | 15763 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | LEAD | MG/KG | 33 | 33 | 55.2 | 10.8 | 26.03 | 4 | 4 | 49.9 | 17.263 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | TS | LITHIUM | MG/KG | 34 | 34 | 36.8 | 20.1 | 34.84 | 4 | 4 | 17.9 | 15.825 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | MAGNESIUM | MG/KG | 34 | 34 | 14800 | 7220 | 13874 | 4 | 4 | 7050 | 4518.8 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | MANGANESE | MG/KG | 34 | 34 | 6650 | 751 | 6650 | 4 | 4 | 823 | 477 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | MERCURY | MG/KG | 34 | 13 | 0.27 | 0.0413 | 0.168 | 4 | 0 | NA | 0.0479 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | NICKEL | MG/KG | 34 | 34 | 38 | 20.5 | 34.73 | 4 | 4 | 17.3 | 13.038 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | POTASSIUM | MG/KG | 34 | 34 | 3200 | 1270 | 2498 | 4 | 4 | 1270 | 886.38 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | SELENIUM | MG/KG | 33 | 8 | 0.37 | 0.16 | 0.31 | 4 | 4 | 1.3 | 0.9725 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | TS | SILVER | MG/KG | 34 | 2 | 0.27 | 0.0931 | 0.27 | 4 | 2 | 0.39 | 0.1173 | NA | NA | Exceeds Background UPL |
| Area of Concern 3 | TS | SODIUM | MG/KG | 34 | 34 | 331 | 170 | 301.8 | 4 | 0 | NA | 68.088 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | THALLIUM | MG/KG | 34 | 0 | NA | 0.121765 | 0.5 | 4 | 3 | 0.15 | 0.1375 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | VANADIUM | MG/KG | 34 | 34 | 35.2 | 22.10882 | 34.94 | 4 | 4 | 21.5 | 18.5 | NA | NA | Does Not Exceed Background |
| Area of Concern 3 | TS | ZINC | MG/KG | 34 | 34 | 266 | 57.45588 | 266 | 4 | 4 | 158 | 64.7 | NA | NA | Does Not Exceed Background |

1. The 95% Upper Prediction Limit for Next Observation (ProUCL 4.1)is used to evaluate constituents with 4 to 7 detections in the site data set.

Hexavalent Chromium was not analyzed for in background samples.

When the quantile test and Wilcoxon Rank Sum test result in different conclusions, there is some uncertainty in the result.

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

TABLE 3 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR AREA OF CONCERN 4, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Unit | Background Data | | | | | Site Data | | | Hypothesis Tests | | Conclusion | |
|--------------------------|-----------|------------------|--------------|-----------------|-----------|--------------|---------------|----------------------|-----------|----------|--------------|------------------|---------------|----------------------|-------------------------------|
| | | | | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | |
| Area of Concern 4 | SO | ALUMINUM | MG/KG | 18 | 18 | 19100 | 11000 | 18891 | 3 | 3 | 12100 | 11666.67 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | ANTIMONY | MG/KG | 18 | 7 | 0.76 | 0.314 | 0.771 | 3 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | ARSENIC | MG/KG | 18 | 18 | 6.8 | 3.87 | 6.026 | 3 | 3 | 8 | 5.3 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SO | BARIUM | MG/KG | 18 | 18 | 173 | 99 | 165.9 | 3 | 3 | 104 | 97.76667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | BERYLLIUM | MG/KG | 18 | 18 | 0.98 | 0.554 | 0.983 | 3 | 3 | 0.82 | 0.8 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | BORON | MG/KG | 18 | 17 | 9.3 | 4.76 | 9.049 | 3 | 0 | NA | 11.9 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SO | CADMIUM | MG/KG | 18 | 4 | 0.18 | 0.0456 | 0.146 | 3 | 3 | 0.089 | 0.0657 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | CALCIUM | MG/KG | 18 | 18 | 58900 | 40000 | 58900 | 3 | 3 | 55400 | 38210 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | CHROMIUM | MG/KG | 18 | 18 | 25.8 | 16.1 | 26.95 | 3 | 3 | 19.9 | 18.73333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | COBALT | MG/KG | 18 | 18 | 16.7 | 10.9 | 17.41 | 3 | 3 | 17.7 | 11.76667 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SO | COPPER | MG/KG | 18 | 18 | 49.3 | 28.4 | 54.56 | 3 | 3 | 45 | 35.2 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | IRON | MG/KG | 18 | 18 | 33000 | 22000 | 33957 | 3 | 3 | 30900 | 25900 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | LEAD | MG/KG | 18 | 18 | 11.8 | 6.09 | 11.36 | 3 | 3 | 7.7 | 7.266667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | LITHIUM | MG/KG | 18 | 18 | 36.8 | 24 | 37.9 | 3 | 3 | 25.1 | 24.43333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | MAGNESIUM | MG/KG | 18 | 18 | 14800 | 9660 | 14962 | 3 | 3 | 9290 | 7340 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | MANGANESE | MG/KG | 18 | 18 | 979 | 692 | 971.7 | 3 | 3 | 942 | 630.3333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | MERCURY | MG/KG | 18 | 4 | 0.035 | 0.0258 | 0.0378 | 3 | 0 | NA | 0.018 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | NICKEL | MG/KG | 18 | 18 | 38 | 22.2 | 35.71 | 3 | 3 | 24.3 | 22.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | POTASSIUM | MG/KG | 18 | 18 | 3200 | 1600 | 2942 | 3 | 3 | 1770 | 1319.333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | SELENIUM | MG/KG | 18 | 1 | 0.23 | 0.117 | 0.23 | 3 | 3 | 1.2 | 0.95 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SO | SILVER | MG/KG | 18 | 0 | NA | 0.0783 | 0.2 | 3 | 3 | 0.047 | 0.0333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | SODIUM | MG/KG | 18 | 18 | 331 | 209 | 331 | 3 | 0 | NA | 130.3333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | THALLIUM | MG/KG | 18 | 0 | NA | 0.115 | 0.5 | 3 | 2 | 0.19 | 0.153333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | VANADIUM | MG/KG | 18 | 18 | 35.2 | 21.9 | 36.17 | 3 | 3 | 30 | 27.63333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SO | ZINC | MG/KG | 18 | 18 | 266 | 61.8 | 266 | 3 | 3 | 47 | 44.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | ALUMINUM | MG/KG | 16 | 16 | 18400 | 11600 | 18922 | 3 | 3 | 13300 | 11366.67 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | ANTIMONY | MG/KG | 16 | 6 | 0.94 | 0.292 | 0.747 | 3 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | ARSENIC | MG/KG | 15 | 15 | 11.4 | 4.4 | 8.322 | 3 | 3 | 3.5 | 3.033333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | BARIUM | MG/KG | 16 | 16 | 279 | 124 | 251 | 3 | 3 | 204 | 157 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | BERYLLIUM | MG/KG | 16 | 16 | 1 | 0.636 | 1.05 | 3 | 3 | 1.1 | 0.796667 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SS | BORON | MG/KG | 16 | 12 | 10.1 | 3.05 | 14.23 | 3 | 0 | NA | 9.1 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | CADMIUIM | MG/KG | 16 | 8 | 0.53 | 0.0953 | 0.474 | 3 | 3 | 0.84 | 0.46 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SS | CALCIUM | MG/KG | 16 | 16 | 45200 | 8610 | 29113 | 3 | 3 | 7120 | 5086.667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | CHROMIUM | MG/KG | 16 | 16 | 24.3 | 17.3 | 26.33 | 3 | 3 | 18.1 | 17.1 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | COBALT | MG/KG | 16 | 16 | 57.4 | 12 | 33.57 | 3 | 3 | 6 | 5.466667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | COPPER | MG/KG | 16 | 16 | 34.7 | 18.3 | 36.07 | 3 | 3 | 47.8 | 36.1 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SS | IRON | MG/KG | 16 | 16 | 36400 | 21000 | 37075 | 3 | 3 | 21800 | 16866.67 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | LEAD | MG/KG | 15 | 15 | 55.2 | 16.4 | 39.42 | 3 | 3 | 98.3 | 42.86667 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SS | LITHIUM | MG/KG | 16 | 16 | 27.9 | 15.7 | 29.12 | 3 | 3 | 22.7 | 20.96667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | MAGNESIUM | MG/KG | 16 | 16 | 10200 | 4470 | 9538 | 3 | 3 | 3230 | 2943.333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | MANGANESE | MG/KG | 16 | 16 | 6650 | 817 | 2679 | 3 | 3 | 260 | 160.6667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | MERCURY | MG/KG | 16 | 9 | 0.27 | 0.0588 | 0.207 | 3 | 0 | NA | 0.0713 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | NICKEL | MG/KG | 16 | 16 | 37.5 | 18.5 | 34.61 | 3 | 3 | 23 | 18.43333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | POTASSIUM | MG/KG | 16 | 16 | 1820 | 898 | 1727 | 3 | 3 | 1190 | 985.3333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | SELENIUM | MG/KG | 15 | 7 | 0.37 | 0.211 | 0.392 | 3 | 3 | 2.6 | 2.0667 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SS | SILVER | MG/KG | 16 | 2 | 0.27 | 0.11 | 0.27 | 3 | 3 | 0.18 | 0.0967 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | SODIUM | MG/KG | 16 | 16 | 286 | 125 | 215.6 | 3 | 0 | NA | 124.4667 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | SS | THALLIUM | MG/KG | 16 | 0 | NA | 0.129 | 0.5 | 3 | 2 | 0.19 | 0.17 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | VANADIUM | MG/KG | 16 | 16 | 34 | 22.3 | 35.18 | 3 | 3 | 28.1 | 22.7 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | SS | ZINC | MG/KG | 16 | 16 | 78 | 52.6 | 80.8 | 3 | 3 | 377 | 158 | NA | NA | Exceeds Background UPL |

TABLE 3 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR AREA OF CONCERN 4, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Unit | Background Data | | | | Site Data | | | Hypothesis Tests | | Conclusion | | |
|-------------------|--------|-----------|-------|-----------------|----------|--------------|----------|----------------------|---|----------|------------------|----------|---------------|----------------------|----------------------------|
| | | | | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | |
| Area of Concern 4 | TS | ALUMINUM | MG/KG | 34 | 34 | 19100 | 11300 | 18487 | 6 | 6 | 13300 | 11516.67 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | ANTIMONY | MG/KG | 34 | 13 | 0.94 | 0.304 | 0.733 | 6 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | ARSENIC | MG/KG | 33 | 33 | 11.4 | 4.11 | 7.077 | 6 | 6 | 8 | 4.183333 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | TS | BARIUM | MG/KG | 34 | 34 | 279 | 111 | 204.7 | 6 | 6 | 204 | 127.3833 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | BERYLLIUM | MG/KG | 34 | 34 | 1 | 0.593 | 0.996 | 6 | 6 | 1.1 | 0.805 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | TS | BORON | MG/KG | 34 | 29 | 10.1 | 3.96 | 14.65 | 6 | 0 | 13.7 | 10.5 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | CADMIUM | MG/KG | 34 | 12 | 0.53 | 0.069 | 0.257 | 6 | 6 | 0.84 | 0.262833 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | TS | CALCIUM | MG/KG | 34 | 34 | 58900 | 25200 | 58900 | 6 | 6 | 55400 | 21648.33 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | CHROMIUM | MG/KG | 34 | 34 | 25.8 | 16.7 | 26.17 | 6 | 6 | 19.9 | 17.91667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | COBALT | MG/KG | 34 | 34 | 57.4 | 11.4 | 25.36 | 6 | 6 | 17.7 | 8.616667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | COPPER | MG/KG | 34 | 34 | 49.3 | 23.7 | 46.72 | 6 | 6 | 47.8 | 35.65 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | TS | IRON | MG/KG | 34 | 34 | 36400 | 21500 | 34744 | 6 | 6 | 30900 | 21383.33 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | LEAD | MG/KG | 33 | 33 | 55.2 | 10.8 | 26.03 | 6 | 6 | 98.3 | 25.06667 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | TS | LITHIUM | MG/KG | 34 | 34 | 36.8 | 20.1 | 34.84 | 6 | 6 | 25.1 | 22.7 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | MAGNESIUM | MG/KG | 34 | 34 | 14800 | 7220 | 13874 | 6 | 6 | 9290 | 5141.667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | MANGANESE | MG/KG | 34 | 34 | 6650 | 751 | 6650 | 6 | 6 | 942 | 395.5 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | MERCURY | MG/KG | 34 | 13 | 0.27 | 0.0413 | 0.168 | 6 | 0 | NA | 0.0447 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | NICKEL | MG/KG | 34 | 34 | 38 | 20.5 | 34.73 | 6 | 6 | 24.3 | 20.51667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | POTASSIUM | MG/KG | 34 | 34 | 3200 | 1270 | 2498 | 6 | 6 | 1770 | 1152.333 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | SELENIUM | MG/KG | 33 | 8 | 0.37 | 0.16 | 0.31 | 6 | 6 | 2.6 | 1.508333 | NA | NA | Exceeds Background UPL |
| Area of Concern 4 | TS | SILVER | MG/KG | 34 | 2 | 0.27 | 0.0931 | 0.27 | 6 | 6 | 0.18 | 0.065 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | SODIUM | MG/KG | 34 | 34 | 331 | 170 | 301.8 | 6 | 0 | NA | 127.4 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | THALLIUM | MG/KG | 34 | 0 | NA | 0.121765 | 0.5 | 6 | 5 | 0.19 | 0.161667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | VANADIUM | MG/KG | 34 | 34 | 35.2 | 22.10882 | 34.94 | 6 | 6 | 30 | 25.16667 | NA | NA | Does Not Exceed Background |
| Area of Concern 4 | TS | ZINC | MG/KG | 34 | 34 | 266 | 57.45588 | 266 | 6 | 6 | 377 | 101.3 | NA | NA | Exceeds Background UPL |

1. The 95% Upper Prediction Limit for Next Observation (ProUCL 4.1)is used to evaluate constituents with 4 to 7 detections in the site data set.

When the quantile test and Wilcoxon Rank Sum test result in different conclusions, there is some uncertainty in the result.

Hexavalent Chromium was not analyzed for in background samples.

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

TABLE 4 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR AREA OF CONCERN 5, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Unit | Background Data | | | | | Site Data | | | Hypothesis Tests | | Conclusion | |
|------------------------------|-----------|-----------------|--------------|-----------------|-----------|--------------|--------------|----------------------|-----------|----------|---------------|------------------|---------------|----------------------|-------------------------------|
| | | | | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | |
| Area of Interest AA07 | SO | ALUMINUM | MG/KG | 18 | 18 | 19100 | 11000 | 18891 | 2 | 2 | 6610 | 5430 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | ANTIMONY | MG/KG | 18 | 7 | 0.76 | 0.314 | 0.771 | 2 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | ARSENIC | MG/KG | 18 | 18 | 6.8 | 3.87 | 6.026 | 2 | 2 | 3.5 | 3.4 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | BARIUM | MG/KG | 18 | 18 | 173 | 99 | 165.9 | 2 | 2 | 61.8 | 49.5 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | BERYLLIUM | MG/KG | 18 | 18 | 0.98 | 0.554 | 0.983 | 2 | 2 | 0.4 | 0.315 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | BORON | MG/KG | 18 | 17 | 9.3 | 4.76 | 9.049 | 2 | 0 | NA | 9 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | CADMIUM | MG/KG | 18 | 4 | 0.18 | 0.0456 | 0.146 | 2 | 2 | 0.098 | 0.079 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | CALCIUM | MG/KG | 18 | 18 | 58900 | 40000 | 58900 | 2 | 2 | 45500 | 24195 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | CHROMIUM | MG/KG | 18 | 18 | 25.8 | 16.1 | 26.95 | 2 | 2 | 10.2 | 8.75 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | COBALT | MG/KG | 18 | 18 | 16.7 | 10.9 | 17.41 | 2 | 2 | 7 | 6.1 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | COPPER | MG/KG | 18 | 18 | 49.3 | 28.4 | 54.56 | 2 | 2 | 28.3 | 26.55 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | IRON | MG/KG | 18 | 18 | 33000 | 22000 | 33957 | 2 | 2 | 16300 | 14650 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | LEAD | MG/KG | 18 | 18 | 11.8 | 6.09 | 11.36 | 2 | 2 | 4.9 | 4.15 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | LITHIUM | MG/KG | 18 | 18 | 36.8 | 24 | 37.9 | 2 | 2 | 10.2 | 9.45 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | MAGNESIUM | MG/KG | 18 | 18 | 14800 | 9660 | 14962 | 2 | 2 | 5730 | 3870 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | MANGANESE | MG/KG | 18 | 18 | 979 | 692 | 971.7 | 2 | 2 | 816 | 758 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | MERCURY | MG/KG | 18 | 4 | 0.035 | 0.0258 | 0.0378 | 2 | 0 | NA | 0.0235 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | NICKEL | MG/KG | 18 | 18 | 38 | 22.2 | 35.71 | 2 | 2 | 12.3 | 11.2 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | POTASSIUM | MG/KG | 18 | 18 | 3200 | 1600 | 2942 | 2 | 2 | 453 | 441 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | SELENIUM | MG/KG | 18 | 1 | 0.23 | 0.117 | 0.23 | 2 | 2 | 1.4 | 1.35 | NA | NA | Exceeds Background UPL |
| Area of Interest AA07 | SO | SILVER | MG/KG | 18 | 0 | NA | 0.0783 | 0.2 | 2 | 1 | 0.029 | 0.0265 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | SODIUM | MG/KG | 18 | 18 | 331 | 209 | 331 | 2 | 0 | NA | 95.1 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | THALLIUM | MG/KG | 18 | 0 | NA | 0.115 | 0.5 | 2 | 0 | NA | 0.15 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | VANADIUM | MG/KG | 18 | 18 | 35.2 | 21.9 | 36.17 | 2 | 2 | 19.2 | 16.1 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SO | ZINC | MG/KG | 18 | 18 | 266 | 61.8 | 266 | 2 | 2 | 28.8 | 27 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | ALUMINUM | MG/KG | 16 | 16 | 18400 | 11600 | 18922 | 2 | 2 | 11700 | 9785 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | ANTIMONY | MG/KG | 16 | 6 | 0.94 | 0.292 | 0.747 | 2 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | ARSENIC | MG/KG | 15 | 15 | 11.4 | 4.4 | 8.322 | 2 | 2 | 4.55 | 3.725 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | BARIUM | MG/KG | 16 | 16 | 279 | 124 | 251 | 2 | 2 | 101.35 | 88.925 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | BERYLLIUM | MG/KG | 16 | 16 | 1 | 0.636 | 1.05 | 2 | 2 | 0.665 | 0.5275 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | BORON | MG/KG | 16 | 12 | 10.1 | 3.05 | 14.23 | 2 | 0 | NA | 6.8 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | CADMIU | MG/KG | 16 | 8 | 0.53 | 0.0953 | 0.474 | 2 | 2 | 0.465 | 0.3325 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | CALCIUM | MG/KG | 16 | 16 | 45200 | 8610 | 29113 | 2 | 2 | 14950 | 14775 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | CHROMIUM | MG/KG | 16 | 16 | 24.3 | 17.3 | 26.33 | 2 | 2 | 19.9 | 15.85 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | COBALT | MG/KG | 16 | 16 | 57.4 | 12 | 33.57 | 2 | 2 | 7.9 | 6.85 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | COPPER | MG/KG | 16 | 16 | 34.7 | 18.3 | 36.07 | 2 | 2 | 29.3 | 27.475 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | IRON | MG/KG | 16 | 16 | 36400 | 21000 | 37075 | 2 | 2 | 20400 | 18200 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | LEAD | MG/KG | 15 | 15 | 55.2 | 16.4 | 39.42 | 2 | 2 | 40.4 | 25.9 | NA | NA | Exceeds Background UPL |
| Area of Interest AA07 | SS | LITHIUM | MG/KG | 16 | 16 | 27.9 | 15.7 | 29.12 | 2 | 2 | 18.4 | 16.7 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | MAGNESIUM | MG/KG | 16 | 16 | 10200 | 4470 | 9538 | 2 | 2 | 7020 | 5625 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | MANGANESE | MG/KG | 16 | 16 | 6650 | 817 | 2679 | 2 | 2 | 670 | 608 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | MERCURY | MG/KG | 16 | 9 | 0.27 | 0.0588 | 0.207 | 2 | 0 | NA | 0.0955 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | NICKEL | MG/KG | 16 | 16 | 37.5 | 18.5 | 34.61 | 2 | 2 | 18.55 | 15.425 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | POTASSIUM | MG/KG | 16 | 16 | 1820 | 898 | 1727 | 2 | 2 | 1305 | 960 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | SELENIUM | MG/KG | 15 | 7 | 0.37 | 0.211 | 0.392 | 2 | 2 | 1.4 | 1.275 | NA | NA | Exceeds Background UPL |
| Area of Interest AA07 | SS | SILVER | MG/KG | 16 | 2 | 0.27 | 0.11 | 0.27 | 2 | 2 | 0.082 | 0.053 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | SODIUM | MG/KG | 16 | 16 | 286 | 125 | 215.6 | 2 | 1 | 68.9 | 60.05 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | THALLIUM | MG/KG | 16 | 0 | NA | 0.129 | 0.5 | 2 | 2 | 0.16 | 0.15 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | VANADIUM | MG/KG | 16 | 16 | 34 | 22.3 | 35.18 | 2 | 2 | 25.85 | 21.275 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | SS | ZINC | MG/KG | 16 | 16 | 78 | 52.6 | 80.8 | 2 | 2 | 105.75 | 81.425 | NA | NA | Exceeds Background UPL |

TABLE 4 SUMMARY OF BACKGROUND EVALUATION DATA SET STATISTICS FOR SOIL FOR AREA OF CONCERN 5, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Area | Matrix | Chemical | Unit | Background Data | | | | | Site Data | | | Hypothesis Tests | | Conclusion | |
|------------------------------|-----------|-----------------|--------------|-----------------|-----------|--------------|--------------|----------------------|-----------|----------|--------------|------------------|---------------|----------------------|-------------------------------|
| | | | | N | #Detects | Max Detected | Mean | 95% UPL ¹ | N | #Detects | Max Detected | Mean | Quantile Test | Wilcox Rank Sum Test | |
| Area of Interest AA07 | TS | ALUMINUM | MG/KG | 34 | 34 | 19100 | 11300 | 18487 | 4 | 4 | 11700 | 7607.5 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | ANTIMONY | MG/KG | 34 | 13 | 0.94 | 0.304 | 0.733 | 4 | 0 | NA | 0.6 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | ARSENIC | MG/KG | 33 | 33 | 11.4 | 4.11 | 7.077 | 4 | 4 | 4.55 | 3.5625 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | BARIUM | MG/KG | 34 | 34 | 279 | 111 | 204.7 | 4 | 4 | 101.35 | 69.213 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | BERYLLIUM | MG/KG | 34 | 34 | 1 | 0.593 | 0.996 | 4 | 4 | 0.665 | 0.4213 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | BORON | MG/KG | 34 | 29 | 10.1 | 3.96 | 14.65 | 4 | 0 | NA | 7.9 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | CADMIUM | MG/KG | 34 | 12 | 0.53 | 0.069 | 0.257 | 4 | 4 | 0.465 | 0.2058 | NA | NA | Exceeds Background UPL |
| Area of Interest AA07 | TS | CALCIUM | MG/KG | 34 | 34 | 58900 | 25200 | 58900 | 4 | 4 | 45500 | 19485 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | CHROMIUM | MG/KG | 34 | 34 | 25.8 | 16.7 | 26.17 | 4 | 4 | 19.9 | 12.3 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | COBALT | MG/KG | 34 | 34 | 57.4 | 11.4 | 25.36 | 4 | 4 | 7.9 | 6.475 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | COPPER | MG/KG | 34 | 34 | 49.3 | 23.7 | 46.72 | 4 | 4 | 29.3 | 27.013 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | IRON | MG/KG | 34 | 34 | 36400 | 21500 | 34744 | 4 | 4 | 20400 | 16425 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | LEAD | MG/KG | 33 | 33 | 55.2 | 10.8 | 26.03 | 4 | 4 | 40.4 | 15.025 | NA | NA | Exceeds Background UPL |
| Area of Interest AA07 | TS | LITHIUM | MG/KG | 34 | 34 | 36.8 | 20.1 | 34.84 | 4 | 4 | 18.4 | 13.075 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | MAGNESIUM | MG/KG | 34 | 34 | 14800 | 7220 | 13874 | 4 | 4 | 7020 | 4747.5 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | MANGANESE | MG/KG | 34 | 34 | 6650 | 751 | 6650 | 4 | 4 | 816 | 683 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | MERCURY | MG/KG | 34 | 13 | 0.27 | 0.0413 | 0.168 | 4 | 0 | NA | 0.0595 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | NICKEL | MG/KG | 34 | 34 | 38 | 20.5 | 34.73 | 4 | 4 | 18.55 | 13.313 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | POTASSIUM | MG/KG | 34 | 34 | 3200 | 1270 | 2498 | 4 | 4 | 1305 | 700.5 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | SELENIUM | MG/KG | 33 | 8 | 0.37 | 0.16 | 0.31 | 4 | 4 | 1.4 | 1.3125 | NA | NA | Exceeds Background UPL |
| Area of Interest AA07 | TS | SILVER | MG/KG | 34 | 2 | 0.27 | 0.0931 | 0.27 | 4 | 3 | 0.082 | 0.0398 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | SODIUM | MG/KG | 34 | 34 | 331 | 170 | 301.8 | 4 | 1 | 68.9 | 77.575 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | THALLIUM | MG/KG | 34 | 0 | NA | 0.121765 | 0.5 | 4 | 2 | 0.16 | 0.15 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | VANADIUM | MG/KG | 34 | 34 | 35.2 | 22.10882 | 34.94 | 4 | 4 | 25.85 | 18.688 | NA | NA | Does Not Exceed Background |
| Area of Interest AA07 | TS | ZINC | MG/KG | 34 | 34 | 266 | 57.45588 | 266 | 4 | 4 | 105.75 | 54.213 | NA | NA | Does Not Exceed Background |

1. The 95% Upper Prediction Limit for Next Observation (ProUCL 4.1)is used to evaluate constituents with 4 to 7 detections in the site data set.

Hexavalent Chromium was not analyzed for in background samples.

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

When the quantile test and Wilcoxon Rank Sum test result in different conclusions, there is some uncertainty in the result.

TABLE 5
BACKGROUND COMPARISON FOR PAHS IN EU 8 SOIL

| AOC | Matrix | Chemical | Unit | Background Data | | | | Site Data | | | | Hypothesis Tests | | Conclusion | |
|------|--------|-------------------------|-------|-----------------|----------|--------------|-------------------|----------------------|----|----------|--------------|-------------------|---------------|----------------------|--------------------------------|
| | | | | N | #Detects | Max Detected | Mean ¹ | 95% UPL ² | N | #Detects | Max Detected | Mean ¹ | Quantile Test | Wilcox Rank Sum Test | |
| EU 8 | SS | BENZO[A]PYRENE | UG/KG | 16 | 12 | 240 | 30.675 | 140.4 | 11 | 1 | 179 | 1174 | NA | NA | Exceeds Background UPL |
| EU 8 | SS | BENZO[B]FLUORANTHENE | UG/KG | 16 | 13 | 260 | 38.1 | 169.6 | 11 | 1 | 99.4 | 1167 | NA | NA | Does Not Exceed Background UPL |
| EU 8 | SS | BENZO[G,H,I]PERYLENE | UG/KG | 16 | 10 | 110 | 18.819 | 79.29 | 11 | 1 | 184 | 1175 | NA | NA | Exceeds Background UPL |
| EU 8 | SS | INDENO[1,2,3-C,D]PYRENE | UG/KG | 16 | 11 | 160 | 20.681 | 160 | 11 | 1 | 124 | 1169 | NA | NA | Does Not Exceed Background UPL |
| EU 8 | TS | BENZO[A]PYRENE | UG/KG | 34 | 14 | 240 | 16.98 | 43.92 | 20 | 1 | 179 | 695 | NA | NA | Exceeds Background UPL |
| EU 8 | TS | BENZO[B]FLUORANTHENE | UG/KG | 34 | 18 | 260 | 20.76 | 76.88 | 20 | 1 | 99.4 | 691 | NA | NA | Exceeds Background UPL |
| EU 8 | TS | BENZO[G,H,I]PERYLENE | UG/KG | 34 | 12 | 110 | 13.2 | 41.81 | 20 | 1 | 184 | 695 | NA | NA | Exceeds Background UPL |
| EU 8 | TS | INDENO[1,2,3-C,D]PYRENE | UG/KG | 34 | 12 | 160 | 11.87 | 160 | 20 | 1 | 124 | 692 | NA | NA | Does Not Exceed Background UPL |

1. Both detected and non-detected concentrations used in determining mean concentration. Non-detected results are equal to the reporting limit.

2. 95% Upper Prediction Limit for Next Observaion (ProUCL 4.1)

AOC = Area of Concern

N = Number of Samples

UPL = Upper Prediction Limit

EU = Exposure Unit

MG/KG = milligrams per kilogram

UG/KG = micrograms per kilogram

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

TABLE 6
BACKGROUND COMPARISON FOR PAHS IN SOIL, AREA OF CONCERN 3

| Area | Matrix | Chemical | Unit | Background Data | | | | Site Data | | | | Hypothesis Tests | | Conclusion | |
|-------------------|--------|----------------|-------|-----------------|----------|--------------|-------------------|----------------------|---|----------|--------------|-------------------|---------------|----------------------|--------------------------------|
| | | | | N | #Detects | Max Detected | Mean ¹ | 95% UPL ² | N | #Detects | Max Detected | Mean ¹ | Quantile Test | Wilcox Rank Sum Test | |
| Area of Concern 3 | SS | BENZO(A)PYRENE | UG/KG | 16 | 12 | 240 | 30.675 | 140.4 | 2 | 2 | 20 | 12.275 | NA | NA | Does Not Exceed Background UPL |
| Area of Concern 3 | TS | BENZO(A)PYRENE | UG/KG | 34 | 14 | 240 | 16.98 | 43.92 | 4 | 2 | 20 | 6.862 | NA | NA | Does Not Exceed Background UPL |

1. Both detected and non-detected concentrations used in determining mean concentration. Non-detected results are equal to the reporting limit.

2. 95% Upper Prediction Limit for Next Observaion (ProUCL 4.1)

AOC = Area of Concern

N = Number of Samples

UPL = Upper Prediction Limit

MG/KG = milligrams per kilogram

UG/KG = micrograms per kilogram

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

TABLE 7
BACKGROUND COMPARISON FOR PAHS IN SOIL, AREA OF CONCERN 5

| AOC | Matrix | Background Data | | | | | | | Site Data | | | | Hypothesis Tests | | Conclusion |
|-------------------|--------|-----------------|-------|----|----------|--------------|-------------------|----------------------|-----------|----------|--------------|-------------------|------------------|----------------------|----------------------------|
| | | Chemical | Unit | N | #Detects | Max Detected | Mean ¹ | 95% UPL ² | N | #Detects | Max Detected | Mean ¹ | Quantile Test | Wilcox Rank Sum Test | |
| Area of Concern 5 | SS | BENZO(A)PYRENE | UG/KG | 16 | 12 | 240 | 30.675 | 140.4 | 2 | 1 | 30 | 15.75 | NA | NA | Does Not Exceed Background |
| Area of Concern 5 | TS | BENZO(A)PYRENE | UG/KG | 34 | 14 | 240 | 16.98 | 43.92 | 4 | 2 | 30 | 9.55 | NA | NA | Does Not Exceed Background |

1. Both detected and non-detected concentrations used in determining mean concentration. Non-detected results are equal to the reporting limit.

2. 95% Upper Prediction Limit for Next Observaion (ProUCL 4.1)

AOC = Area of Concern

N = Number of Samples

UPL = Upper Prediction Limit

MG/KG = milligrams per kilogram

UG/KG = micrograms per kilogram

Mean was calculated using both detected and non-detected data (full value of the reporting limit was utilized for non-detected results).

TABLE 8 SUMMARY OF BACKGROUND EVALUATION FOR RADIOLOGICAL PARAMETERS IN SURFACE WATER AND SEDIMENT, OTHER AREAS OF CONCERN 2 AND 6, OCCP REMEDIAL INVESTIGATION, LAKE ONTARIO ORDNANCE WORKS

| Detected Radionuclide | Highest Reported Concentration Other Area of Interest Pond 1 | BTW | Units | Conclusion |
|------------------------------|---|------------------|--------------|--------------------------------|
| Surface Water | | | | |
| Alpha | 0.85 | 12.2 | pci/L | Does Not Exceed Background BTW |
| Beta | 4.01 | 12.3 | pci/L | Does Not Exceed Background BTW |
| Sediment | | | | |
| Protactinium-234 | 2.11 | 3.1 ¹ | pci/g | Does Not Exceed Background BTW |
| Radium-226 | 2.05 | 2.4 | pci/g | Does Not Exceed Background BTW |
| Radium-228 | 0.67 | 1.1 | pci/g | Does Not Exceed Background BTW |

BTW = Background Threshold Values

Values for radiological parameters based on background threshold values found in Table 13-1 of the Niagara Falls Storage Site Remedial Investigation Report Addendum (USACE 2011e).

1. Protactinium-234 interpreted as equal to U-238 for Background Threshold Value.
2. Other areas of interest refers to areas outside of EU 8.

ATTACHMENT 1
BACKGROUND SOIL DATA TABLES
AND
RESULTS OF THE INTER-QUARTILE TEST FOR OUTLIERS

Background Samples, Summary of Detected Analytes in Soil (Laboratory Analytical Results) Phase I RI Report (USACE/EA 1999)

| METHOD | ANALYTE | UNIT | ACTION LEVEL | ACTION LEVEL TYPE | BKGD-1-0-0.5 | BKGD-1-12-14 | BKGD-2-14 | BKGD-2-2 |
|---------|-----------------------------|-------|--------------|-------------------|----------------|----------------|--------------|--------------|
| E160.3 | PERCENT MOISTURE | % | | | 14.6 | 15.7 | 17.2 | 14.9 |
| SW6010 | ALUMINUM | MG/KG | 33000 | NYTAGM-US | 18400 | 10700 | 5260 | 13800 |
| SW6010 | ANTIMONY | MG/KG | 0.6 | NYTAGM-B | 0.65 BN | 0.63 BN | 0.52 BN | 0.5 BN |
| SW6010 | ARSENIC | MG/KG | 34 | NYTAGM-BG | 3.8 | 3.7 | 3.1 | 3.8 |
| SW6010 | BARIUM | MG/KG | 300 | NYTAGM | 148 E | 97.9 E | 58.5 E | 129 E |
| SW6010 | BERYLLIUM | MG/KG | 1.4 | NYTAGM-BG | 0.77 | 0.4 B | 0.12 B | 0.71 |
| SW6010 | BORON | MG/KG | | | 2.7 BN | 3.5 BN | 1.4 BN | |
| SW6010 | CALCIUM | MG/KG | | | 3890 | 54700 | 45400 | 7930 |
| SW6010 | CHROMIUM | MG/KG | 50 | NYTAGM | 23.6 N | 15.2 N | 8 N | 17.5 N |
| SW6010 | COBALT | MG/KG | 30 | NYTAGM | 12.8 | 12 | 4.9 B | 10.1 |
| SW6010 | COPPER | MG/KG | 50 | NYTAGM-BG | 32.9 | 38 | 20.6 | 30.7 |
| SW6010 | IRON | MG/KG | 2000 | NYTAGM | 36400 | 25100 | 15000 | 29300 |
| SW6010 | LEAD | MG/KG | 400 | NYTAGM | 8.1 | 5.7 | 3.6 | 11.8 |
| SW6010 | LITHIUM | MG/KG | | | 27.1 | 25.3 | 12.6 | 17.9 |
| SW6010 | MAGNESIUM | MG/KG | | | 6300 | 9780 | 8860 | 5120 |
| SW6010 | MANGANESE | MG/KG | 5000 | NYTAGM-US | 699 | 687 | 605 | 455 |
| SW6010 | NICKEL | MG/KG | 29 | NYTAGM-BG | 28.5 | 19.9 | 10.2 | 22.9 |
| SW6010 | POTASSIUM | MG/KG | | | 1420 N | 1620 N | 999 N | 747 N |
| SW6010 | SELENIUM | MG/KG | 2.2 | NYTAGM-BG | | | 0.23 BN | |
| SW6010 | SODIUM | MG/KG | | | 154 | 195 | 205 | 154 |
| SW6010 | VANADIUM | MG/KG | 150 | NYTAGM | 30.7 | 20.1 | 11.3 | 26.2 |
| SW6010 | ZINC | MG/KG | 76 | NYTAGM-BG | 66.1 N | 266 N | 30 N | 40.4 N |
| SW8081 | 4,4'-DDE | UG/KG | 2100 | NYTAGM | | | | 1.4 |
| SW8081 | 4,4'-DDT | UG/KG | 2100 | NYTAGM | | | | 0.65 P |
| SW8081 | HEPTACHLOR EPOXIDE | UG/KG | 20 | NYTAGM | | | | 0.37 P |
| SW8151 | PENTACHLOROPHENOL | UG/KG | 1000 | NYTAGM | | 110 | | |
| SW8270C | BIS(2-ETHYLHEXYL) PHTHALATE | UG/KG | 50000 | NYTAGM | | 260 | | |
| SW8310 | ACENAPHTHENE | UG/KG | 50000 | NYTAGM | | | 79 | |
| SW8310 | ANTHRACENE | UG/KG | 50000 | NYTAGM | | | | 8 |

NA = not analyzed

blank = not detected

Background Samples, Summary of Detected Analytes in Soil (Laboratory Analytical Results) Phase I RI Report (USACE/EA 1999)

| METHOD | ANALYTE | UNIT | ACTION LEVEL | ACTION LEVEL TYPE | BKGD-1-0-0.5 | BKGD-1-12-14 | BKGD-2-2 |
|--------|------------------------|-------|--------------|-------------------|--------------|--------------|----------|
| SW8310 | BENZ[A]ANTHRACENE | UG/KG | 224 | NYTAGM | | | 16 |
| SW8310 | BENZO[A]PYRENE | UG/KG | 61 | NYTAGM | | | 19 |
| SW8310 | BENZO[B]FLUORANTHENE | UG/KG | 224 | NYTAGM | 2.5 | 1.6 | 4.3 |
| SW8310 | BENZO[GHI]PERYLENE | UG/KG | 50000 | NYTAGM | | | 16 |
| SW8310 | BENZO[KJ]FLUORANTHENE | UG/KG | 224 | NYTAGM | 0.74 | | 0.53 |
| SW8310 | CHRYSENE | UG/KG | 400 | NYTAGM | | 1.6 | |
| SW8310 | DIBENZ[A,H]ANTHRACENE | UG/KG | 14 | NYTAGM | | | 2.7 |
| SW8310 | FLUORANTHENE | UG/KG | 50000 | NYTAGM | 2.3 | | 1.3 |
| SW8310 | FLUORENE | UG/KG | 50000 | NYTAGM | | | 2.9 |
| SW8310 | INDENO[1,2,3-CD]PYRENE | UG/KG | 3200 | NYTAGM | | | 8.8 |
| SW8310 | PHENANTHRENE | UG/KG | 50000 | NYTAGM | | | 5.5 |
| SW8310 | PYRENE | UG/KG | 50000 | NYTAGM | 1.5 | | 31 |

NA = not analyzed

blank = not detected

Laboratory Results
All Results for
SURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA,
2002)

| ANALYTE | GRID: | NO GRID | |
|------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | SAMPLE ID: | BKGD 10-0.5 | BKGD 11-0.5 | BKGD 12-0.5 | BKGD 13-0.5 | BKGD 14-0.5 | BKGD 15-0.5 | BKGD 16-0.5 | BKGD 17-0.5 |
| | SAMPLE DATE: | 11/09/00 | 11/09/00 | 11/10/00 | 11/10/00 | 11/10/00 | 11/10/00 | 11/11/00 | 11/11/00 |
| | DUP ID: | | | | | | | | |
| FIELD REP: | REP | REP | REP | REP | REP | REP | REP | REP | |

ANALYTE Units

Group: 3-PAH

| | | | | | | | | | |
|------------------------|-------|-------|--------|-------|-------|-------|-------|-------|------|
| ACENAPHTHENE | UG/KG | 100U | 100U | 200U | 100U | 100U | 500U | 100U | 100U |
| ACENAPHTHYLENE | UG/KG | 100U | 100U | 200U | 100U | 100U | 500U | 100U | 100U |
| ANTHRACENE | UG/KG | 100U | 100U | 200U | 100U | 100U | 500U | 100U | 100U |
| BENZ[A]ANTHRACENE | UG/KG | 5U | 7.2 | 25 | 6.8 | 5U | 220 | 11 | 15 |
| BENZO[A]PYRENE | UG/KG | 4.70J | 11 | 37 | 13 | 5U | 240 | 5U | 18 |
| BENZO[B]FLUORANTHENE | UG/KG | 6.4 | 13 | 38 | 12 | 5U | 260 | 20PG | 26 |
| BENZO[G,H]PERYLENE | UG/KG | 10U | 6.90J | 27 | 7.80J | 10U | 110 | 9.90J | 14 |
| BENZO[K]FLUORANTHENE | UG/KG | 1.90J | 4.8 | 14 | 5 | 3.30U | 120 | 5.9 | 10 |
| CHRYSENE | UG/KG | 5.4 | 12 | 35 | 11 | 5U | 290 | 18 | 22 |
| DIBENZ[A,H]ANTHRACENE | UG/KG | 5U | 5U | 7.50J | 3J | 5U | 38PG | 5U | 5U |
| FLUORANTHENE | UG/KG | 13PG | 27PG | 72PG | 27PG | 10U | 990PG | 45PG | 59PG |
| FLUORENE | UG/KG | 100U | 100U | 200U | 100U | 100U | 16J | 100U | 100U |
| INDENO[1,2,3-CD]PYRENE | UG/KG | 5U | 8.70PG | 27 | 13 | 5U | 160 | 9.6 | 20 |
| NAPHTHALENE | UG/KG | 100U | 100U | 200U | 100U | 100U | 500U | 100U | 100U |
| PAH-SUM | UG/KG | 61.4 | 137.6 | 382.5 | 135.6 | 20 | 3924 | 186.4 | 269 |
| PHENANTHRENE | UG/KG | 16J | 20J | 34J | 17J | 7J | 320J | 28J | 29J |
| PYRENE | UG/KG | 14 | 27 | 66 | 20 | 13PG | 560 | 39 | 56 |

Group: 6-MET

| | | | | | | | | | |
|------------------|-------|---------|---------|---------|---------|---------|--------|---------|---------|
| ALUMINUM, TOTAL | MG/KG | 4380 | 10200 | 12800 | 10300 | 17500 | 8700 | 9300 | 6950 |
| ANTIMONY, TOTAL | MG/KG | 0.24UN | 0.30UN | 0.25UN | 0.26UN | 0.24UN | 0.25UN | 0.26UN | 0.26UN |
| ARSENIC, TOTAL | MG/KG | 11.4 | 2.8 | 5.8 | 4.3 | 6.2 | 5 | 3.5 | 60.4 |
| BARIUM, TOTAL | MG/KG | 45.20* | 112* | 246* | 101* | 118* | 73.20* | 80.30* | 76.80* |
| BERYLLIUM, TOTAL | MG/KG | 0.18B | 0.58B | 0.85 | 0.79 | 0.9 | 0.46B | 0.47B | 0.41B |
| BORON, TOTAL | MG/KG | 1.40UN | 2.10BN | 10.10BN | 4.20BN | 4.50BN | 2.50BN | 1.70BN | 1.60UN |
| CADMIUM, TOTAL | MG/KG | 0.06B | 0.03U | 0.12B | 0.03U | 0.02U | 0.04B | 0.02U | 0.02U |
| CHROMIUM, TOTAL | MG/KG | 5.3 | 14 | 19.1 | 18.3 | 23.6 | 16.1 | 14.3 | 10.6 |
| COBALT, TOTAL | MG/KG | 2.20BN* | 4.50BN* | 57.40N* | 16.40N* | 15.30N* | 6.70N* | 4.20BN* | 4.30BN* |
| COPPER, TOTAL | MG/KG | 9.80* | 9.80* | 21* | 4.40* | 34.70* | 19.30* | 12.10* | 32.30* |
| LEAD, TOTAL | MG/KG | 55.2 | 13.1 | 30.8 | 12.9 | 10.9 | 24.9 | 17.3 | 209 |
| LITHIUM, TOTAL | MG/KG | 4.6 | 12.1 | 16 | 21.2 | 19.8 | 10.1 | 10.9 | 7.4 |
| MANGANESE, TOTAL | MG/KG | 164* | 159* | 6650* | 981* | 802* | 503* | 211* | 217* |
| MERCURY, TOTAL | MG/KG | 0.05U | 0.27 | 0.06B | 0.06U | 0.06U | 0.06B | 0.07B | 0.06B |
| NICKEL, TOTAL | MG/KG | 5.80* | 12* | 21* | 24.10* | 27.50* | 14.80* | 10.30* | 9.80* |
| SELENIUM, TOTAL | MG/KG | 0.21B | 0.27B | 1.3 | 0.25B | 0.18U | 0.30B | 0.37B | 0.37B |
| SILVER, TOTAL | MG/KG | 0.18U | 0.23U | 0.27B | 0.20U | 0.18U | 0.19U | 0.20U | 0.20U |
| THALLIUM, TOTAL | MG/KG | 0.17U | 0.21U | 0.18U | 0.19U | 0.17U | 0.18U | 0.19U | 0.18U |
| VANADIUM, TOTAL | MG/KG | 9.9 | 16.5 | 27.4 | 25.5 | 31.9 | 19.6 | 15.6 | 15.8 |
| ZINC, TOTAL | MG/KG | 23.10* | 41.40* | 68.40* | 54.70* | 67.70* | 61.70* | 54.70* | 36* |

Group: 7-TOC

| | | | | | | | | | |
|-----------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| CARBON, TOTAL ORGANIC | MG/KG | 11800 | 47300 | 28400 | 20100 | 8150 | 18300 | 29200 | 24400 |
|-----------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|

Laboratory Results
All Results for
SURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA,
2002)

| GRID: | NO GRID |
|--------------|------------|------------|------------|------------|------------|------------|------------|
| SAMPLE ID: | BKGD 3-0.5 | BKGD 4-0.5 | BKGD 5-0.5 | BKGD 6-0.5 | BKGD 7-0.5 | BKGD 8-0.5 | BKGD 9-0.5 |
| SAMPLE DATE: | 10/05/00 | 10/05/00 | 10/05/00 | 10/05/00 | 11/09/00 | 11/09/00 | 11/09/00 |
| DUP ID: | | | | | | | |
| FIELD REP: | REP |

ANALYTE

Group: 3-PAH

| ANALYTE | Units | UG/KG | 20U | 18U | 110P | 18U | 100U | 200U | 500U |
|------------------------|-------|-------|-------|-------|-------|-------|--------|-------|--------|
| ACENAPHTHENE | UG/KG | | | | | | | | |
| ACENAPHTHYLENE | UG/KG | | 32U | 29U | 28U | 29U | 100U | 200U | 500U |
| ANTHRACENE | UG/KG | | 3.20U | 2.90U | 14 | 2.90U | 100U | 200U | 150J |
| BENZ[A]ANTHRACENE | UG/KG | | 3.20U | 7.5 | 38 | 8.8 | 5U | 10U | 160 |
| BENZO[A]PYRENE | UG/KG | | 2.80U | 11P | 33 | 7.50P | 2.80J | 7.60J | 90 |
| BENZO[B]FLUORANTHENE | UG/KG | | 3.90U | 11P | 37P | 12 | 2.80J | 10U | 150 |
| BENZO[G,H]PERYLENE | UG/KG | | 4.60U | 8.60P | 22 | 6.50P | 10U | 20U | 32J |
| BENZO[K]FLUORANTHENE | UG/KG | | 1.70U | 1.50U | 20P | 5.60P | 1.10J | 6.70U | 57 |
| CHRYSENE | UG/KG | | 6.50P | 17 | 44P | 12P | 4J | 10U | 190 |
| DIBENZ[A,H]ANTHRACENE | UG/KG | | 4.90U | 4.40U | 8.40P | 4.40U | 5U | 10U | 9.70J |
| FLUORANTHENE | UG/KG | | 7.4 | 29 | 97 | 20 | 10PG | 17J | 690 |
| FLUORENE | UG/KG | | 4.60U | 4.20U | 3.90U | 4.10U | 100U | 200U | 30J |
| INDENO[1,2,3-CD]PYRENE | UG/KG | | 2U | 6.50P | 22 | 9.7 | 6.10PG | 10PG | 25U |
| NAPHTHALENE | UG/KG | | 22U | 20U | 19U | 20U | 100U | 200U | 500U |
| PAH-SUM | UG/KG | | 21.1 | 126.6 | 623.4 | 111.1 | 39.4 | 44.6 | 2128.7 |
| PHENANTHRENE | UG/KG | | 2.60P | 15P | 52 | 10 | 4.20J | 10J | 110J |
| PYRENE | UG/KG | | 4.60P | 21 | 86 | 19 | 8.4 | 10U | 460 |

Group: 6-MET

| | | | | | | | | |
|------------------|-------|--------|--------|--------|--------|--------|---------|---------|
| ALUMINUM, TOTAL | MG/KG | 8450 | 17700 | 15300 | 9520 | 10400 | 13400 | 12700 |
| ANTIMONY, TOTAL | MG/KG | 0.45BN | 0.94BN | 0.62BN | 0.42BN | 0.26BN | 0.30UN | 0.29UN |
| ARSENIC, TOTAL | MG/KG | 2.3 | 4.1 | 3.5 | 4 | 3.2 | 2.4 | 3.7 |
| BARIUM, TOTAL | MG/KG | 66.7 | 144 | 110 | 74 | 125* | 279* | 179* |
| BERYLLIUM, TOTAL | MG/KG | 0.36B | 1 | 0.75 | 0.48B | 0.56B | 0.82 | 0.79 |
| BORON, TOTAL | MG/KG | 1.90U | 1.80U | 2.10B | 3.50B | 3.10BN | 5.20BN | 3.80BN |
| CADMIUM, TOTAL | MG/KG | 0.11B | 0.15B | 0.16B | 0.23B | 0.02U | 0.53B | 0.03U |
| CHROMIUM, TOTAL | MG/KG | 14.70N | 24.30N | 21.50N | 16.30N | 16.1 | 20.1 | 18.2 |
| COBALT, TOTAL | MG/KG | 3B | 12.8 | 10.2 | 5.70B | 8.30N* | 17.50N* | 10.20N* |
| COPPER, TOTAL | MG/KG | 7.40N | 21.80N | 23.30N | 13.50N | 19.70* | 6* | 25.40* |
| LEAD, TOTAL | MG/KG | 8.7 | 12.9 | 6.1 | 16.3 | 11 | 4.7 | 13.3 |
| LITHIUM, TOTAL | MG/KG | 12 | 27.9 | 26.8 | 12.9 | 15.3 | 7.3 | 20.4 |
| MANGANESE, TOTAL | MG/KG | 70 | 415 | 410 | 163 | 429* | 657* | 542* |
| MERCURY, TOTAL | MG/KG | 0.10N | 0.04BN | 0.02BN | 0.04N | 0.06U | 0.07U | 0.07U |
| NICKEL, TOTAL | MG/KG | 7.7 | 26.6 | 21 | 11.6 | 16.70* | 37.50* | 21.50* |
| SELENIUM, TOTAL | MG/KG | 0.27U | 0.26U | 0.25U | 0.26U | 0.19U | 0.23U | 0.31B |
| SILVER, TOTAL | MG/KG | 0.12U | 0.12U | 0.11U | 0.12U | 0.27B | 0.23U | 0.22U |
| THALLIUM, TOTAL | MG/KG | 0.50U | 0.48U | 0.47U | 0.48U | 0.18U | 0.22U | 0.20U |
| VANADIUM, TOTAL | MG/KG | 13.2 | 34 | 27.2 | 17.6 | 22.4 | 24.3 | 25.4 |
| ZINC, TOTAL | MG/KG | 27.40N | 61.70N | 53.10N | 36.80N | 53.10* | 78* | 57.40* |

Group: 7-TOC

| | | | | | | | | |
|-----------------------|-------|------|------|------|-------|-------|-------|-------|
| CARBON, TOTAL ORGANIC | MG/KG | 8160 | 9030 | 9040 | 21100 | 22600 | 25700 | 28300 |
|-----------------------|-------|------|------|------|-------|-------|-------|-------|

Laboratory Results

**All Results for
SUBSURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA, 2002)**

| GRID: | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID |
|--------------|---------------|---------------|-----------------|--------------|---------------|---------------|---------------|
| | BKGD-SO-10-20 | BKGD-SO-11-12 | BKGD-SO-12-11.5 | BKGD-SO-13-7 | BKGD-SO-14-14 | BKGD-SO-15-17 | BKGD-SO-16-16 |
| SAMPLE ID: | | | | | | | |
| SAMPLE DATE: | 11/09/00 | 11/09/00 | 11/10/00 | 11/10/00 | 11/10/00 | 11/10/00 | 11/11/00 |
| DUP ID: | | | | | | | |
| FIELD REP: | REP | REP | REP | REP | REP | REP | REP |
| Units | | | | | | | |

ANALYTE
Group: 3-PAH

| | | | | | | | |
|------------------------|-------|-------|-------|-------|-------|-------|-------|
| ACENAPHTHENE | UG/KG | 100U | 100U | 100U | 100U | 100U | 100U |
| ACENAPHTHYLENE | UG/KG | 100U | 100U | 100U | 100U | 100U | 100U |
| ANTHRACENE | UG/KG | 100U | 100U | 100U | 100U | 100U | 100U |
| BENZ[A]ANTHRACENE | UG/KG | 5U | 5U | 5U | 5U | 5U | 3.70J |
| BENZO[A]PYRENE | UG/KG | 5U | 5U | 5U | 5U | 5U | 3.50J |
| BENZO[B]FLUORANTHENE | UG/KG | 5U | 5U | 5U | 5U | 5U | 2.70J |
| BENZO[GHI]PERYLENE | UG/KG | 10U | 10U | 10U | 10U | 10U | 10U |
| BENZO[K]FLUORANTHENE | UG/KG | 3.30U | 3.30U | 3.30U | 3.30U | 3.30U | 3.30U |
| CHRYSENE | UG/KG | 5.4 | 5U | 5U | 5U | 5U | 3.50J |
| DIBENZ[A,H]ANTHRACENE | UG/KG | 5U | 5U | 5U | 5U | 5U | 5U |
| FLUORANTHENE | UG/KG | 10U | 10U | 10U | 10U | 10U | 10U |
| FLUORENE | UG/KG | 100U | 100U | 100U | 100U | 100U | 100U |
| INDENO[1,2,3-CD]PYRENE | UG/KG | 5U | 5U | 5U | 5U | 5U | 5U |
| NAPHTHALENE | UG/KG | 100U | 100U | 100U | 100U | 100U | 100U |
| PAH-SUM | UG/KG | 8.9 | 0U | 0U | 0U | 0U | 47.6 |
| PHENANTHRENE | UG/KG | 3.50J | 100U | 100U | 100U | 100U | 7.90J |
| PYRENE | UG/KG | 5U | 5U | 5U | 5U | 5U | 14PG |
| Group: 6-MET | | | | | | | |

| | | | | | | | | |
|------------------|-------|---------|--------|--------|---------|---------|--------|---------|
| ALUMINUM, TOTAL | MG/KG | 14600 | 9030 | 5770 | 12900 | 13400 | 5450 | 10500 |
| ANTIMONY, TOTAL | MG/KG | 0.27UN | 0.25UN | 0.23UN | 0.23UN | 0.26UN | 0.23UN | 0.25UN |
| ARSENIC, TOTAL | MG/KG | 4.7 | 1.7 | 3.7 | 3 | 4.8 | 4.5 | 3.7 |
| BARIUM, TOTAL | MG/KG | 119* | 173 | 172 | 45.80* | 78.10* | 60.5 | 82.30* |
| BERYLLIUM, TOTAL | MG/KG | 0.73 | 0.56B | 0.36B | 0.72 | 0.60B | 0.25B | 0.53B |
| BORON, TOTAL | MG/KG | 9.30BN | 8.10B | 4.90B | 8.80BN | 5.50BN | 4.30B | 5.80BN |
| CADMIUM, TOTAL | MG/KG | 0.03U | 0.02U | 0.13B | 0.02U | 0.02U | 0.02U | 0.02U |
| CHROMIUM, TOTAL | MG/KG | 21.6 | 13.4 | 8.8 | 19.7 | 20.4 | 8.1 | 16.4 |
| COBALT, TOTAL | MG/KG | 14.60N* | 12.4 | 8 | 16.40N* | 13.40N* | 6.6 | 11.40N* |
| COPPER, TOTAL | MG/KG | 33.80* | 4.1 | 4.6 | 4.30* | 44.90* | 39.6 | 30* |
| LEAD, TOTAL | MG/KG | 8.6 | 2.8 | 5.1 | 3.2 | 6.8 | 4.7 | 5.7 |
| LITHIUM, TOTAL | MG/KG | 33.7 | 32.2 | 20.1 | 36.8 | 26.4 | 14.2 | 26.2 |
| MANGANESE, TOTAL | MG/KG | 756* | 459 | 629 | 582* | 812* | 773 | 729* |
| MERCURY, TOTAL | MG/KG | 0.06U | 0.06U | 0.05U | 0.05U | 0.06U | 0.05U | 0.06U |
| NICKEL, TOTAL | MG/KG | 31.50* | 25.3 | 16.4 | 38* | 27.70* | 12.8 | 23.60* |
| SELENIUM, TOTAL | MG/KG | 0.20U | 0.19U | 0.18U | 0.17U | 0.20U | 0.18U | 0.19U |
| SILVER, TOTAL | MG/KG | 0.20U | 0.19U | 0.18U | 0.17U | 0.20U | 0.18U | 0.19U |
| THALLIUM, TOTAL | MG/KG | 0.19U | 0.18U | 0.17U | 0.16U | 0.18U | 0.17U | 0.18U |
| VANADIUM, TOTAL | MG/KG | 28 | 16.4 | 10.8 | 22.6 | 26.5 | 11.9 | 21.9 |
| ZINC, TOTAL | MG/KG | 68.30* | 50 | 33.6 | 64.60* | 63.50* | 31.9 | 54.20* |

Laboratory Results

All Results for
**SUBSURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA, 2002)**

| GRID: | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID |
|--------------|---------------|---------------|-----------------|--------------|---------------|---------------|---------------|
| SAMPLE ID: | BKGD-SO-10-20 | BKGD-SO-11-12 | BKGD-SO-12-11.5 | BKGD-SO-13-7 | BKGD-SO-14-14 | BKGD-SO-15-17 | BKGD-SO-16-16 |
| SAMPLE DATE: | 11/09/00 | 11/09/00 | 11/10/00 | 11/10/00 | 11/10/00 | 11/10/00 | 11/11/00 |
| DUP ID: | | | | | | | |
| FIELD REP: | REP | REP | REP | REP | REP | REP | REP |
| Units | | | | | | | |

ANALYTE

| Group: 7-TOC | | | | | | | |
|-----------------------|-------|-------|------|-------|------|-------|-------|
| CARBON, TOTAL ORGANIC | MG/KG | 5140B | 5650 | 3110B | 3280 | 4030B | 2250B |
| | | | | | | | 5390B |

Laboratory Results

All Results for
**SUBSURFACE SOIL Samples Collected from
 Background Areas, Phase II RI (USACE/EA, 2002)**

| GRID: | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID |
|--------------|---------------|----------------|----------------|---------------|--------------|-------------|-------------|
| | BKGD-SO-17-20 | BKGD-SO-3-11.5 | BKGD-SO-4-10.5 | BKGD-SO-5-9.5 | BKGD-SO-6-12 | BKGD-SO-7-6 | BKGD-SO-8-6 |
| SAMPLE ID: | | | | | | | |
| SAMPLE DATE: | 11/11/00 | 10/05/00 | 10/05/00 | 10/05/00 | 10/05/00 | 11/09/00 | 11/09/00 |
| DUP ID: | | | | | | | |
| FIELD REP: | REP | REP | REP | REP | REP | REP | REP |
| Units | | | | | | | |

ANALYTE

Group: 3-PAH

| | | | | | | | | |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ACENAPHTHENE | UG/KG | 100U | 17U | 17U | 17U | 17U | 100U | 100U |
| ACENAPHTHYLENE | UG/KG | 100U | 28U | 28U | 29U | 28U | 100U | 100U |
| ANTHRACENE | UG/KG | 100U | 2.80U | 2.80U | 2.90U | 2.80U | 100U | 100U |
| BENZ[A]ANTHRACENE | UG/KG | 5U | 2.80U | 2.80U | 2.90U | 2.80U | 5U | 5U |
| BENZO[A]PYRENE | UG/KG | 5U | 2.40U | 2.40U | 2.50U | 2.50U | 5U | 5U |
| BENZO[B]FLUORANTHENE | UG/KG | 5U | 3.40U | 3.40U | 3.50U | 3.40U | 5U | 5U |
| BENZO[GH]PERYLENE | UG/KG | 10U | 4U | 4U | 4.10U | 4U | 10U | 10U |
| BENZO[K]FLUORANTHENE | UG/KG | 3.30U | 1.40U | 1.40U | 1.50U | 1.50U | 3.30U | 3.30U |
| CHRYSENE | UG/KG | 5U | 1.70U | 1.70U | 1.70U | 1.70U | 5U | 5U |
| DIBENZ[A,H]ANTHRACENE | UG/KG | 5U | 4.20U | 4.20U | 4.30U | 4.30U | 5U | 5U |
| FLUORANTHENE | UG/KG | 10U | 3.50U | 3.50U | 3.60U | 3.60U | 10U | 10U |
| FLUORENE | UG/KG | 100U | 4U | 4U | 4.10U | 4U | 100U | 100U |
| INDENO[1,2,3-CD]PYRENE | UG/KG | 5U | 1.70U | 1.70U | 1.70U | 1.70U | 5U | 5U |
| NAPHTHALENE | UG/KG | 100U | 19U | 19U | 20U | 20U | 100U | 100U |
| PAH-SUM | UG/KG | 0U |
| PHENANTHRENE | UG/KG | 100U | 2.20U | 2.20U | 2.20U | 2.20U | 100U | 100U |
| PYRENE | UG/KG | 5U | 3.70U | 3.70U | 3.90U | 3.80U | 5U | 5U |

Group: 6-MET

| | | | | | | | | |
|------------------|-------|--------|--------|--------|--------|--------|--------|---------|
| ALUMINUM, TOTAL | MG/KG | 5830 | 13400 | 14700 | 17800 | 13000 | 7670 | 19100 |
| ANTIMONY, TOTAL | MG/KG | 0.23UN | 0.60BN | 0.64BN | 0.76BN | 0.68BN | 0.24UN | 0.24UN |
| ARSENIC, TOTAL | MG/KG | 3.9 | 3.9 | 1.7 | 4.2 | 4.3 | 5.3 | 6.8 |
| BARIUM, TOTAL | MG/KG | 79.50* | 81.8 | 70.8 | 134 | 70.4 | 119* | 128* |
| BERYLLIUM, TOTAL | MG/KG | 0.28B | 0.68 | 0.7 | 0.93 | 0.67 | 0.52B | 0.98 |
| BORON, TOTAL | MG/KG | 3.70BN | 2.90B | 4.80B | 7.60B | 3.90B | 3.30BN | 3.70BN |
| CADMIUM, TOTAL | MG/KG | 0.02U | 0.18B | 0.14B | 0.06U | 0.13B | 0.02U | 0.02U |
| CHROMIUM, TOTAL | MG/KG | 8.8 | 19.90N | 21.10N | 25.50N | 19.60N | 13.1 | 25.8 |
| COBALT, TOTAL | MG/KG | 6.80N* | 11.2 | 10.6 | 15.6 | 12.1 | 7.80N* | 16.70N* |
| COPPER, TOTAL | MG/KG | 37.90* | 25N | 12.50N | 24.40N | 25.20N | 48.50* | 38* |
| LEAD, TOTAL | MG/KG | 4.4 | 5.9 | 5.4 | 8.9 | 5.7 | 6.6 | 11.7 |
| LITHIUM, TOTAL | MG/KG | 14.7 | 26.5 | 29.7 | 33.9 | 27.5 | 14.6 | 25 |
| MANGANESE, TOTAL | MG/KG | 979* | 535 | 540 | 600 | 659 | 822* | 875* |
| MERCURY, TOTAL | MG/KG | 0.06U | 0.03BN | 0.02BN | 0.01BN | 0.01BN | 0.06U | 0.06U |
| NICKEL, TOTAL | MG/KG | 13.70* | 24 | 23 | 29.7 | 21.9 | 17.30* | 30.10* |
| SELENIUM, TOTAL | MG/KG | 0.18U | 0.25U | 0.25U | 0.27U | 0.27U | 0.18U | 0.18U |
| SILVER, TOTAL | MG/KG | 0.18U | 0.11U | 0.11U | 0.12U | 0.12U | 0.18U | 0.18U |
| THALLIUM, TOTAL | MG/KG | 0.17U | 0.46U | 0.46U | 0.50U | 0.49U | 0.17U | 0.17U |
| VANADIUM, TOTAL | MG/KG | 12.4 | 27.4 | 23.7 | 34.1 | 26.2 | 28.9 | 35.2 |
| ZINC, TOTAL | MG/KG | 36.10* | 52.90N | 56.60N | 62N | 53.60N | 42.20* | 74.80* |

Laboratory Results

All Results for
**SUBSURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA, 2002)**

| GRID: | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID | NO GRID |
|--------------|---------------|----------------|----------------|---------------|--------------|-------------|-------------|
| SAMPLE ID: | BKGD-SO-17-20 | BKGD-SO-3-11.5 | BKGD-SO-4-10.5 | BKGD-SO-5-9.5 | BKGD-SO-6-12 | BKGD-SO-7-6 | BKGD-SO-8-6 |
| SAMPLE DATE: | 11/11/00 | 10/05/00 | 10/05/00 | 10/05/00 | 10/05/00 | 11/09/00 | 11/09/00 |
| DUP ID: | | | | | | | |
| FIELD REP: | REP | REP | REP | REP | REP | REP | REP |
| Units | | | | | | | |

ANALYTE**Group: 7-TOC**

CARBON, TOTAL ORGANIC

| | | | | | | | |
|-------|-------|------|------|------|------|-------|-------|
| MG/KG | 3520B | 5340 | 4160 | 3340 | 4950 | 3180B | 2620B |
|-------|-------|------|------|------|------|-------|-------|

Laboratory Results

**All Results for
SUBSURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA, 2002)**

| | |
|--------------|------------|
| GRID: | NO GRID |
| SAMPLE ID: | BKGD-SO-9- |
| SAMPLE DATE: | 20 |
| DUP ID: | |
| FIELD REP: | REP |
| Units | |

ANALYTE**Group: 3-PAH**

| | | |
|------------------------|-------|-------|
| ACENAPHTHENE | UG/KG | 100U |
| ACENAPHTHYLENE | UG/KG | 100U |
| ANTHRACENE | UG/KG | 100U |
| BENZ[A]ANTHRACENE | UG/KG | 5U |
| BENZO[A]PYRENE | UG/KG | 5U |
| BENZO[B]FLUORANTHENE | UG/KG | 5U |
| BENZO[GHI]PERYLENE | UG/KG | 10U |
| BENZO[K]FLUORANTHENE | UG/KG | 3.30U |
| CHRYSENE | UG/KG | 5U |
| DIBENZ[A,H]ANTHRACENE | UG/KG | 5U |
| FLUORANTHENE | UG/KG | 10U |
| FLUORENE | UG/KG | 100U |
| INDENO[1,2,3-CD]PYRENE | UG/KG | 5U |
| NAPHTHALENE | UG/KG | 100U |
| PAH-SUM | UG/KG | 0U |
| PHENANTHRENE | UG/KG | 100U |
| PYRENE | UG/KG | 5U |

Group: 6-MET

| | | |
|------------------|-------|--------|
| ALUMINUM, TOTAL | MG/KG | 5410 |
| ANTIMONY, TOTAL | MG/KG | 0.23UN |
| ARSENIC, TOTAL | MG/KG | 2.9 |
| BARIUM, TOTAL | MG/KG | 82.20* |
| BERYLLIUM, TOTAL | MG/KG | 0.24B |
| BORON, TOTAL | MG/KG | 3.60BN |
| CADMIUM, TOTAL | MG/KG | 0.02U |
| CHROMIUM, TOTAL | MG/KG | 7.7 |
| COBALT, TOTAL | MG/KG | 6.20N* |
| COPPER, TOTAL | MG/KG | 49.30* |
| LEAD, TOTAL | MG/KG | 3 |
| LITHIUM, TOTAL | MG/KG | 14.6 |
| MANGANESE, TOTAL | MG/KG | 951* |
| MERCURY, TOTAL | MG/KG | 0.05U |
| NICKEL, TOTAL | MG/KG | 12.40* |
| SELENIUM, TOTAL | MG/KG | 0.17U |
| SILVER, TOTAL | MG/KG | 0.17U |
| THALLIUM, TOTAL | MG/KG | 0.16U |
| VANADIUM, TOTAL | MG/KG | 11.1 |
| ZINC, TOTAL | MG/KG | 31.50* |

Laboratory Results

All Results for
**SUBSURFACE SOIL Samples Collected from
Background Areas, Phase II RI (USACE/EA, 2002)**

| | |
|--------------|------------|
| GRID: | NO GRID |
| SAMPLE ID: | BKGD-SO-9- |
| SAMPLE DATE: | 20 |
| DUP ID: | |
| FIELD REP: | REP |
| Units | |

ANALYTE

| | | |
|-----------------------|-------|-------|
| Group: 7-TOC | | |
| CARBON, TOTAL ORGANIC | MG/KG | 3470B |

INTER-QUARTILE RANGE - SOIL BACKGROUND DATA

| Chemical | Units | N | Q1 | Q3 | IQR | L |
|-----------------|--------------|----------|-----------|-----------|------------|----------|
| ALUMINUM | MG/KG | 34 | 8450 | 13800 | 5350 | 29850 |
| ANTIMONY | MG/KG | 34 | 0.12 | 0.52 | 0.4 | 1.72 |
| ARSENIC | MG/KG | 34 | 3.2 | 4.7 | 1.5 | 9.2 |
| BARIUM | MG/KG | 34 | 74 | 129 | 55 | 294 |
| BERYLLIUM | MG/KG | 34 | 0.41 | 0.77 | 0.36 | 1.85 |
| BORON | MG/KG | 34 | 2.1 | 4.9 | 2.8 | 13.3 |
| CADMIUM | MG/KG | 34 | 0.01 | 0.12 | 0.11 | 0.45 |
| CALCIUM | MG/KG | 34 | 3660 | 45900 | 42240 | 172620 |
| CHROMIUM | MG/KG | 34 | 13.4 | 20.4 | 7 | 41.4 |
| COBALT | MG/KG | 34 | 6.6 | 13.4 | 6.8 | 33.8 |
| COPPER | MG/KG | 34 | 12.1 | 33.8 | 21.7 | 98.9 |
| IRON | MG/KG | 34 | 14200 | 27300 | 13100 | 66600 |
| LEAD | MG/KG | 34 | 5.4 | 12.9 | 7.5 | 35.4 |
| LITHIUM | MG/KG | 34 | 12.9 | 26.8 | 13.9 | 68.5 |
| MAGNESIUM | MG/KG | 34 | 4040 | 10100 | 6060 | 28280 |
| MANGANESE | MG/KG | 34 | 429 | 773 | 344 | 1805 |
| MERCURY | MG/KG | 34 | 0.025 | 0.035 | 0.01 | 0.065 |
| NICKEL | MG/KG | 34 | 12.8 | 26.6 | 13.8 | 68 |
| POTASSIUM | MG/KG | 34 | 747 | 1790 | 1043 | 4919 |
| SELENIUM | MG/KG | 34 | 0.095 | 0.23 | 0.135 | 0.635 |
| SILVER | MG/KG | 34 | 0.06 | 0.1 | 0.04 | 0.22 |
| SODIUM | MG/KG | 34 | 119 | 196 | 77 | 427 |
| THALLIUM | MG/KG | 34 | 0.085 | 0.11 | 0.025 | 0.185 |
| VANADIUM | MG/KG | 34 | 15.8 | 27.4 | 11.6 | 62.2 |
| ZINC | MG/KG | 34 | 36.8 | 63.5 | 26.7 | 143.6 |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| ALUMINUM | MG/KG | 19100 | | BKGD-8 | No |
| ALUMINUM | MG/KG | 18400 | | BKGD-1 | No |
| ALUMINUM | MG/KG | 17800 | | BKGD-5 | No |
| ALUMINUM | MG/KG | 17700 | | BKGD-4 | No |
| ALUMINUM | MG/KG | 17500 | | BKGD-14 | No |
| ALUMINUM | MG/KG | 15300 | | BKGD-5 | No |
| ALUMINUM | MG/KG | 14700 | | BKGD-4 | No |
| ALUMINUM | MG/KG | 14600 | | BKGD-10 | No |
| ALUMINUM | MG/KG | 13800 | | BKGD-2 | No |
| ALUMINUM | MG/KG | 13400 | | BKGD-3 | No |
| ALUMINUM | MG/KG | 13400 | | BKGD-14 | No |
| ALUMINUM | MG/KG | 13400 | | BKGD-8 | No |
| ALUMINUM | MG/KG | 13000 | | BKGD-6 | No |
| ALUMINUM | MG/KG | 12900 | | BKGD-13 | No |
| ALUMINUM | MG/KG | 12800 | | BKGD-12 | No |
| ALUMINUM | MG/KG | 12700 | | BKGD-9 | No |
| ALUMINUM | MG/KG | 10700 | | BKGD-1 | No |
| ALUMINUM | MG/KG | 10500 | | BKGD-16 | No |
| ALUMINUM | MG/KG | 10400 | | BKGD-7 | No |
| ALUMINUM | MG/KG | 10300 | | BKGD-13 | No |
| ALUMINUM | MG/KG | 10200 | | BKGD-11 | No |
| ALUMINUM | MG/KG | 9520 | | BKGD-6 | No |
| ALUMINUM | MG/KG | 9300 | | BKGD-16 | No |
| ALUMINUM | MG/KG | 9030 | | BKGD-11 | No |
| ALUMINUM | MG/KG | 8700 | | BKGD-15 | No |
| ALUMINUM | MG/KG | 8450 | | BKGD-3 | No |
| ALUMINUM | MG/KG | 7670 | | BKGD-7 | No |
| ALUMINUM | MG/KG | 6950 | | BKGD-17 | No |
| ALUMINUM | MG/KG | 5830 | | BKGD-17 | No |
| ALUMINUM | MG/KG | 5770 | | BKGD-12 | No |
| ALUMINUM | MG/KG | 5450 | | BKGD-15 | No |
| ALUMINUM | MG/KG | 5410 | | BKGD-9 | No |
| ALUMINUM | MG/KG | 5260 | | BKGD-2 | No |
| ALUMINUM | MG/KG | 4380 | | BKGD-10 | No |
| ANTIMONY | MG/KG | 0.94 | BN | BKGD-4 | No |
| ANTIMONY | MG/KG | 0.76 | BN | BKGD-5 | No |
| ANTIMONY | MG/KG | 0.68 | BN | BKGD-6 | No |
| ANTIMONY | MG/KG | 0.65 | BN | BKGD-1 | No |
| ANTIMONY | MG/KG | 0.64 | BN | BKGD-4 | No |
| ANTIMONY | MG/KG | 0.63 | BN | BKGD-1 | No |
| ANTIMONY | MG/KG | 0.62 | BN | BKGD-5 | No |
| ANTIMONY | MG/KG | 0.6 | BN | BKGD-3 | No |
| ANTIMONY | MG/KG | 0.52 | BN | BKGD-2 | No |
| ANTIMONY | MG/KG | 0.5 | BN | BKGD-2 | No |
| ANTIMONY | MG/KG | 0.45 | BN | BKGD-3 | No |
| ANTIMONY | MG/KG | 0.42 | BN | BKGD-6 | No |
| ANTIMONY | MG/KG | 0.3 | UN | BKGD-8 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| ANTIMONY | MG/KG | 0.3 | UN | BKGD-11 | No |
| ANTIMONY | MG/KG | 0.29 | UN | BKGD-9 | No |
| ANTIMONY | MG/KG | 0.27 | UN | BKGD-10 | No |
| ANTIMONY | MG/KG | 0.26 | UN | BKGD-14 | No |
| ANTIMONY | MG/KG | 0.26 | UN | BKGD-16 | No |
| ANTIMONY | MG/KG | 0.26 | UN | BKGD-13 | No |
| ANTIMONY | MG/KG | 0.26 | BN | BKGD-7 | No |
| ANTIMONY | MG/KG | 0.26 | UN | BKGD-17 | No |
| ANTIMONY | MG/KG | 0.25 | UN | BKGD-16 | No |
| ANTIMONY | MG/KG | 0.25 | UN | BKGD-12 | No |
| ANTIMONY | MG/KG | 0.25 | UN | BKGD-11 | No |
| ANTIMONY | MG/KG | 0.25 | UN | BKGD-15 | No |
| ANTIMONY | MG/KG | 0.24 | UN | BKGD-10 | No |
| ANTIMONY | MG/KG | 0.24 | UN | BKGD-8 | No |
| ANTIMONY | MG/KG | 0.24 | UN | BKGD-7 | No |
| ANTIMONY | MG/KG | 0.24 | UN | BKGD-14 | No |
| ANTIMONY | MG/KG | 0.23 | UN | BKGD-15 | No |
| ANTIMONY | MG/KG | 0.23 | UN | BKGD-13 | No |
| ANTIMONY | MG/KG | 0.23 | UN | BKGD-12 | No |
| ANTIMONY | MG/KG | 0.23 | UN | BKGD-9 | No |
| ANTIMONY | MG/KG | 0.23 | UN | BKGD-17 | No |
| ARSENIC | MG/KG | 60.4 | | BKGD-17 | Yes |
| ARSENIC | MG/KG | 11.4 | | BKGD-10 | Yes |
| ARSENIC | MG/KG | 6.8 | | BKGD-8 | No |
| ARSENIC | MG/KG | 6.2 | | BKGD-14 | No |
| ARSENIC | MG/KG | 5.8 | | BKGD-12 | No |
| ARSENIC | MG/KG | 5.3 | | BKGD-7 | No |
| ARSENIC | MG/KG | 5 | | BKGD-15 | No |
| ARSENIC | MG/KG | 4.8 | | BKGD-14 | No |
| ARSENIC | MG/KG | 4.7 | | BKGD-10 | No |
| ARSENIC | MG/KG | 4.5 | | BKGD-15 | No |
| ARSENIC | MG/KG | 4.3 | | BKGD-13 | No |
| ARSENIC | MG/KG | 4.3 | | BKGD-6 | No |
| ARSENIC | MG/KG | 4.2 | | BKGD-5 | No |
| ARSENIC | MG/KG | 4.1 | | BKGD-4 | No |
| ARSENIC | MG/KG | 4 | | BKGD-6 | No |
| ARSENIC | MG/KG | 3.9 | | BKGD-3 | No |
| ARSENIC | MG/KG | 3.9 | | BKGD-17 | No |
| ARSENIC | MG/KG | 3.8 | | BKGD-1 | No |
| ARSENIC | MG/KG | 3.8 | | BKGD-2 | No |
| ARSENIC | MG/KG | 3.7 | | BKGD-12 | No |
| ARSENIC | MG/KG | 3.7 | | BKGD-9 | No |
| ARSENIC | MG/KG | 3.7 | | BKGD-1 | No |
| ARSENIC | MG/KG | 3.7 | | BKGD-16 | No |
| ARSENIC | MG/KG | 3.5 | | BKGD-5 | No |
| ARSENIC | MG/KG | 3.5 | | BKGD-16 | No |
| ARSENIC | MG/KG | 3.2 | | BKGD-7 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| ARSENIC | MG/KG | 3.1 | | BKGD-2 | No |
| ARSENIC | MG/KG | 3 | | BKGD-13 | No |
| ARSENIC | MG/KG | 2.9 | | BKGD-9 | No |
| ARSENIC | MG/KG | 2.8 | | BKGD-11 | No |
| ARSENIC | MG/KG | 2.4 | | BKGD-8 | No |
| ARSENIC | MG/KG | 2.3 | | BKGD-3 | No |
| ARSENIC | MG/KG | 1.7 | | BKGD-4 | No |
| ARSENIC | MG/KG | 1.7 | | BKGD-11 | No |
| BARIUM | MG/KG | 279* | | BKGD-8 | No |
| BARIUM | MG/KG | 246* | | BKGD-12 | No |
| BARIUM | MG/KG | 179* | | BKGD-9 | No |
| BARIUM | MG/KG | 173 | | BKGD-11 | No |
| BARIUM | MG/KG | 172 | | BKGD-12 | No |
| BARIUM | MG/KG | 148 | E | BKGD-1 | No |
| BARIUM | MG/KG | 144 | | BKGD-4 | No |
| BARIUM | MG/KG | 134 | | BKGD-5 | No |
| BARIUM | MG/KG | 129 | E | BKGD-2 | No |
| BARIUM | MG/KG | 128 | * | BKGD-8 | No |
| BARIUM | MG/KG | 125 | * | BKGD-7 | No |
| BARIUM | MG/KG | 119 | * | BKGD-7 | No |
| BARIUM | MG/KG | 119 | * | BKGD-10 | No |
| BARIUM | MG/KG | 118 | * | BKGD-14 | No |
| BARIUM | MG/KG | 112 | * | BKGD-11 | No |
| BARIUM | MG/KG | 110 | | BKGD-5 | No |
| BARIUM | MG/KG | 101 | * | BKGD-13 | No |
| BARIUM | MG/KG | 97.9 | E | BKGD-1 | No |
| BARIUM | MG/KG | 82.3 | * | BKGD-16 | No |
| BARIUM | MG/KG | 82.2 | * | BKGD-9 | No |
| BARIUM | MG/KG | 81.8 | | BKGD-3 | No |
| BARIUM | MG/KG | 80.3 | * | BKGD-16 | No |
| BARIUM | MG/KG | 79.5 | * | BKGD-17 | No |
| BARIUM | MG/KG | 78.1 | * | BKGD-14 | No |
| BARIUM | MG/KG | 76.8 | * | BKGD-17 | No |
| BARIUM | MG/KG | 74 | | BKGD-6 | No |
| BARIUM | MG/KG | 73.2 | * | BKGD-15 | No |
| BARIUM | MG/KG | 70.8 | | BKGD-4 | No |
| BARIUM | MG/KG | 70.4 | | BKGD-6 | No |
| BARIUM | MG/KG | 66.7 | | BKGD-3 | No |
| BARIUM | MG/KG | 60.5 | | BKGD-15 | No |
| BARIUM | MG/KG | 58.5 | E | BKGD-2 | No |
| BARIUM | MG/KG | 45.8 | * | BKGD-13 | No |
| BARIUM | MG/KG | 45.2 | * | BKGD-10 | No |
| BERYLLIUM | MG/KG | 1 | | BKGD-4 | No |
| BERYLLIUM | MG/KG | 0.98 | | BKGD-8 | No |
| BERYLLIUM | MG/KG | 0.93 | | BKGD-5 | No |
| BERYLLIUM | MG/KG | 0.9 | | BKGD-14 | No |
| BERYLLIUM | MG/KG | 0.85 | | BKGD-12 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| BERYLLIUM | MG/KG | 0.82 | | BKGD-8 | No |
| BERYLLIUM | MG/KG | 0.79 | | BKGD-13 | No |
| BERYLLIUM | MG/KG | 0.79 | | BKGD-9 | No |
| BERYLLIUM | MG/KG | 0.77 | | BKGD-1 | No |
| BERYLLIUM | MG/KG | 0.75 | | BKGD-5 | No |
| BERYLLIUM | MG/KG | 0.73 | | BKGD-10 | No |
| BERYLLIUM | MG/KG | 0.72 | | BKGD-13 | No |
| BERYLLIUM | MG/KG | 0.71 | | BKGD-2 | No |
| BERYLLIUM | MG/KG | 0.7 | | BKGD-4 | No |
| BERYLLIUM | MG/KG | 0.68 | | BKGD-3 | No |
| BERYLLIUM | MG/KG | 0.67 | | BKGD-6 | No |
| BERYLLIUM | MG/KG | 0.6 | B | BKGD-14 | No |
| BERYLLIUM | MG/KG | 0.58 | B | BKGD-11 | No |
| BERYLLIUM | MG/KG | 0.56 | B | BKGD-7 | No |
| BERYLLIUM | MG/KG | 0.56 | B | BKGD-11 | No |
| BERYLLIUM | MG/KG | 0.53 | B | BKGD-16 | No |
| BERYLLIUM | MG/KG | 0.52 | B | BKGD-7 | No |
| BERYLLIUM | MG/KG | 0.48 | B | BKGD-6 | No |
| BERYLLIUM | MG/KG | 0.47 | B | BKGD-16 | No |
| BERYLLIUM | MG/KG | 0.46 | B | BKGD-15 | No |
| BERYLLIUM | MG/KG | 0.41 | B | BKGD-17 | No |
| BERYLLIUM | MG/KG | 0.4 | B | BKGD-1 | No |
| BERYLLIUM | MG/KG | 0.36 | B | BKGD-12 | No |
| BERYLLIUM | MG/KG | 0.36 | B | BKGD-3 | No |
| BERYLLIUM | MG/KG | 0.28 | B | BKGD-17 | No |
| BERYLLIUM | MG/KG | 0.25 | B | BKGD-15 | No |
| BERYLLIUM | MG/KG | 0.24 | B | BKGD-9 | No |
| BERYLLIUM | MG/KG | 0.18 | B | BKGD-10 | No |
| BERYLLIUM | MG/KG | 0.12 | B | BKGD-2 | No |
| BORON | MG/KG | 10.1 | BN | BKGD-12 | No |
| BORON | MG/KG | 9.3 | BN | BKGD-10 | No |
| BORON | MG/KG | 8.8 | BN | BKGD-13 | No |
| BORON | MG/KG | 8.1 | B | BKGD-11 | No |
| BORON | MG/KG | 7.6 | B | BKGD-5 | No |
| BORON | MG/KG | 5.8 | BN | BKGD-16 | No |
| BORON | MG/KG | 5.5 | BN | BKGD-14 | No |
| BORON | MG/KG | 5.2 | BN | BKGD-8 | No |
| BORON | MG/KG | 4.9 | B | BKGD-12 | No |
| BORON | MG/KG | 4.8 | B | BKGD-4 | No |
| BORON | MG/KG | 4.5 | BN | BKGD-14 | No |
| BORON | MG/KG | 4.3 | B | BKGD-15 | No |
| BORON | MG/KG | 4.2 | BN | BKGD-13 | No |
| BORON | MG/KG | 3.9 | B | BKGD-6 | No |
| BORON | MG/KG | 3.8 | BN | BKGD-9 | No |
| BORON | MG/KG | 3.7 | BN | BKGD-17 | No |
| BORON | MG/KG | 3.7 | BN | BKGD-8 | No |
| BORON | MG/KG | 3.6 | BN | BKGD-9 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| BORON | MG/KG | 3.5 | B | BKGD-6 | No |
| BORON | MG/KG | 3.5 | BN | BKGD-1 | No |
| BORON | MG/KG | 3.3 | BN | BKGD-7 | No |
| BORON | MG/KG | 3.1 | BN | BKGD-7 | No |
| BORON | MG/KG | 2.9 | B | BKGD-3 | No |
| BORON | MG/KG | 2.7 | BN | BKGD-1 | No |
| BORON | MG/KG | 2.5 | BN | BKGD-15 | No |
| BORON | MG/KG | 2.1 | B | BKGD-5 | No |
| BORON | MG/KG | 2.1 | BN | BKGD-11 | No |
| BORON | MG/KG | 1.9 | U | BKGD-3 | No |
| BORON | MG/KG | 1.8 | U | BKGD-4 | No |
| BORON | MG/KG | 1.7 | BN | BKGD-16 | No |
| BORON | MG/KG | 1.6 | UN | BKGD-17 | No |
| BORON | MG/KG | 1.4 | BN | BKGD-2 | No |
| BORON | MG/KG | 1.4 | UN | BKGD-10 | No |
| BORON | MG/KG | 1.3 | UN | BKGD-2 | No |
| CADMIUM | MG/KG | 0.53 | B | BKGD-8 | Yes |
| CADMIUM | MG/KG | 0.23 | B | BKGD-6 | No |
| CADMIUM | MG/KG | 0.18 | B | BKGD-3 | No |
| CADMIUM | MG/KG | 0.16 | B | BKGD-5 | No |
| CADMIUM | MG/KG | 0.15 | B | BKGD-4 | No |
| CADMIUM | MG/KG | 0.14 | B | BKGD-4 | No |
| CADMIUM | MG/KG | 0.13 | B | BKGD-12 | No |
| CADMIUM | MG/KG | 0.13 | B | BKGD-6 | No |
| CADMIUM | MG/KG | 0.12 | B | BKGD-12 | No |
| CADMIUM | MG/KG | 0.11 | B | BKGD-3 | No |
| CADMIUM | MG/KG | 0.08 | UN | BKGD-1 | No |
| CADMIUM | MG/KG | 0.07 | UN | BKGD-1 | No |
| CADMIUM | MG/KG | 0.07 | UN | BKGD-2 | No |
| CADMIUM | MG/KG | 0.07 | UN | BKGD-2 | No |
| CADMIUM | MG/KG | 0.06 | B | BKGD-10 | No |
| CADMIUM | MG/KG | 0.06 | U | BKGD-5 | No |
| CADMIUM | MG/KG | 0.04 | B | BKGD-15 | No |
| CADMIUM | MG/KG | 0.03 | U | BKGD-11 | No |
| CADMIUM | MG/KG | 0.03 | U | BKGD-13 | No |
| CADMIUM | MG/KG | 0.03 | U | BKGD-9 | No |
| CADMIUM | MG/KG | 0.03 | U | BKGD-10 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-15 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-7 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-9 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-14 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-17 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-11 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-13 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-14 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-17 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-16 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| CADMIUM | MG/KG | 0.02 | U | BKGD-7 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-8 | No |
| CADMIUM | MG/KG | 0.02 | U | BKGD-16 | No |
| CALCIUM | MG/KG | 58900 | | BKGD-14 | No |
| CALCIUM | MG/KG | 54700 | | BKGD-1 | No |
| CALCIUM | MG/KG | 53900 | | BKGD-5 | No |
| CALCIUM | MG/KG | 52000 | | BKGD-17 | No |
| CALCIUM | MG/KG | 50500 | | BKGD-4 | No |
| CALCIUM | MG/KG | 48600 | | BKGD-10 | No |
| CALCIUM | MG/KG | 48200 | | BKGD-6 | No |
| CALCIUM | MG/KG | 47000 | | BKGD-16 | No |
| CALCIUM | MG/KG | 45900 | | BKGD-9 | No |
| CALCIUM | MG/KG | 45400 | | BKGD-2 | No |
| CALCIUM | MG/KG | 45200 | | BKGD-8 | No |
| CALCIUM | MG/KG | 44000 | | BKGD-3 | No |
| CALCIUM | MG/KG | 39700 | | BKGD-12 | No |
| CALCIUM | MG/KG | 39200 | | BKGD-15 | No |
| CALCIUM | MG/KG | 36600 | | BKGD-5 | No |
| CALCIUM | MG/KG | 31400 | | BKGD-11 | No |
| CALCIUM | MG/KG | 31000 | | BKGD-7 | No |
| CALCIUM | MG/KG | 18500 | | BKGD-13 | No |
| CALCIUM | MG/KG | 9430 | | BKGD-7 | No |
| CALCIUM | MG/KG | 8410 | | BKGD-9 | No |
| CALCIUM | MG/KG | 7930 | | BKGD-2 | No |
| CALCIUM | MG/KG | 5770 | | BKGD-15 | No |
| CALCIUM | MG/KG | 4670 | | BKGD-4 | No |
| CALCIUM | MG/KG | 3890 | | BKGD-1 | No |
| CALCIUM | MG/KG | 3740 | | BKGD-6 | No |
| CALCIUM | MG/KG | 3660 | | BKGD-11 | No |
| CALCIUM | MG/KG | 3180 | | BKGD-13 | No |
| CALCIUM | MG/KG | 2910 | | BKGD-12 | No |
| CALCIUM | MG/KG | 2890 | | BKGD-3 | No |
| CALCIUM | MG/KG | 2600 | | BKGD-8 | No |
| CALCIUM | MG/KG | 2540 | | BKGD-17 | No |
| CALCIUM | MG/KG | 2390 | | BKGD-14 | No |
| CALCIUM | MG/KG | 1520 | | BKGD-16 | No |
| CALCIUM | MG/KG | 994 | | BKGD-10 | No |
| CHROMIUM | MG/KG | 25.8 | | BKGD-8 | No |
| CHROMIUM | MG/KG | 25.5 | N | BKGD-5 | No |
| CHROMIUM | MG/KG | 24.3 | N | BKGD-4 | No |
| CHROMIUM | MG/KG | 23.6 | N | BKGD-1 | No |
| CHROMIUM | MG/KG | 23.6 | | BKGD-14 | No |
| CHROMIUM | MG/KG | 21.6 | | BKGD-10 | No |
| CHROMIUM | MG/KG | 21.5 | N | BKGD-5 | No |
| CHROMIUM | MG/KG | 21.1 | N | BKGD-4 | No |
| CHROMIUM | MG/KG | 20.4 | | BKGD-14 | No |
| CHROMIUM | MG/KG | 20.1 | | BKGD-8 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| CHROMIUM | MG/KG | 19.9 | N | BKGD-3 | No |
| CHROMIUM | MG/KG | 19.7 | | BKGD-13 | No |
| CHROMIUM | MG/KG | 19.6 | N | BKGD-6 | No |
| CHROMIUM | MG/KG | 19.1 | | BKGD-12 | No |
| CHROMIUM | MG/KG | 18.3 | | BKGD-13 | No |
| CHROMIUM | MG/KG | 18.2 | | BKGD-9 | No |
| CHROMIUM | MG/KG | 17.5 | N | BKGD-2 | No |
| CHROMIUM | MG/KG | 16.4 | | BKGD-16 | No |
| CHROMIUM | MG/KG | 16.3 | N | BKGD-6 | No |
| CHROMIUM | MG/KG | 16.1 | | BKGD-7 | No |
| CHROMIUM | MG/KG | 16.1 | | BKGD-15 | No |
| CHROMIUM | MG/KG | 15.2 | N | BKGD-1 | No |
| CHROMIUM | MG/KG | 14.7 | N | BKGD-3 | No |
| CHROMIUM | MG/KG | 14.3 | | BKGD-16 | No |
| CHROMIUM | MG/KG | 14 | | BKGD-11 | No |
| CHROMIUM | MG/KG | 13.4 | | BKGD-11 | No |
| CHROMIUM | MG/KG | 13.1 | | BKGD-7 | No |
| CHROMIUM | MG/KG | 10.6 | | BKGD-17 | No |
| CHROMIUM | MG/KG | 8.8 | | BKGD-17 | No |
| CHROMIUM | MG/KG | 8.8 | | BKGD-12 | No |
| CHROMIUM | MG/KG | 8.1 | | BKGD-15 | No |
| CHROMIUM | MG/KG | 8 | N | BKGD-2 | No |
| CHROMIUM | MG/KG | 7.7 | | BKGD-9 | No |
| CHROMIUM | MG/KG | 5.3 | | BKGD-10 | No |
| COBALT | MG/KG | 57.4 | N* | BKGD-12 | Yes |
| COBALT | MG/KG | 17.5 | N* | BKGD-8 | No |
| COBALT | MG/KG | 16.7 | N* | BKGD-8 | No |
| COBALT | MG/KG | 16.4 | N* | BKGD-13 | No |
| COBALT | MG/KG | 16.4 | N* | BKGD-13 | No |
| COBALT | MG/KG | 15.6 | | BKGD-5 | No |
| COBALT | MG/KG | 15.3 | N* | BKGD-14 | No |
| COBALT | MG/KG | 14.6 | N* | BKGD-10 | No |
| COBALT | MG/KG | 13.4 | N* | BKGD-14 | No |
| COBALT | MG/KG | 12.8 | | BKGD-1 | No |
| COBALT | MG/KG | 12.8 | | BKGD-4 | No |
| COBALT | MG/KG | 12.4 | | BKGD-11 | No |
| COBALT | MG/KG | 12.1 | | BKGD-6 | No |
| COBALT | MG/KG | 12 | | BKGD-1 | No |
| COBALT | MG/KG | 11.4 | N* | BKGD-16 | No |
| COBALT | MG/KG | 11.2 | | BKGD-3 | No |
| COBALT | MG/KG | 10.6 | | BKGD-4 | No |
| COBALT | MG/KG | 10.2 | | BKGD-5 | No |
| COBALT | MG/KG | 10.2 | N* | BKGD-9 | No |
| COBALT | MG/KG | 10.1 | | BKGD-2 | No |
| COBALT | MG/KG | 8.3 | N* | BKGD-7 | No |
| COBALT | MG/KG | 8 | | BKGD-12 | No |
| COBALT | MG/KG | 7.8 | N* | BKGD-7 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| COBALT | MG/KG | 6.8 | N* | BKGD-17 | No |
| COBALT | MG/KG | 6.7 | N* | BKGD-15 | No |
| COBALT | MG/KG | 6.6 | | BKGD-15 | No |
| COBALT | MG/KG | 6.2 | N* | BKGD-9 | No |
| COBALT | MG/KG | 5.7 | B | BKGD-6 | No |
| COBALT | MG/KG | 4.9 | B | BKGD-2 | No |
| COBALT | MG/KG | 4.5 | BN* | BKGD-11 | No |
| COBALT | MG/KG | 4.3 | BN* | BKGD-17 | No |
| COBALT | MG/KG | 4.2 | BN* | BKGD-16 | No |
| COBALT | MG/KG | 3 | B | BKGD-3 | No |
| COBALT | MG/KG | 2.2 | BN* | BKGD-10 | No |
| COPPER | MG/KG | 49.3 | * | BKGD-9 | No |
| COPPER | MG/KG | 48.5 | * | BKGD-7 | No |
| COPPER | MG/KG | 44.9 | * | BKGD-14 | No |
| COPPER | MG/KG | 39.6 | | BKGD-15 | No |
| COPPER | MG/KG | 38 | * | BKGD-8 | No |
| COPPER | MG/KG | 38 | | BKGD-1 | No |
| COPPER | MG/KG | 37.9 | * | BKGD-17 | No |
| COPPER | MG/KG | 34.7 | * | BKGD-14 | No |
| COPPER | MG/KG | 33.8 | * | BKGD-10 | No |
| COPPER | MG/KG | 32.9 | | BKGD-1 | No |
| COPPER | MG/KG | 32.3 | * | BKGD-17 | No |
| COPPER | MG/KG | 30.7 | | BKGD-2 | No |
| COPPER | MG/KG | 30 | * | BKGD-16 | No |
| COPPER | MG/KG | 25.4 | * | BKGD-9 | No |
| COPPER | MG/KG | 25.2 | N | BKGD-6 | No |
| COPPER | MG/KG | 25 | N | BKGD-3 | No |
| COPPER | MG/KG | 24.4 | N | BKGD-5 | No |
| COPPER | MG/KG | 23.3 | N | BKGD-5 | No |
| COPPER | MG/KG | 21.8 | N | BKGD-4 | No |
| COPPER | MG/KG | 21 | * | BKGD-12 | No |
| COPPER | MG/KG | 20.6 | | BKGD-2 | No |
| COPPER | MG/KG | 19.7 | * | BKGD-7 | No |
| COPPER | MG/KG | 19.3 | * | BKGD-15 | No |
| COPPER | MG/KG | 13.5 | N | BKGD-6 | No |
| COPPER | MG/KG | 12.5 | N | BKGD-4 | No |
| COPPER | MG/KG | 12.1 | * | BKGD-16 | No |
| COPPER | MG/KG | 9.8 | * | BKGD-11 | No |
| COPPER | MG/KG | 9.8 | * | BKGD-10 | No |
| COPPER | MG/KG | 7.4 | N | BKGD-3 | No |
| COPPER | MG/KG | 6 | * | BKGD-8 | No |
| COPPER | MG/KG | 4.6 | | BKGD-12 | No |
| COPPER | MG/KG | 4.4 | * | BKGD-13 | No |
| COPPER | MG/KG | 4.3 | * | BKGD-13 | No |
| COPPER | MG/KG | 4.1 | | BKGD-11 | No |
| IRON | MG/KG | 36400 | | BKGD-1 | No |
| IRON | MG/KG | 34200 | * | BKGD-12 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| IRON | MG/KG | 33000 | * | BKGD-8 | No |
| IRON | MG/KG | 31700 | | BKGD-4 | No |
| IRON | MG/KG | 30500 | | BKGD-5 | No |
| IRON | MG/KG | 30200 | * | BKGD-14 | No |
| IRON | MG/KG | 29300 | | BKGD-2 | No |
| IRON | MG/KG | 27600 | * | BKGD-10 | No |
| IRON | MG/KG | 27300 | * | BKGD-14 | No |
| IRON | MG/KG | 25800 | | BKGD-6 | No |
| IRON | MG/KG | 25500 | | BKGD-3 | No |
| IRON | MG/KG | 25100 | | BKGD-1 | No |
| IRON | MG/KG | 24800 | * | BKGD-13 | No |
| IRON | MG/KG | 24800 | | BKGD-5 | No |
| IRON | MG/KG | 22800 | * | BKGD-9 | No |
| IRON | MG/KG | 22800 | * | BKGD-8 | No |
| IRON | MG/KG | 22800 | | BKGD-4 | No |
| IRON | MG/KG | 22200 | * | BKGD-7 | No |
| IRON | MG/KG | 21800 | * | BKGD-13 | No |
| IRON | MG/KG | 21800 | * | BKGD-16 | No |
| IRON | MG/KG | 18000 | * | BKGD-7 | No |
| IRON | MG/KG | 16600 | * | BKGD-15 | No |
| IRON | MG/KG | 15600 | | BKGD-11 | No |
| IRON | MG/KG | 15200 | | BKGD-6 | No |
| IRON | MG/KG | 15000 | | BKGD-2 | No |
| IRON | MG/KG | 14200 | * | BKGD-11 | No |
| IRON | MG/KG | 14200 | * | BKGD-16 | No |
| IRON | MG/KG | 14000 | * | BKGD-17 | No |
| IRON | MG/KG | 13900 | | BKGD-15 | No |
| IRON | MG/KG | 13100 | * | BKGD-9 | No |
| IRON | MG/KG | 12800 | * | BKGD-17 | No |
| IRON | MG/KG | 10800 | | BKGD-12 | No |
| IRON | MG/KG | 10800 | | BKGD-3 | No |
| IRON | MG/KG | 6240 | * | BKGD-10 | No |
| LEAD | MG/KG | 209 | | BKGD-17 | Yes |
| LEAD | MG/KG | 55.2 | | BKGD-10 | Yes |
| LEAD | MG/KG | 30.8 | | BKGD-12 | No |
| LEAD | MG/KG | 24.9 | | BKGD-15 | No |
| LEAD | MG/KG | 17.3 | | BKGD-16 | No |
| LEAD | MG/KG | 16.3 | | BKGD-6 | No |
| LEAD | MG/KG | 13.3 | | BKGD-9 | No |
| LEAD | MG/KG | 13.1 | | BKGD-11 | No |
| LEAD | MG/KG | 12.9 | | BKGD-4 | No |
| LEAD | MG/KG | 12.9 | | BKGD-13 | No |
| LEAD | MG/KG | 11.8 | | BKGD-2 | No |
| LEAD | MG/KG | 11.7 | | BKGD-8 | No |
| LEAD | MG/KG | 11 | | BKGD-7 | No |
| LEAD | MG/KG | 10.9 | | BKGD-14 | No |
| LEAD | MG/KG | 8.9 | | BKGD-5 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| LEAD | MG/KG | 8.7 | BKGD-3 | No | |
| LEAD | MG/KG | 8.6 | BKGD-10 | No | |
| LEAD | MG/KG | 8.1 | BKGD-1 | No | |
| LEAD | MG/KG | 6.8 | BKGD-14 | No | |
| LEAD | MG/KG | 6.6 | BKGD-7 | No | |
| LEAD | MG/KG | 6.1 | BKGD-5 | No | |
| LEAD | MG/KG | 5.9 | BKGD-3 | No | |
| LEAD | MG/KG | 5.7 | BKGD-1 | No | |
| LEAD | MG/KG | 5.7 | BKGD-6 | No | |
| LEAD | MG/KG | 5.7 | BKGD-16 | No | |
| LEAD | MG/KG | 5.4 | BKGD-4 | No | |
| LEAD | MG/KG | 5.1 | BKGD-12 | No | |
| LEAD | MG/KG | 4.7 | BKGD-15 | No | |
| LEAD | MG/KG | 4.7 | BKGD-8 | No | |
| LEAD | MG/KG | 4.4 | BKGD-17 | No | |
| LEAD | MG/KG | 3.6 | BKGD-2 | No | |
| LEAD | MG/KG | 3.2 | BKGD-13 | No | |
| LEAD | MG/KG | 3 | BKGD-9 | No | |
| LEAD | MG/KG | 2.8 | BKGD-11 | No | |
| LITHIUM | MG/KG | 36.8 | BKGD-13 | No | |
| LITHIUM | MG/KG | 33.9 | BKGD-5 | No | |
| LITHIUM | MG/KG | 33.7 | BKGD-10 | No | |
| LITHIUM | MG/KG | 32.2 | BKGD-11 | No | |
| LITHIUM | MG/KG | 29.7 | BKGD-4 | No | |
| LITHIUM | MG/KG | 27.9 | BKGD-4 | No | |
| LITHIUM | MG/KG | 27.5 | BKGD-6 | No | |
| LITHIUM | MG/KG | 27.1 | BKGD-1 | No | |
| LITHIUM | MG/KG | 26.8 | BKGD-5 | No | |
| LITHIUM | MG/KG | 26.5 | BKGD-3 | No | |
| LITHIUM | MG/KG | 26.4 | BKGD-14 | No | |
| LITHIUM | MG/KG | 26.2 | BKGD-16 | No | |
| LITHIUM | MG/KG | 25.3 | BKGD-1 | No | |
| LITHIUM | MG/KG | 25 | BKGD-8 | No | |
| LITHIUM | MG/KG | 21.2 | BKGD-13 | No | |
| LITHIUM | MG/KG | 20.4 | BKGD-9 | No | |
| LITHIUM | MG/KG | 20.1 | BKGD-12 | No | |
| LITHIUM | MG/KG | 19.8 | BKGD-14 | No | |
| LITHIUM | MG/KG | 17.9 | BKGD-2 | No | |
| LITHIUM | MG/KG | 16 | BKGD-12 | No | |
| LITHIUM | MG/KG | 15.3 | BKGD-7 | No | |
| LITHIUM | MG/KG | 14.7 | BKGD-17 | No | |
| LITHIUM | MG/KG | 14.6 | BKGD-9 | No | |
| LITHIUM | MG/KG | 14.6 | BKGD-7 | No | |
| LITHIUM | MG/KG | 14.2 | BKGD-15 | No | |
| LITHIUM | MG/KG | 12.9 | BKGD-6 | No | |
| LITHIUM | MG/KG | 12.6 | BKGD-2 | No | |
| LITHIUM | MG/KG | 12.1 | BKGD-11 | No | |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| LITHIUM | MG/KG | 12 | | BKGD-3 | No |
| LITHIUM | MG/KG | 10.9 | | BKGD-16 | No |
| LITHIUM | MG/KG | 10.1 | | BKGD-15 | No |
| LITHIUM | MG/KG | 7.4 | | BKGD-17 | No |
| LITHIUM | MG/KG | 7.3 | | BKGD-8 | No |
| LITHIUM | MG/KG | 4.6 | | BKGD-10 | No |
| MAGNESIUM | MG/KG | 14800 | | BKGD-14 | No |
| MAGNESIUM | MG/KG | 14300 | | BKGD-10 | No |
| MAGNESIUM | MG/KG | 12900 | N* | BKGD-5 | No |
| MAGNESIUM | MG/KG | 12200 | | BKGD-16 | No |
| MAGNESIUM | MG/KG | 11500 | N* | BKGD-4 | No |
| MAGNESIUM | MG/KG | 11400 | N* | BKGD-6 | No |
| MAGNESIUM | MG/KG | 11300 | N* | BKGD-3 | No |
| MAGNESIUM | MG/KG | 10200 | | BKGD-8 | No |
| MAGNESIUM | MG/KG | 10100 | | BKGD-17 | No |
| MAGNESIUM | MG/KG | 9780 | | BKGD-1 | No |
| MAGNESIUM | MG/KG | 9590 | | BKGD-13 | No |
| MAGNESIUM | MG/KG | 9420 | N* | BKGD-5 | No |
| MAGNESIUM | MG/KG | 9080 | | BKGD-9 | No |
| MAGNESIUM | MG/KG | 8860 | | BKGD-2 | No |
| MAGNESIUM | MG/KG | 8580 | | BKGD-15 | No |
| MAGNESIUM | MG/KG | 7500 | N* | BKGD-4 | No |
| MAGNESIUM | MG/KG | 6890 | | BKGD-11 | No |
| MAGNESIUM | MG/KG | 6420 | | BKGD-12 | No |
| MAGNESIUM | MG/KG | 6300 | | BKGD-1 | No |
| MAGNESIUM | MG/KG | 6020 | | BKGD-8 | No |
| MAGNESIUM | MG/KG | 5840 | | BKGD-9 | No |
| MAGNESIUM | MG/KG | 5510 | | BKGD-14 | No |
| MAGNESIUM | MG/KG | 5120 | | BKGD-2 | No |
| MAGNESIUM | MG/KG | 5060 | | BKGD-7 | No |
| MAGNESIUM | MG/KG | 4580 | | BKGD-13 | No |
| MAGNESIUM | MG/KG | 4040 | | BKGD-7 | No |
| MAGNESIUM | MG/KG | 3760 | | BKGD-15 | No |
| MAGNESIUM | MG/KG | 3210 | | BKGD-12 | No |
| MAGNESIUM | MG/KG | 2570 | N* | BKGD-6 | No |
| MAGNESIUM | MG/KG | 2540 | | BKGD-11 | No |
| MAGNESIUM | MG/KG | 1850 | | BKGD-16 | No |
| MAGNESIUM | MG/KG | 1810 | | BKGD-17 | No |
| MAGNESIUM | MG/KG | 1450 | N* | BKGD-3 | No |
| MAGNESIUM | MG/KG | 931 | | BKGD-10 | No |
| MANGANESE | MG/KG | 6650 | * | BKGD-12 | Yes |
| MANGANESE | MG/KG | 981 | * | BKGD-13 | No |
| MANGANESE | MG/KG | 979 | * | BKGD-17 | No |
| MANGANESE | MG/KG | 951 | * | BKGD-9 | No |
| MANGANESE | MG/KG | 875 | * | BKGD-8 | No |
| MANGANESE | MG/KG | 822 | * | BKGD-7 | No |
| MANGANESE | MG/KG | 812 | * | BKGD-14 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| MANGANESE | MG/KG | 802 | * | BKGD-14 | No |
| MANGANESE | MG/KG | 773 | | BKGD-15 | No |
| MANGANESE | MG/KG | 756 | * | BKGD-10 | No |
| MANGANESE | MG/KG | 729 | * | BKGD-16 | No |
| MANGANESE | MG/KG | 699 | | BKGD-1 | No |
| MANGANESE | MG/KG | 687 | | BKGD-1 | No |
| MANGANESE | MG/KG | 659 | | BKGD-6 | No |
| MANGANESE | MG/KG | 657 | * | BKGD-8 | No |
| MANGANESE | MG/KG | 629 | | BKGD-12 | No |
| MANGANESE | MG/KG | 605 | | BKGD-2 | No |
| MANGANESE | MG/KG | 600 | | BKGD-5 | No |
| MANGANESE | MG/KG | 582 | * | BKGD-13 | No |
| MANGANESE | MG/KG | 542 | * | BKGD-9 | No |
| MANGANESE | MG/KG | 540 | | BKGD-4 | No |
| MANGANESE | MG/KG | 535 | | BKGD-3 | No |
| MANGANESE | MG/KG | 503 | * | BKGD-15 | No |
| MANGANESE | MG/KG | 459 | | BKGD-11 | No |
| MANGANESE | MG/KG | 455 | | BKGD-2 | No |
| MANGANESE | MG/KG | 429 | * | BKGD-7 | No |
| MANGANESE | MG/KG | 415 | | BKGD-4 | No |
| MANGANESE | MG/KG | 410 | | BKGD-5 | No |
| MANGANESE | MG/KG | 217 | * | BKGD-17 | No |
| MANGANESE | MG/KG | 211 | * | BKGD-16 | No |
| MANGANESE | MG/KG | 164 | * | BKGD-10 | No |
| MANGANESE | MG/KG | 163 | | BKGD-6 | No |
| MANGANESE | MG/KG | 159 | * | BKGD-11 | No |
| MANGANESE | MG/KG | 70 | | BKGD-3 | No |
| MERCURY | MG/KG | 0.27 | | BKGD-11 | Yes |
| MERCURY | MG/KG | 0.1 | N | BKGD-3 | Yes |
| MERCURY | MG/KG | 0.07 | U | BKGD-8 | Yes |
| MERCURY | MG/KG | 0.07 | B | BKGD-16 | Yes |
| MERCURY | MG/KG | 0.07 | U | BKGD-2 | Yes |
| MERCURY | MG/KG | 0.07 | U | BKGD-1 | Yes |
| MERCURY | MG/KG | 0.07 | U | BKGD-9 | Yes |
| MERCURY | MG/KG | 0.06 | U | BKGD-7 | No |
| MERCURY | MG/KG | 0.06 | B | BKGD-17 | No |
| MERCURY | MG/KG | 0.06 | B | BKGD-15 | No |
| MERCURY | MG/KG | 0.06 | B | BKGD-12 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-8 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-17 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-16 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-14 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-10 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-7 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-14 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-13 | No |
| MERCURY | MG/KG | 0.06 | U | BKGD-11 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| MERCURY | MG/KG | 0.05 | U | BKGD-12 | No |
| MERCURY | MG/KG | 0.05 | U | BKGD-9 | No |
| MERCURY | MG/KG | 0.05 | U | BKGD-1 | No |
| MERCURY | MG/KG | 0.05 | U | BKGD-2 | No |
| MERCURY | MG/KG | 0.05 | U | BKGD-10 | No |
| MERCURY | MG/KG | 0.05 | U | BKGD-13 | No |
| MERCURY | MG/KG | 0.05 | U | BKGD-15 | No |
| MERCURY | MG/KG | 0.04 | BN | BKGD-4 | No |
| MERCURY | MG/KG | 0.04 | N | BKGD-6 | No |
| MERCURY | MG/KG | 0.03 | BN | BKGD-3 | No |
| MERCURY | MG/KG | 0.02 | BN | BKGD-5 | No |
| MERCURY | MG/KG | 0.02 | BN | BKGD-4 | No |
| MERCURY | MG/KG | 0.01 | BN | BKGD-6 | No |
| MERCURY | MG/KG | 0.01 | BN | BKGD-5 | No |
| NICKEL | MG/KG | 38* | | BKGD-13 | No |
| NICKEL | MG/KG | 37.5* | | BKGD-8 | No |
| NICKEL | MG/KG | 31.5* | | BKGD-10 | No |
| NICKEL | MG/KG | 30.1* | | BKGD-8 | No |
| NICKEL | MG/KG | 29.7 | | BKGD-5 | No |
| NICKEL | MG/KG | 28.5 | | BKGD-1 | No |
| NICKEL | MG/KG | 27.7* | | BKGD-14 | No |
| NICKEL | MG/KG | 27.5* | | BKGD-14 | No |
| NICKEL | MG/KG | 26.6 | | BKGD-4 | No |
| NICKEL | MG/KG | 25.3 | | BKGD-11 | No |
| NICKEL | MG/KG | 24.1* | | BKGD-13 | No |
| NICKEL | MG/KG | 24 | | BKGD-3 | No |
| NICKEL | MG/KG | 23.6* | | BKGD-16 | No |
| NICKEL | MG/KG | 23 | | BKGD-4 | No |
| NICKEL | MG/KG | 22.9 | | BKGD-2 | No |
| NICKEL | MG/KG | 21.9 | | BKGD-6 | No |
| NICKEL | MG/KG | 21.5* | | BKGD-9 | No |
| NICKEL | MG/KG | 21* | | BKGD-12 | No |
| NICKEL | MG/KG | 21 | | BKGD-5 | No |
| NICKEL | MG/KG | 19.9 | | BKGD-1 | No |
| NICKEL | MG/KG | 17.3* | | BKGD-7 | No |
| NICKEL | MG/KG | 16.7* | | BKGD-7 | No |
| NICKEL | MG/KG | 16.4 | | BKGD-12 | No |
| NICKEL | MG/KG | 14.8* | | BKGD-15 | No |
| NICKEL | MG/KG | 13.7* | | BKGD-17 | No |
| NICKEL | MG/KG | 12.8 | | BKGD-15 | No |
| NICKEL | MG/KG | 12.4* | | BKGD-9 | No |
| NICKEL | MG/KG | 12 | * | BKGD-11 | No |
| NICKEL | MG/KG | 11.6 | | BKGD-6 | No |
| NICKEL | MG/KG | 10.3* | | BKGD-16 | No |
| NICKEL | MG/KG | 10.2 | | BKGD-2 | No |
| NICKEL | MG/KG | 9.8* | | BKGD-17 | No |
| NICKEL | MG/KG | 7.7 | | BKGD-3 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| NICKEL | MG/KG | 5.8 | * | BKGD-10 | No |
| POTASSIUM | MG/KG | 3200 | | BKGD-5 | No |
| POTASSIUM | MG/KG | 2460 | | BKGD-4 | No |
| POTASSIUM | MG/KG | 2440 | | BKGD-10 | No |
| POTASSIUM | MG/KG | 2370 | | BKGD-3 | No |
| POTASSIUM | MG/KG | 2300 | | BKGD-6 | No |
| POTASSIUM | MG/KG | 2000 | | BKGD-13 | No |
| POTASSIUM | MG/KG | 1830 | | BKGD-16 | No |
| POTASSIUM | MG/KG | 1820 | | BKGD-5 | No |
| POTASSIUM | MG/KG | 1790 | | BKGD-14 | No |
| POTASSIUM | MG/KG | 1630 | | BKGD-11 | No |
| POTASSIUM | MG/KG | 1620 | N | BKGD-1 | No |
| POTASSIUM | MG/KG | 1440 | | BKGD-4 | No |
| POTASSIUM | MG/KG | 1420 | N | BKGD-1 | No |
| POTASSIUM | MG/KG | 1320 | | BKGD-14 | No |
| POTASSIUM | MG/KG | 1130 | | BKGD-13 | No |
| POTASSIUM | MG/KG | 1120 | | BKGD-12 | No |
| POTASSIUM | MG/KG | 1070 | | BKGD-6 | No |
| POTASSIUM | MG/KG | 1070 | | BKGD-8 | No |
| POTASSIUM | MG/KG | 1050 | | BKGD-12 | No |
| POTASSIUM | MG/KG | 999 | N | BKGD-2 | No |
| POTASSIUM | MG/KG | 982 | | BKGD-15 | No |
| POTASSIUM | MG/KG | 917 | | BKGD-17 | No |
| POTASSIUM | MG/KG | 860 | | BKGD-9 | No |
| POTASSIUM | MG/KG | 858 | | BKGD-15 | No |
| POTASSIUM | MG/KG | 747 | | BKGD-3 | No |
| POTASSIUM | MG/KG | 747 | N | BKGD-2 | No |
| POTASSIUM | MG/KG | 746 | | BKGD-11 | No |
| POTASSIUM | MG/KG | 675 | | BKGD-9 | No |
| POTASSIUM | MG/KG | 590 | | BKGD-16 | No |
| POTASSIUM | MG/KG | 508 | | BKGD-7 | No |
| POTASSIUM | MG/KG | 503 | | BKGD-7 | No |
| POTASSIUM | MG/KG | 399 | | BKGD-8 | No |
| POTASSIUM | MG/KG | 394 | | BKGD-17 | No |
| POTASSIUM | MG/KG | 138 | | BKGD-10 | No |
| SELENIUM | MG/KG | 1.3 | | BKGD-12 | Yes |
| SELENIUM | MG/KG | 0.52 | UN | BKGD-1 | No |
| SELENIUM | MG/KG | 0.46 | UN | BKGD-2 | No |
| SELENIUM | MG/KG | 0.37 | B | BKGD-17 | No |
| SELENIUM | MG/KG | 0.37 | B | BKGD-16 | No |
| SELENIUM | MG/KG | 0.31 | B | BKGD-9 | No |
| SELENIUM | MG/KG | 0.3 | B | BKGD-15 | No |
| SELENIUM | MG/KG | 0.27 | U | BKGD-3 | No |
| SELENIUM | MG/KG | 0.27 | B | BKGD-11 | No |
| SELENIUM | MG/KG | 0.27 | U | BKGD-6 | No |
| SELENIUM | MG/KG | 0.27 | U | BKGD-5 | No |
| SELENIUM | MG/KG | 0.26 | U | BKGD-4 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| SELENIUM | MG/KG | 0.26 | U | BKGD-6 | No |
| SELENIUM | MG/KG | 0.25 | U | BKGD-5 | No |
| SELENIUM | MG/KG | 0.25 | U | BKGD-3 | No |
| SELENIUM | MG/KG | 0.25 | U | BKGD-4 | No |
| SELENIUM | MG/KG | 0.25 | B | BKGD-13 | No |
| SELENIUM | MG/KG | 0.23 | U | BKGD-8 | No |
| SELENIUM | MG/KG | 0.23 | UN | BKGD-1 | No |
| SELENIUM | MG/KG | 0.23 | BN | BKGD-2 | No |
| SELENIUM | MG/KG | 0.21 | B | BKGD-10 | No |
| SELENIUM | MG/KG | 0.2 | U | BKGD-10 | No |
| SELENIUM | MG/KG | 0.2 | U | BKGD-14 | No |
| SELENIUM | MG/KG | 0.19 | U | BKGD-7 | No |
| SELENIUM | MG/KG | 0.19 | U | BKGD-16 | No |
| SELENIUM | MG/KG | 0.19 | U | BKGD-11 | No |
| SELENIUM | MG/KG | 0.18 | U | BKGD-7 | No |
| SELENIUM | MG/KG | 0.18 | U | BKGD-8 | No |
| SELENIUM | MG/KG | 0.18 | U | BKGD-14 | No |
| SELENIUM | MG/KG | 0.18 | U | BKGD-17 | No |
| SELENIUM | MG/KG | 0.18 | U | BKGD-15 | No |
| SELENIUM | MG/KG | 0.18 | U | BKGD-12 | No |
| SELENIUM | MG/KG | 0.17 | U | BKGD-9 | No |
| SELENIUM | MG/KG | 0.17 | U | BKGD-13 | No |
| SILVER | MG/KG | 0.27 | B | BKGD-7 | Yes |
| SILVER | MG/KG | 0.27 | B | BKGD-12 | Yes |
| SILVER | MG/KG | 0.23 | U | BKGD-11 | Yes |
| SILVER | MG/KG | 0.23 | U | BKGD-8 | Yes |
| SILVER | MG/KG | 0.22 | U | BKGD-9 | No |
| SILVER | MG/KG | 0.2 | U | BKGD-14 | No |
| SILVER | MG/KG | 0.2 | U | BKGD-10 | No |
| SILVER | MG/KG | 0.2 | U | BKGD-17 | No |
| SILVER | MG/KG | 0.2 | U | BKGD-16 | No |
| SILVER | MG/KG | 0.2 | U | BKGD-13 | No |
| SILVER | MG/KG | 0.19 | U | BKGD-15 | No |
| SILVER | MG/KG | 0.19 | U | BKGD-16 | No |
| SILVER | MG/KG | 0.19 | U | BKGD-11 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-10 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-14 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-12 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-15 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-17 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-7 | No |
| SILVER | MG/KG | 0.18 | U | BKGD-8 | No |
| SILVER | MG/KG | 0.17 | U | BKGD-13 | No |
| SILVER | MG/KG | 0.17 | U | BKGD-9 | No |
| SILVER | MG/KG | 0.13 | U | BKGD-1 | No |
| SILVER | MG/KG | 0.12 | U | BKGD-5 | No |
| SILVER | MG/KG | 0.12 | U | BKGD-6 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|----------|-------|--------|------------|-----------|--------------------|
| SILVER | MG/KG | 0.12 | U | BKGD-4 | No |
| SILVER | MG/KG | 0.12 | U | BKGD-3 | No |
| SILVER | MG/KG | 0.12 | U | BKGD-6 | No |
| SILVER | MG/KG | 0.12 | U | BKGD-2 | No |
| SILVER | MG/KG | 0.11 | U | BKGD-2 | No |
| SILVER | MG/KG | 0.11 | U | BKGD-1 | No |
| SILVER | MG/KG | 0.11 | U | BKGD-4 | No |
| SILVER | MG/KG | 0.11 | U | BKGD-3 | No |
| SILVER | MG/KG | 0.11 | U | BKGD-5 | No |
| SODIUM | MG/KG | 331 | B | BKGD-3 | No |
| SODIUM | MG/KG | 324 | | BKGD-11 | No |
| SODIUM | MG/KG | 312 | | BKGD-10 | No |
| SODIUM | MG/KG | 288 | B | BKGD-6 | No |
| SODIUM | MG/KG | 286 | | BKGD-11 | No |
| SODIUM | MG/KG | 244 | | BKGD-16 | No |
| SODIUM | MG/KG | 205 | | BKGD-2 | No |
| SODIUM | MG/KG | 202 | | BKGD-14 | No |
| SODIUM | MG/KG | 196 | | BKGD-8 | No |
| SODIUM | MG/KG | 195 | | BKGD-1 | No |
| SODIUM | MG/KG | 178 | | BKGD-9 | No |
| SODIUM | MG/KG | 172 | B | BKGD-4 | No |
| SODIUM | MG/KG | 172 | B | BKGD-5 | No |
| SODIUM | MG/KG | 171 | | BKGD-12 | No |
| SODIUM | MG/KG | 167 | | BKGD-17 | No |
| SODIUM | MG/KG | 160 | | BKGD-13 | No |
| SODIUM | MG/KG | 159 | | BKGD-8 | No |
| SODIUM | MG/KG | 157 | | BKGD-15 | No |
| SODIUM | MG/KG | 154 | | BKGD-1 | No |
| SODIUM | MG/KG | 154 | | BKGD-2 | No |
| SODIUM | MG/KG | 134 | | BKGD-7 | No |
| SODIUM | MG/KG | 132 | | BKGD-12 | No |
| SODIUM | MG/KG | 127 | B | BKGD-9 | No |
| SODIUM | MG/KG | 125 | | BKGD-7 | No |
| SODIUM | MG/KG | 120 | | BKGD-14 | No |
| SODIUM | MG/KG | 119 | B | BKGD-16 | No |
| SODIUM | MG/KG | 117 | B | BKGD-13 | No |
| SODIUM | MG/KG | 114 | B | BKGD-17 | No |
| SODIUM | MG/KG | 112 | B | BKGD-15 | No |
| SODIUM | MG/KG | 105 | B | BKGD-4 | No |
| SODIUM | MG/KG | 98.6 | B | BKGD-10 | No |
| SODIUM | MG/KG | 95.3 | B | BKGD-5 | No |
| SODIUM | MG/KG | 91.9 | B | BKGD-6 | No |
| SODIUM | MG/KG | 51.7 | B | BKGD-3 | No |
| THALLIUM | MG/KG | 0.5 | U | BKGD-5 | Yes |
| THALLIUM | MG/KG | 0.5 | U | BKGD-3 | Yes |
| THALLIUM | MG/KG | 0.49 | U | BKGD-6 | Yes |
| THALLIUM | MG/KG | 0.48 | U | BKGD-6 | Yes |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| THALLIUM | MG/KG | 0.48 | U | BKGD-4 | Yes |
| THALLIUM | MG/KG | 0.47 | U | BKGD-5 | Yes |
| THALLIUM | MG/KG | 0.46 | U | BKGD-4 | Yes |
| THALLIUM | MG/KG | 0.46 | U | BKGD-3 | Yes |
| THALLIUM | MG/KG | 0.22 | U | BKGD-8 | Yes |
| THALLIUM | MG/KG | 0.21 | U | BKGD-11 | Yes |
| THALLIUM | MG/KG | 0.2 | U | BKGD-9 | Yes |
| THALLIUM | MG/KG | 0.19 | U | BKGD-16 | Yes |
| THALLIUM | MG/KG | 0.19 | U | BKGD-13 | Yes |
| THALLIUM | MG/KG | 0.19 | U | BKGD-10 | Yes |
| THALLIUM | MG/KG | 0.18 | U | BKGD-17 | No |
| THALLIUM | MG/KG | 0.18 | U | BKGD-7 | No |
| THALLIUM | MG/KG | 0.18 | U | BKGD-11 | No |
| THALLIUM | MG/KG | 0.18 | U | BKGD-14 | No |
| THALLIUM | MG/KG | 0.18 | U | BKGD-15 | No |
| THALLIUM | MG/KG | 0.18 | U | BKGD-12 | No |
| THALLIUM | MG/KG | 0.18 | U | BKGD-16 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-15 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-10 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-12 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-17 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-7 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-8 | No |
| THALLIUM | MG/KG | 0.17 | U | BKGD-14 | No |
| THALLIUM | MG/KG | 0.16 | U | BKGD-9 | No |
| THALLIUM | MG/KG | 0.16 | U | BKGD-13 | No |
| THALLIUM | MG/KG | 0.13 | U | BKGD-1 | No |
| THALLIUM | MG/KG | 0.12 | U | BKGD-2 | No |
| THALLIUM | MG/KG | 0.11 | U | BKGD-1 | No |
| THALLIUM | MG/KG | 0.11 | U | BKGD-2 | No |
| VANADIUM | MG/KG | 35.2 | | BKGD-8 | No |
| VANADIUM | MG/KG | 34.1 | | BKGD-5 | No |
| VANADIUM | MG/KG | 34 | | BKGD-4 | No |
| VANADIUM | MG/KG | 31.9 | | BKGD-14 | No |
| VANADIUM | MG/KG | 30.7 | | BKGD-1 | No |
| VANADIUM | MG/KG | 28.9 | | BKGD-7 | No |
| VANADIUM | MG/KG | 28 | | BKGD-10 | No |
| VANADIUM | MG/KG | 27.4 | | BKGD-3 | No |
| VANADIUM | MG/KG | 27.4 | | BKGD-12 | No |
| VANADIUM | MG/KG | 27.2 | | BKGD-5 | No |
| VANADIUM | MG/KG | 26.5 | | BKGD-14 | No |
| VANADIUM | MG/KG | 26.2 | | BKGD-2 | No |
| VANADIUM | MG/KG | 26.2 | | BKGD-6 | No |
| VANADIUM | MG/KG | 25.5 | | BKGD-13 | No |
| VANADIUM | MG/KG | 25.4 | | BKGD-9 | No |
| VANADIUM | MG/KG | 24.3 | | BKGD-8 | No |
| VANADIUM | MG/KG | 23.7 | | BKGD-4 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|-----------------|--------------|---------------|-------------------|------------------|---------------------------|
| VANADIUM | MG/KG | 22.6 | | BKGD-13 | No |
| VANADIUM | MG/KG | 22.4 | | BKGD-7 | No |
| VANADIUM | MG/KG | 21.9 | | BKGD-16 | No |
| VANADIUM | MG/KG | 20.1 | | BKGD-1 | No |
| VANADIUM | MG/KG | 19.6 | | BKGD-15 | No |
| VANADIUM | MG/KG | 17.6 | | BKGD-6 | No |
| VANADIUM | MG/KG | 16.5 | | BKGD-11 | No |
| VANADIUM | MG/KG | 16.4 | | BKGD-11 | No |
| VANADIUM | MG/KG | 15.8 | | BKGD-17 | No |
| VANADIUM | MG/KG | 15.6 | | BKGD-16 | No |
| VANADIUM | MG/KG | 13.2 | | BKGD-3 | No |
| VANADIUM | MG/KG | 12.4 | | BKGD-17 | No |
| VANADIUM | MG/KG | 11.9 | | BKGD-15 | No |
| VANADIUM | MG/KG | 11.3 | | BKGD-2 | No |
| VANADIUM | MG/KG | 11.1 | | BKGD-9 | No |
| VANADIUM | MG/KG | 10.8 | | BKGD-12 | No |
| VANADIUM | MG/KG | 9.9 | | BKGD-10 | No |
| ZINC | MG/KG | 266 | N | BKGD-1 | Yes |
| ZINC | MG/KG | 78 | * | BKGD-8 | No |
| ZINC | MG/KG | 74.8 | * | BKGD-8 | No |
| ZINC | MG/KG | 68.4 | * | BKGD-12 | No |
| ZINC | MG/KG | 68.3 | * | BKGD-10 | No |
| ZINC | MG/KG | 67.7 | * | BKGD-14 | No |
| ZINC | MG/KG | 66.1 | N | BKGD-1 | No |
| ZINC | MG/KG | 64.6 | * | BKGD-13 | No |
| ZINC | MG/KG | 63.5 | * | BKGD-14 | No |
| ZINC | MG/KG | 62 | N | BKGD-5 | No |
| ZINC | MG/KG | 61.7 | N | BKGD-4 | No |
| ZINC | MG/KG | 61.7 | * | BKGD-15 | No |
| ZINC | MG/KG | 57.4 | * | BKGD-9 | No |
| ZINC | MG/KG | 56.6 | N | BKGD-4 | No |
| ZINC | MG/KG | 54.7 | * | BKGD-16 | No |
| ZINC | MG/KG | 54.7 | * | BKGD-13 | No |
| ZINC | MG/KG | 54.2 | * | BKGD-16 | No |
| ZINC | MG/KG | 53.6 | N | BKGD-6 | No |
| ZINC | MG/KG | 53.1 | * | BKGD-7 | No |
| ZINC | MG/KG | 53.1 | N | BKGD-5 | No |
| ZINC | MG/KG | 52.9 | N | BKGD-3 | No |
| ZINC | MG/KG | 50 | | BKGD-11 | No |
| ZINC | MG/KG | 42.2 | * | BKGD-7 | No |
| ZINC | MG/KG | 41.4 | * | BKGD-11 | No |
| ZINC | MG/KG | 40.4 | N | BKGD-2 | No |
| ZINC | MG/KG | 36.8 | N | BKGD-6 | No |
| ZINC | MG/KG | 36.1 | * | BKGD-17 | No |
| ZINC | MG/KG | 36 | * | BKGD-17 | No |
| ZINC | MG/KG | 33.6 | | BKGD-12 | No |
| ZINC | MG/KG | 31.9 | | BKGD-15 | No |

**RESULTS OF INTER-QUARTILE TEST FOR POTENTIAL OUTLIERS IN SOIL
BACKGROUND DATA**

| Chemical | Units | Result | Qualifiers | Sample ID | Potential Outlier? |
|----------|-------|--------|------------|-----------|--------------------|
| ZINC | MG/KG | 31.5 | * | BKGD-9 | No |
| ZINC | MG/KG | 30 | N | BKGD-2 | No |
| ZINC | MG/KG | 27.4 | N | BKGD-3 | No |
| ZINC | MG/KG | 23.1 | * | BKGD-10 | No |

Shading = reported concentration is a potential outlier

ATTACHMENT 2
ProUCL OUTPUTS

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_BORON**Background Data: Background_TS_BORON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 46 | 5 |
| Number of Detect Data | 9 | 29 |
| Minimum Non-Detect | 9 | 1.3 |
| Maximum Non-Detect | 225 | 1.9 |
| Percent Non detects | 83.64% | 14.71% |
| Minimum Detected | 3.4 | 1.4 |
| Maximum Detected | 57.2 | 10.1 |
| Mean of Detected Data | 18.92 | 4.503 |
| Median of Detected Data | 7.6 | 3.8 |
| SD of Detected Data | 21.99 | 2.284 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 225 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2475
 WMW Test U-Stat -0.00422
 WMW Critical Value (0.050) 1.645
 P-Value 0.498

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_CADMIUM**Background Data: Background_TS_CADMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 19 | 22 |
| Number of Detect Data | 36 | 12 |
| Minimum Non-Detect | 0.47 | 0.02 |
| Maximum Non-Detect | 0.75 | 0.08 |
| Percent Non detects | 34.55% | 64.71% |
| Minimum Detected | 0.053 | 0.04 |
| Maximum Detected | 184 | 0.53 |
| Mean of Detected Data | 11.47 | 0.165 |
| Median of Detected Data | 0.76 | 0.135 |
| SD of Detected Data | 31.72 | 0.125 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_CADMIUM**Background Data: Background_TS_CADMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 19 | 22 |
| Number of Detect Data | 36 | 12 |
| Minimum Non-Detect | 0.47 | 0.02 |
| Maximum Non-Detect | 0.75 | 0.08 |
| Percent Non detects | 34.55% | 64.71% |
| Minimum Detected | 0.053 | 0.04 |
| Maximum Detected | 184 | 0.53 |
| Mean of Detected Data | 11.47 | 0.165 |
| Median of Detected Data | 0.76 | 0.135 |
| SD of Detected Data | 31.72 | 0.125 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2781
 WMW Test U-Stat 2.58
 WMW Critical Value (0.050) 1.645
 P-Value 0.00495

Conclusion with Alpha = 0.05**Reject H0, Conclude Site > Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_CALCIUM**Background Data: Background_TS_CALCIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1500 | 994 |
| Maximum Detected | 196000 | 58900 |
| Mean of Detected Data | 22667 | 25212 |
| Median of Detected Data | 8860 | 24750 |
| SD of Detected Data | 32222 | 21434 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

R Value Adjusted for Ties in Data 7

K Value Adjusted for Ties in Data 7

Number of Site Observations in 'R' Largest 5

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_CALCIUM**Background Data: Background_TS_CALCIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1500 | 994 |
| Maximum Detected | 196000 | 58900 |
| Mean of Detected Data | 22667 | 25212 |
| Median of Detected Data | 8860 | 24750 |
| SD of Detected Data | 32222 | 21434 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

| | |
|----------------------------|-------|
| Site Rank Sum W-Stat | N/A |
| WMW Test U-Stat | N/A |
| WMW Critical Value (0.050) | 1.645 |
| P-Value | N/A |

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_CHROMIUM**Background Data: Background_TS_CHROMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 2 | 0 |
| Number of Detect Data | 53 | 34 |
| Minimum Non-Detect | 8.8 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 3.64% | 0.00% |
| Minimum Detected | 6.2 | 5.3 |
| Maximum Detected | 4960 | 25.8 |
| Mean of Detected Data | 169 | 16.67 |
| Median of Detected Data | 25.1 | 16.95 |
| SD of Detected Data | 685.7 | 5.534 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_CHROMIUM**Background Data: Background_TS_CHROMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 2 | 0 |
| Number of Detect Data | 53 | 34 |
| Minimum Non-Detect | 8.8 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 3.64% | 0.00% |
| Minimum Detected | 6.2 | 5.3 |
| Maximum Detected | 4960 | 25.8 |
| Mean of Detected Data | 169 | 16.67 |
| Median of Detected Data | 25.1 | 16.95 |
| SD of Detected Data | 685.7 | 5.534 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_COBALT**Background Data: Background_TS_COBALT****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 34 |
| Minimum Non-Detect | 2.9 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 2 | 2.2 |
| Maximum Detected | 43.3 | 57.4 |
| Mean of Detected Data | 8.558 | 11.42 |
| Median of Detected Data | 6.7 | 10.4 |
| SD of Detected Data | 6.874 | 9.206 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_COBALT**Background Data: Background_TS_COBALT****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 34 |
| Minimum Non-Detect | 2.9 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 2 | 2.2 |
| Maximum Detected | 43.3 | 57.4 |
| Mean of Detected Data | 8.558 | 11.42 |
| Median of Detected Data | 6.7 | 10.4 |
| SD of Detected Data | 6.874 | 9.206 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_COPPER**Background Data: Background_TS_COPPER****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3.3 | 4.1 |
| Maximum Detected | 4790 | 49.3 |
| Mean of Detected Data | 250.9 | 23.67 |
| Median of Detected Data | 31.8 | 23.85 |
| SD of Detected Data | 702.6 | 13.42 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_COPPER**Background Data: Background_TS_COPPER****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3.3 | 4.1 |
| Maximum Detected | 4790 | 49.3 |
| Mean of Detected Data | 250.9 | 23.67 |
| Median of Detected Data | 31.8 | 23.85 |
| SD of Detected Data | 702.6 | 13.42 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_IRON**Background Data: Background_TS_IRON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 4480 | 6240 |
| Maximum Detected | 182000 | 36400 |
| Mean of Detected Data | 27801 | 21495 |
| Median of Detected Data | 21000 | 22500 |
| SD of Detected Data | 32440 | 7716 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_IRON**Background Data: Background_TS_IRON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 4480 | 6240 |
| Maximum Detected | 182000 | 36400 |
| Mean of Detected Data | 27801 | 21495 |
| Median of Detected Data | 21000 | 22500 |
| SD of Detected Data | 32440 | 7716 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_LEAD**Background Data: Background_TS_LEAD****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 33 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 33 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 0.99 | 2.8 |
| Maximum Detected | 2760 | 55.2 |
| Mean of Detected Data | 335.5 | 10.78 |
| Median of Detected Data | 8.6 | 8.1 |
| SD of Detected Data | 677.1 | 10.08 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0535

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_LEAD**Background Data: Background_TS_LEAD****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 33 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 33 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 0.99 | 2.8 |
| Maximum Detected | 2760 | 55.2 |
| Mean of Detected Data | 335.5 | 10.78 |
| Median of Detected Data | 8.6 | 8.1 |
| SD of Detected Data | 677.1 | 10.08 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_LITHIUM**Background Data: Background_TS_LITHIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 2 | 0 |
| Number of Detect Data | 53 | 34 |
| Minimum Non-Detect | 0.47 | N/A |
| Maximum Non-Detect | 1.8 | N/A |
| Percent Non detects | 3.64% | 0.00% |
| Minimum Detected | 0.53 | 4.6 |
| Maximum Detected | 36.3 | 36.8 |
| Mean of Detected Data | 14.14 | 20.11 |
| Median of Detected Data | 16.3 | 19.95 |
| SD of Detected Data | 8.853 | 8.58 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 1

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_LITHIUM**Background Data: Background_TS_LITHIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 2 | 0 |
| Number of Detect Data | 53 | 34 |
| Minimum Non-Detect | 0.47 | N/A |
| Maximum Non-Detect | 1.8 | N/A |
| Percent Non detects | 3.64% | 0.00% |
| Minimum Detected | 0.53 | 4.6 |
| Maximum Detected | 36.3 | 36.8 |
| Mean of Detected Data | 14.14 | 20.11 |
| Median of Detected Data | 16.3 | 19.95 |
| SD of Detected Data | 8.853 | 8.58 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_MAGNESIUM**Background Data: Background_TS_MAGNESIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 632 | 931 |
| Maximum Detected | 97300 | 14800 |
| Mean of Detected Data | 10838 | 7218 |
| Median of Detected Data | 7220 | 6655 |
| SD of Detected Data | 14665 | 3876 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_MAGNESIUM**Background Data: Background_TS_MAGNESIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 632 | 931 |
| Maximum Detected | 97300 | 14800 |
| Mean of Detected Data | 10838 | 7218 |
| Median of Detected Data | 7220 | 6655 |
| SD of Detected Data | 14665 | 3876 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_MANGANESE**Background Data: Background_TS_MANGANESE****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 18.5 | 70 |
| Maximum Detected | 1790 | 6650 |
| Mean of Detected Data | 429.7 | 750.6 |
| Median of Detected Data | 262 | 602.5 |
| SD of Detected Data | 388.3 | 1071 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 4

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_MANGANESE**Background Data: Background_TS_MANGANESE****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 18.5 | 70 |
| Maximum Detected | 1790 | 6650 |
| Mean of Detected Data | 429.7 | 750.6 |
| Median of Detected Data | 262 | 602.5 |
| SD of Detected Data | 388.3 | 1071 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_MERCURY**Background Data: Background_TS_MERCURY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 19 | 21 |
| Number of Detect Data | 36 | 13 |
| Minimum Non-Detect | 0.06 | 0.05 |
| Maximum Non-Detect | 0.081 | 0.07 |
| Percent Non detects | 34.55% | 61.76% |
| Minimum Detected | 0.0081 | 0.01 |
| Maximum Detected | 0.62 | 0.27 |
| Mean of Detected Data | 0.087 | 0.0608 |
| Median of Detected Data | 0.0475 | 0.04 |
| SD of Detected Data | 0.116 | 0.0681 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 5

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_MERCURY**Background Data: Background_TS_MERCURY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 19 | 21 |
| Number of Detect Data | 36 | 13 |
| Minimum Non-Detect | 0.06 | 0.05 |
| Maximum Non-Detect | 0.081 | 0.07 |
| Percent Non detects | 34.55% | 61.76% |
| Minimum Detected | 0.0081 | 0.01 |
| Maximum Detected | 0.62 | 0.27 |
| Mean of Detected Data | 0.087 | 0.0608 |
| Median of Detected Data | 0.0475 | 0.04 |
| SD of Detected Data | 0.116 | 0.0681 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.081 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2591

WMW Test U-Stat 0.975

WMW Critical Value (0.050) 1.645

P-Value 0.165

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_NICKEL**Background Data: Background_TS_NICKEL****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 34 |
| Minimum Non-Detect | 2.4 | N/A |
| Maximum Non-Detect | 2.4 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 6.8 | 5.8 |
| Maximum Detected | 699 | 38 |
| Mean of Detected Data | 46.48 | 20.49 |
| Median of Detected Data | 18.95 | 21.25 |
| SD of Detected Data | 103.2 | 8.294 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_NICKEL**Background Data: Background_TS_NICKEL****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 34 |
| Minimum Non-Detect | 2.4 | N/A |
| Maximum Non-Detect | 2.4 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 6.8 | 5.8 |
| Maximum Detected | 699 | 38 |
| Mean of Detected Data | 46.48 | 20.49 |
| Median of Detected Data | 18.95 | 21.25 |
| SD of Detected Data | 103.2 | 8.294 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_POTASSIUM**Background Data: Background_TS_POTASSIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 118 | 138 |
| Maximum Detected | 4540 | 3200 |
| Mean of Detected Data | 1233 | 1269 |
| Median of Detected Data | 718 | 1070 |
| SD of Detected Data | 1198 | 715.8 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_POTASSIUM**Background Data: Background_TS_POTASSIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 118 | 138 |
| Maximum Detected | 4540 | 3200 |
| Mean of Detected Data | 1233 | 1269 |
| Median of Detected Data | 718 | 1070 |
| SD of Detected Data | 1198 | 715.8 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_SELENIUM**Background Data: Background_TS_SELENIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 33 |
| Number of Non-Detect Data | 21 | 25 |
| Number of Detect Data | 34 | 8 |
| Minimum Non-Detect | 0.47 | 0.17 |
| Maximum Non-Detect | 3.75 | 0.52 |
| Percent Non detects | 38.18% | 75.76% |
| Minimum Detected | 0.29 | 0.21 |
| Maximum Detected | 24 | 0.37 |
| Mean of Detected Data | 1.898 | 0.289 |
| Median of Detected Data | 1.3 | 0.285 |
| SD of Detected Data | 3.994 | 0.0601 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_SELENIUM**Background Data: Background_TS_SELENIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 33 |
| Number of Non-Detect Data | 21 | 25 |
| Number of Detect Data | 34 | 8 |
| Minimum Non-Detect | 0.47 | 0.17 |
| Maximum Non-Detect | 3.75 | 0.52 |
| Percent Non detects | 38.18% | 75.76% |
| Minimum Detected | 0.29 | 0.21 |
| Maximum Detected | 24 | 0.37 |
| Mean of Detected Data | 1.898 | 0.289 |
| Median of Detected Data | 1.3 | 0.285 |
| SD of Detected Data | 3.994 | 0.0601 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2481

WMW Test U-Stat 0.28

WMW Critical Value (0.050) 1.645

P-Value 0.39

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_SILVER**Background Data: Background_TS_SILVER****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 24 | 32 |
| Number of Detect Data | 31 | 2 |
| Minimum Non-Detect | 0.12 | 0.11 |
| Maximum Non-Detect | 3.6 | 0.23 |
| Percent Non detects | 43.64% | 94.12% |
| Minimum Detected | 0.027 | 0.27 |
| Maximum Detected | 1.6 | 0.27 |
| Mean of Detected Data | 0.202 | 0.27 |
| Median of Detected Data | 0.098 | 0.27 |
| SD of Detected Data | 0.311 | 0 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

R Value Adjusted for Ties in Data 12

K Value Adjusted for Ties in Data 12

Number of Site Observations in 'R' Largest 12

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_SILVER**Background Data: Background_TS_SILVER****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 24 | 32 |
| Number of Detect Data | 31 | 2 |
| Minimum Non-Detect | 0.12 | 0.11 |
| Maximum Non-Detect | 3.6 | 0.23 |
| Percent Non detects | 43.64% | 94.12% |
| Minimum Detected | 0.027 | 0.27 |
| Maximum Detected | 1.6 | 0.27 |
| Mean of Detected Data | 0.202 | 0.27 |
| Median of Detected Data | 0.098 | 0.27 |
| SD of Detected Data | 0.311 | 0 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3.6 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2475
 WMW Test U-Stat -0.00422
 WMW Critical Value (0.050) 1.645
 P-Value 0.498

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_SODIUM**Background Data: Background_TS_SODIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 9 | 0 |
| Number of Detect Data | 46 | 34 |
| Minimum Non-Detect | 60 | N/A |
| Maximum Non-Detect | 211 | N/A |
| Percent Non detects | 16.36% | 0.00% |
| Minimum Detected | 27 | 51.7 |
| Maximum Detected | 1470 | 331 |
| Mean of Detected Data | 191.6 | 169.7 |
| Median of Detected Data | 94.2 | 158 |
| SD of Detected Data | 265.5 | 70.33 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_SODIUM**Background Data: Background_TS_SODIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 9 | 0 |
| Number of Detect Data | 46 | 34 |
| Minimum Non-Detect | 60 | N/A |
| Maximum Non-Detect | 211 | N/A |
| Percent Non detects | 16.36% | 0.00% |
| Minimum Detected | 27 | 51.7 |
| Maximum Detected | 1470 | 331 |
| Mean of Detected Data | 191.6 | 169.7 |
| Median of Detected Data | 94.2 | 158 |
| SD of Detected Data | 265.5 | 70.33 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_THALLIUM**Background Data: Background_TS_THALLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 42 | 34 |
| Number of Detect Data | 13 | 0 |
| Minimum Non-Detect | 0.3 | 0.11 |
| Maximum Non-Detect | 3.75 | 0.5 |
| Percent Non detects | 76.36% | 100.00% |
| Minimum Detected | 0.063 | N/A |
| Maximum Detected | 1.8 | N/A |
| Mean of Detected Data | 0.497 | N/A |
| Median of Detected Data | 0.39 | N/A |
| SD of Detected Data | 0.491 | N/A |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_VANADIUM**Background Data: Background_TS_VANADIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 3 | 0 |
| Number of Detect Data | 52 | 34 |
| Minimum Non-Detect | 10.5 | N/A |
| Maximum Non-Detect | 52.5 | N/A |
| Percent Non detects | 5.45% | 0.00% |
| Minimum Detected | 4 | 9.9 |
| Maximum Detected | 220 | 35.2 |
| Mean of Detected Data | 21.44 | 22.11 |
| Median of Detected Data | 14.85 | 23.15 |
| SD of Detected Data | 29.33 | 7.47 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 5

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_VANADIUM**Background Data: Background_TS_VANADIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 3 | 0 |
| Number of Detect Data | 52 | 34 |
| Minimum Non-Detect | 10.5 | N/A |
| Maximum Non-Detect | 52.5 | N/A |
| Percent Non detects | 5.45% | 0.00% |
| Minimum Detected | 4 | 9.9 |
| Maximum Detected | 220 | 35.2 |
| Mean of Detected Data | 21.44 | 22.11 |
| Median of Detected Data | 14.85 | 23.15 |
| SD of Detected Data | 29.33 | 7.47 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_ZINC**Background Data: Background_TS_ZINC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 34 |
| Minimum Non-Detect | 18.2 | N/A |
| Maximum Non-Detect | 18.2 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 9.3 | 23.1 |
| Maximum Detected | 52300 | 266 |
| Mean of Detected Data | 5784 | 57.46 |
| Median of Detected Data | 89.55 | 53.9 |
| SD of Detected Data | 11347 | 39.61 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_ZINC**Background Data: Background_TS_ZINC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 34 |
| Minimum Non-Detect | 18.2 | N/A |
| Maximum Non-Detect | 18.2 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 9.3 | 23.1 |
| Maximum Detected | 52300 | 266 |
| Mean of Detected Data | 5784 | 57.46 |
| Median of Detected Data | 89.55 | 53.9 |
| SD of Detected Data | 11347 | 39.61 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_THALLIUM**Background Data: Background_TS_THALLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 42 | 34 |
| Number of Detect Data | 13 | 0 |
| Minimum Non-Detect | 0.3 | 0.11 |
| Maximum Non-Detect | 3.75 | 0.5 |
| Percent Non detects | 76.36% | 100.00% |
| Minimum Detected | 0.063 | N/A |
| Maximum Detected | 1.8 | N/A |
| Mean of Detected Data | 0.497 | N/A |
| Median of Detected Data | 0.39 | N/A |
| SD of Detected Data | 0.491 | N/A |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2475
 WMW Test U-Stat -0.00422
 WMW Critical Value (0.050) 1.645
 P-Value 0.498

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_ALUMINUM**Background Data: Background_SO_ALUMINUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 5160 | 5260 |
| Maximum Detected | 17700 | 19100 |
| Mean of Detected Data | 11078 | 11018 |
| Median of Detected Data | 11000 | 11800 |
| SD of Detected Data | 3382 | 4405 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 2

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_ALUMINUM**Background Data: Background_SO_ALUMINUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 5160 | 5260 |
| Maximum Detected | 17700 | 19100 |
| Mean of Detected Data | 11078 | 11018 |
| Median of Detected Data | 11000 | 11800 |
| SD of Detected Data | 3382 | 4405 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_ANTIMONY**Background Data: Background_SO_ANTIMONY****Raw Statistics**

| | Site | Background |
|---------------------------|---------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 18 | 11 |
| Number of Detect Data | 0 | 7 |
| Minimum Non-Detect | 0.48 | 0.23 |
| Maximum Non-Detect | 3 | 0.27 |
| Percent Non detects | 100.00% | 61.11% |
| Minimum Detected | N/A | 0.5 |
| Maximum Detected | N/A | 0.76 |
| Mean of Detected Data | N/A | 0.619 |
| Median of Detected Data | N/A | 0.63 |
| SD of Detected Data | N/A | 0.0899 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

R Value Adjusted for Ties in Data 5

K Value Adjusted for Ties in Data 5

Number of Site Observations in 'R' Largest 5

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_ANTIMONY**Background Data: Background_SO_ANTIMONY****Raw Statistics**

| | Site | Background |
|---------------------------|---------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 18 | 11 |
| Number of Detect Data | 0 | 7 |
| Minimum Non-Detect | 0.48 | 0.23 |
| Maximum Non-Detect | 3 | 0.27 |
| Percent Non detects | 100.00% | 61.11% |
| Minimum Detected | N/A | 0.5 |
| Maximum Detected | N/A | 0.76 |
| Mean of Detected Data | N/A | 0.619 |
| Median of Detected Data | N/A | 0.63 |
| SD of Detected Data | N/A | 0.0899 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 333

WMW Test U-Stat 162

WMW Critical Value (0.050) 214

Approximate P-Value 0.506

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_ARSENIC**Background Data: Background_SO_ARSENIC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1 | 1.7 |
| Maximum Detected | 5.2 | 6.8 |
| Mean of Detected Data | 3.472 | 3.872 |
| Median of Detected Data | 3.65 | 3.85 |
| SD of Detected Data | 1.092 | 1.205 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 2

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_ARSENIC**Background Data: Background_SO_ARSENIC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1 | 1.7 |
| Maximum Detected | 5.2 | 6.8 |
| Mean of Detected Data | 3.472 | 3.872 |
| Median of Detected Data | 3.65 | 3.85 |
| SD of Detected Data | 1.092 | 1.205 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_BARIUM**Background Data: Background_SO_BARIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 60.8 | 45.8 |
| Maximum Detected | 168 | 173 |
| Mean of Detected Data | 106.9 | 98.99 |
| Median of Detected Data | 107.6 | 82.25 |
| SD of Detected Data | 31.38 | 37.43 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 2

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_BARIUM**Background Data: Background_SO_BARIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 60.8 | 45.8 |
| Maximum Detected | 168 | 173 |
| Mean of Detected Data | 106.9 | 98.99 |
| Median of Detected Data | 107.6 | 82.25 |
| SD of Detected Data | 31.38 | 37.43 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_BERYLLIUM**Background Data: Background_SO_BERYLLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 6 | 0 |
| Number of Detect Data | 12 | 18 |
| Minimum Non-Detect | 0.5 | N/A |
| Maximum Non-Detect | 2.7 | N/A |
| Percent Non detects | 33.33% | 0.00% |
| Minimum Detected | 0.26 | 0.12 |
| Maximum Detected | 0.73 | 0.98 |
| Mean of Detected Data | 0.586 | 0.554 |
| Median of Detected Data | 0.59 | 0.58 |
| SD of Detected Data | 0.128 | 0.24 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 3

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_BERYLLIUM**Background Data: Background_SO_BERYLLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 6 | 0 |
| Number of Detect Data | 12 | 18 |
| Minimum Non-Detect | 0.5 | N/A |
| Maximum Non-Detect | 2.7 | N/A |
| Percent Non detects | 33.33% | 0.00% |
| Minimum Detected | 0.26 | 0.12 |
| Maximum Detected | 0.73 | 0.98 |
| Mean of Detected Data | 0.586 | 0.554 |
| Median of Detected Data | 0.59 | 0.58 |
| SD of Detected Data | 0.128 | 0.24 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_BORON**Background Data: Background_SO_BORON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 13 | 1 |
| Number of Detect Data | 5 | 17 |
| Minimum Non-Detect | 9 | 1.3 |
| Maximum Non-Detect | 45 | 1.3 |
| Percent Non detects | 72.22% | 5.56% |
| Minimum Detected | 3.4 | 1.4 |
| Maximum Detected | 19.2 | 9.3 |
| Mean of Detected Data | 7.8 | 5.006 |
| Median of Detected Data | 5.2 | 4.3 |
| SD of Detected Data | 6.591 | 2.233 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4
 Approximate K Value (0.053) 4
 R Value Adjusted for Ties in Data 7
 K Value Adjusted for Ties in Data 7
 Number of Site Observations in 'R' Largest 7

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_BORON**Background Data: Background_SO_BORON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 13 | 1 |
| Number of Detect Data | 5 | 17 |
| Minimum Non-Detect | 9 | 1.3 |
| Maximum Non-Detect | 45 | 1.3 |
| Percent Non detects | 72.22% | 5.56% |
| Minimum Detected | 3.4 | 1.4 |
| Maximum Detected | 19.2 | 9.3 |
| Mean of Detected Data | 7.8 | 5.006 |
| Median of Detected Data | 5.2 | 4.3 |
| SD of Detected Data | 6.591 | 2.233 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 45 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 333

WMW Test U-Stat 162

WMW Critical Value (0.050) 214

Approximate P-Value 0.506

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_CADMIUM**Background Data: Background_SO_CADMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 9 | 14 |
| Number of Detect Data | 9 | 4 |
| Minimum Non-Detect | 0.48 | 0.02 |
| Maximum Non-Detect | 0.53 | 0.07 |
| Percent Non detects | 50.00% | 77.78% |
| Minimum Detected | 0.053 | 0.13 |
| Maximum Detected | 1.5 | 0.18 |
| Mean of Detected Data | 0.252 | 0.145 |
| Median of Detected Data | 0.1 | 0.135 |
| SD of Detected Data | 0.469 | 0.0238 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 4

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_CADMIUM**Background Data: Background_SO_CADMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 9 | 14 |
| Number of Detect Data | 9 | 4 |
| Minimum Non-Detect | 0.48 | 0.02 |
| Maximum Non-Detect | 0.53 | 0.07 |
| Percent Non detects | 50.00% | 77.78% |
| Minimum Detected | 0.053 | 0.13 |
| Maximum Detected | 1.5 | 0.18 |
| Mean of Detected Data | 0.252 | 0.145 |
| Median of Detected Data | 0.1 | 0.135 |
| SD of Detected Data | 0.469 | 0.0238 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.53 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 342

WMW Test U-Stat 171

WMW Critical Value (0.050) 214

Approximate P-Value 0.394

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_CALCIUM**Background Data: Background_SO_CALCIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1930 | 2600 |
| Maximum Detected | 86500 | 58900 |
| Mean of Detected Data | 39039 | 39968 |
| Median of Detected Data | 47700 | 45650 |
| SD of Detected Data | 25353 | 15971 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

R Value Adjusted for Ties in Data 5

K Value Adjusted for Ties in Data 5

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_CALCIUM**Background Data: Background_SO_CALCIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1930 | 2600 |
| Maximum Detected | 86500 | 58900 |
| Mean of Detected Data | 39039 | 39968 |
| Median of Detected Data | 47700 | 45650 |
| SD of Detected Data | 25353 | 15971 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_CHROMIUM**Background Data: Background_SO_CHROMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 17 | 18 |
| Minimum Non-Detect | 15 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 5.56% | 0.00% |
| Minimum Detected | 8.7 | 7.7 |
| Maximum Detected | 319 | 25.8 |
| Mean of Detected Data | 52.71 | 16.14 |
| Median of Detected Data | 18.4 | 16.95 |
| SD of Detected Data | 96.68 | 6.047 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 4

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_CHROMIUM**Background Data: Background_SO_CHROMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 17 | 18 |
| Minimum Non-Detect | 15 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 5.56% | 0.00% |
| Minimum Detected | 8.7 | 7.7 |
| Maximum Detected | 319 | 25.8 |
| Mean of Detected Data | 52.71 | 16.14 |
| Median of Detected Data | 18.4 | 16.95 |
| SD of Detected Data | 96.68 | 6.047 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_COBALT**Background Data: Background_SO_COBALT****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3.7 | 4.9 |
| Maximum Detected | 12.9 | 16.7 |
| Mean of Detected Data | 9.008 | 10.93 |
| Median of Detected Data | 9.475 | 11.3 |
| SD of Detected Data | 2.556 | 3.624 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 0

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_COBALT**Background Data: Background_SO_COBALT****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3.7 | 4.9 |
| Maximum Detected | 12.9 | 16.7 |
| Mean of Detected Data | 9.008 | 10.93 |
| Median of Detected Data | 9.475 | 11.3 |
| SD of Detected Data | 2.556 | 3.624 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_COPPER**Background Data: Background_SO_COPPER****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 15.9 | 4.1 |
| Maximum Detected | 38.5 | 49.3 |
| Mean of Detected Data | 28.54 | 28.41 |
| Median of Detected Data | 28.1 | 30.35 |
| SD of Detected Data | 5.156 | 14.63 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 0

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_COPPER**Background Data: Background_SO_COPPER****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 15.9 | 4.1 |
| Maximum Detected | 38.5 | 49.3 |
| Mean of Detected Data | 28.54 | 28.41 |
| Median of Detected Data | 28.1 | 30.35 |
| SD of Detected Data | 5.156 | 14.63 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_IRON**Background Data: Background_SO_IRON****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 7830 | 10800 |
| Maximum Detected | 29700 | 33000 |
| Mean of Detected Data | 22162 | 21950 |
| Median of Detected Data | 24900 | 22500 |
| SD of Detected Data | 6698 | 6718 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 2

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_IRON**Background Data: Background_SO_IRON****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 7830 | 10800 |
| Maximum Detected | 29700 | 33000 |
| Mean of Detected Data | 22162 | 21950 |
| Median of Detected Data | 24900 | 22500 |
| SD of Detected Data | 6698 | 6718 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_LEAD**Background Data: Background_SO_LEAD****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3 | 2.8 |
| Maximum Detected | 29.2 | 11.8 |
| Mean of Detected Data | 6.417 | 6.089 |
| Median of Detected Data | 4.8 | 5.7 |
| SD of Detected Data | 5.829 | 2.665 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 1

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_LEAD**Background Data: Background_SO_LEAD****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3 | 2.8 |
| Maximum Detected | 29.2 | 11.8 |
| Mean of Detected Data | 6.417 | 6.089 |
| Median of Detected Data | 4.8 | 5.7 |
| SD of Detected Data | 5.829 | 2.665 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_LITHIUM**Background Data: Background_SO_LITHIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 10.5 | 12.6 |
| Maximum Detected | 23.3 | 36.8 |
| Mean of Detected Data | 18.78 | 23.99 |
| Median of Detected Data | 18.9 | 25.75 |
| SD of Detected Data | 3.646 | 7.78 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 0

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_LITHIUM**Background Data: Background_SO_LITHIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 10.5 | 12.6 |
| Maximum Detected | 23.3 | 36.8 |
| Mean of Detected Data | 18.78 | 23.99 |
| Median of Detected Data | 18.9 | 25.75 |
| SD of Detected Data | 3.646 | 7.78 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_MAGNESIUM**Background Data: Background_SO_MAGNESIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1960 | 5060 |
| Maximum Detected | 11400 | 14800 |
| Mean of Detected Data | 7382 | 9661 |
| Median of Detected Data | 7935 | 9685 |
| SD of Detected Data | 2822 | 2966 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 0

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_MAGNESIUM**Background Data: Background_SO_MAGNESIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1960 | 5060 |
| Maximum Detected | 11400 | 14800 |
| Mean of Detected Data | 7382 | 9661 |
| Median of Detected Data | 7935 | 9685 |
| SD of Detected Data | 2822 | 2966 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_MANGANESE**Background Data: Background_SO_MANGANESE****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 74 | 455 |
| Maximum Detected | 1790 | 979 |
| Mean of Detected Data | 725.7 | 691.6 |
| Median of Detected Data | 832.5 | 673 |
| SD of Detected Data | 429 | 156.7 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_MANGANESE**Background Data: Background_SO_MANGANESE****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 74 | 455 |
| Maximum Detected | 1790 | 979 |
| Mean of Detected Data | 725.7 | 691.6 |
| Median of Detected Data | 832.5 | 673 |
| SD of Detected Data | 429 | 156.7 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_MERCURY**Background Data: Background_SO_MERCURY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 9 | 14 |
| Number of Detect Data | 9 | 4 |
| Minimum Non-Detect | 0.065 | 0.05 |
| Maximum Non-Detect | 0.076 | 0.07 |
| Percent Non detects | 50.00% | 77.78% |
| Minimum Detected | 0.0081 | 0.01 |
| Maximum Detected | 0.07 | 0.03 |
| Mean of Detected Data | 0.0308 | 0.0175 |
| Median of Detected Data | 0.026 | 0.015 |
| SD of Detected Data | 0.0167 | 0.00957 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

R Value Adjusted for Ties in Data 5

K Value Adjusted for Ties in Data 5

Number of Site Observations in 'R' Largest 5

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_MERCURY**Background Data: Background_SO_MERCURY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 9 | 14 |
| Number of Detect Data | 9 | 4 |
| Minimum Non-Detect | 0.065 | 0.05 |
| Maximum Non-Detect | 0.076 | 0.07 |
| Percent Non detects | 50.00% | 77.78% |
| Minimum Detected | 0.0081 | 0.01 |
| Maximum Detected | 0.07 | 0.03 |
| Mean of Detected Data | 0.0308 | 0.0175 |
| Median of Detected Data | 0.026 | 0.015 |
| SD of Detected Data | 0.0167 | 0.00957 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.076 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 333

WMW Test U-Stat 162

WMW Critical Value (0.050) 214

Approximate P-Value 0.506

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_NICKEL**Background Data: Background_SO_NICKEL****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 9.8 | 10.2 |
| Maximum Detected | 23.4 | 38 |
| Mean of Detected Data | 17.52 | 22.24 |
| Median of Detected Data | 17.85 | 22.95 |
| SD of Detected Data | 3.818 | 7.533 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 0

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_NICKEL**Background Data: Background_SO_NICKEL****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 9.8 | 10.2 |
| Maximum Detected | 23.4 | 38 |
| Mean of Detected Data | 17.52 | 22.24 |
| Median of Detected Data | 17.85 | 22.95 |
| SD of Detected Data | 3.818 | 7.533 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_POTASSIUM**Background Data: Background_SO_POTASSIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 452 | 503 |
| Maximum Detected | 4240 | 3200 |
| Mean of Detected Data | 2030 | 1598 |
| Median of Detected Data | 1495 | 1625 |
| SD of Detected Data | 1396 | 751.9 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 4

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_POTASSIUM**Background Data: Background_SO_POTASSIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 452 | 503 |
| Maximum Detected | 4240 | 3200 |
| Mean of Detected Data | 2030 | 1598 |
| Median of Detected Data | 1495 | 1625 |
| SD of Detected Data | 1396 | 751.9 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_SELENIUM**Background Data: Background_SO_SELENIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 9 | 17 |
| Number of Detect Data | 9 | 1 |
| Minimum Non-Detect | 0.48 | 0.17 |
| Maximum Non-Detect | 0.53 | 0.46 |
| Percent Non detects | 50.00% | 94.44% |
| Minimum Detected | 0.9 | 0.23 |
| Maximum Detected | 1.6 | 0.23 |
| Mean of Detected Data | 1.333 | 0.23 |
| Median of Detected Data | 1.3 | 0.23 |
| SD of Detected Data | 0.206 | N/A |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 4

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_SELENIUM**Background Data: Background_SO_SELENIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 9 | 17 |
| Number of Detect Data | 9 | 1 |
| Minimum Non-Detect | 0.48 | 0.17 |
| Maximum Non-Detect | 0.53 | 0.46 |
| Percent Non detects | 50.00% | 94.44% |
| Minimum Detected | 0.9 | 0.23 |
| Maximum Detected | 1.6 | 0.23 |
| Mean of Detected Data | 1.333 | 0.23 |
| Median of Detected Data | 1.3 | 0.23 |
| SD of Detected Data | 0.206 | N/A |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.53 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 414
 WMW Test U-Stat 243
 WMW Critical Value (0.050) 214
 Approximate P-Value 0.00543

Conclusion with Alpha = 0.05**Reject H0, Conclude Site > Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_SILVER**Background Data: Background_SO_SILVER****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 10 | 18 |
| Number of Detect Data | 8 | 0 |
| Minimum Non-Detect | 0.12 | 0.11 |
| Maximum Non-Detect | 1.1 | 0.2 |
| Percent Non detects | 55.56% | 100.00% |
| Minimum Detected | 0.027 | N/A |
| Maximum Detected | 0.12 | N/A |
| Mean of Detected Data | 0.0484 | N/A |
| Median of Detected Data | 0.0385 | N/A |
| SD of Detected Data | 0.03 | N/A |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4
 Approximate K Value (0.053) 4
 R Value Adjusted for Ties in Data 8
 K Value Adjusted for Ties in Data 8
 Number of Site Observations in 'R' Largest 8

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_SILVER**Background Data: Background_SO_SILVER****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 10 | 18 |
| Number of Detect Data | 8 | 0 |
| Minimum Non-Detect | 0.12 | 0.11 |
| Maximum Non-Detect | 1.1 | 0.2 |
| Percent Non detects | 55.56% | 100.00% |
| Minimum Detected | 0.027 | N/A |
| Maximum Detected | 0.12 | N/A |
| Mean of Detected Data | 0.0484 | N/A |
| Median of Detected Data | 0.0385 | N/A |
| SD of Detected Data | 0.03 | N/A |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 1.1 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 333

WMW Test U-Stat 162

WMW Critical Value (0.050) 214

Approximate P-Value 0.506

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_SODIUM**Background Data: Background_SO_SODIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 36.5 | 134 |
| Maximum Detected | 730 | 331 |
| Mean of Detected Data | 218.4 | 209 |
| Median of Detected Data | 151.5 | 186.5 |
| SD of Detected Data | 212 | 62.91 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_SODIUM**Background Data: Background_SO_SODIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 36.5 | 134 |
| Maximum Detected | 730 | 331 |
| Mean of Detected Data | 218.4 | 209 |
| Median of Detected Data | 151.5 | 186.5 |
| SD of Detected Data | 212 | 62.91 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_THALLIUM**Background Data: Background_SO_THALLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 10 | 18 |
| Number of Detect Data | 8 | 0 |
| Minimum Non-Detect | 0.3 | 0.11 |
| Maximum Non-Detect | 0.75 | 0.5 |
| Percent Non detects | 55.56% | 100.00% |
| Minimum Detected | 0.064 | N/A |
| Maximum Detected | 0.67 | N/A |
| Mean of Detected Data | 0.332 | N/A |
| Median of Detected Data | 0.255 | N/A |
| SD of Detected Data | 0.262 | N/A |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 4

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_THALLIUM**Background Data: Background_SO_THALLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 10 | 18 |
| Number of Detect Data | 8 | 0 |
| Minimum Non-Detect | 0.3 | 0.11 |
| Maximum Non-Detect | 0.75 | 0.5 |
| Percent Non detects | 55.56% | 100.00% |
| Minimum Detected | 0.064 | N/A |
| Maximum Detected | 0.67 | N/A |
| Mean of Detected Data | 0.332 | N/A |
| Median of Detected Data | 0.255 | N/A |
| SD of Detected Data | 0.262 | N/A |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 333

WMW Test U-Stat 162

WMW Critical Value (0.050) 214

Approximate P-Value 0.506

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_VANADIUM**Background Data: Background_SO_VANADIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 11.6 | 10.8 |
| Maximum Detected | 35.1 | 35.2 |
| Mean of Detected Data | 23.81 | 21.93 |
| Median of Detected Data | 25.15 | 23.15 |
| SD of Detected Data | 7.497 | 7.971 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_VANADIUM**Background Data: Background_SO_VANADIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 11.6 | 10.8 |
| Maximum Detected | 35.1 | 35.2 |
| Mean of Detected Data | 23.81 | 21.93 |
| Median of Detected Data | 25.15 | 23.15 |
| SD of Detected Data | 7.497 | 7.971 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SO_ZINC**Background Data: Background_SO_ZINC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 26.9 | 30 |
| Maximum Detected | 354 | 266 |
| Mean of Detected Data | 67.95 | 61.79 |
| Median of Detected Data | 45.9 | 53.25 |
| SD of Detected Data | 74.01 | 52.81 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.053) 4

Approximate K Value (0.053) 4

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0519

Conclusion with Alpha = 0.053**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SO
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SO_ZINC**Background Data: Background_SO_ZINC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 18 | 18 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 18 | 18 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 26.9 | 30 |
| Maximum Detected | 354 | 266 |
| Mean of Detected Data | 67.95 | 61.79 |
| Median of Detected Data | 45.9 | 53.25 |
| SD of Detected Data | 74.01 | 52.81 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 214
 Approximate P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_ALUMINUM**Background Data: Background_SS_ALUMINUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1310 | 4380 |
| Maximum Detected | 32800 | 18400 |
| Mean of Detected Data | 10069 | 11625 |
| Median of Detected Data | 9550 | 10350 |
| SD of Detected Data | 6348 | 4038 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 4

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_ALUMINUM**Background Data: Background_SS_ALUMINUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1310 | 4380 |
| Maximum Detected | 32800 | 18400 |
| Mean of Detected Data | 10069 | 11625 |
| Median of Detected Data | 9550 | 10350 |
| SD of Detected Data | 6348 | 4038 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

| | |
|----------------------------|-------|
| Site Rank Sum W-Stat | N/A |
| WMW Test U-Stat | N/A |
| WMW Critical Value (0.050) | 1.645 |
| P-Value | N/A |

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_ANTIMONY**Background Data: Background_SS_ANTIMONY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 22 | 10 |
| Number of Detect Data | 15 | 6 |
| Minimum Non-Detect | 0.52 | 0.24 |
| Maximum Non-Detect | 15 | 0.3 |
| Percent Non detects | 59.46% | 62.50% |
| Minimum Detected | 0.36 | 0.26 |
| Maximum Detected | 10.1 | 0.94 |
| Mean of Detected Data | 2.196 | 0.557 |
| Median of Detected Data | 1.3 | 0.535 |
| SD of Detected Data | 2.432 | 0.236 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_ANTIMONY**Background Data: Background_SS_ANTIMONY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 22 | 10 |
| Number of Detect Data | 15 | 6 |
| Minimum Non-Detect | 0.52 | 0.24 |
| Maximum Non-Detect | 15 | 0.3 |
| Percent Non detects | 59.46% | 62.50% |
| Minimum Detected | 0.36 | 0.26 |
| Maximum Detected | 10.1 | 0.94 |
| Mean of Detected Data | 2.196 | 0.557 |
| Median of Detected Data | 1.3 | 0.535 |
| SD of Detected Data | 2.432 | 0.236 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 15 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 999
 WMW Test U-Stat -0.00969
 WMW Critical Value (0.050) 1.645
 P-Value 0.496

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_ARSENIC**Background Data: Background_SS_ARSENIC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 15 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 15 |
| Minimum Non-Detect | 15 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 1.1 | 2.3 |
| Maximum Detected | 27.1 | 11.4 |
| Mean of Detected Data | 5.451 | 4.4 |
| Median of Detected Data | 3.05 | 3.8 |
| SD of Detected Data | 5.923 | 2.231 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 7

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_ARSENIC**Background Data: Background_SS_ARSENIC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 15 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 15 |
| Minimum Non-Detect | 15 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 1.1 | 2.3 |
| Maximum Detected | 27.1 | 11.4 |
| Mean of Detected Data | 5.451 | 4.4 |
| Median of Detected Data | 3.05 | 3.8 |
| SD of Detected Data | 5.923 | 2.231 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_BARIUM**Background Data: Background_SS_BARIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 5.4 | 45.2 |
| Maximum Detected | 9710 | 279 |
| Mean of Detected Data | 1367 | 123.6 |
| Median of Detected Data | 430 | 111 |
| SD of Detected Data | 2068 | 64.56 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_BARIUM**Background Data: Background_SS_BARIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 5.4 | 45.2 |
| Maximum Detected | 9710 | 279 |
| Mean of Detected Data | 1367 | 123.6 |
| Median of Detected Data | 430 | 111 |
| SD of Detected Data | 2068 | 64.56 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_BERYLLIUM**Background Data: Background_SS_BERYLLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 9 | 0 |
| Number of Detect Data | 28 | 16 |
| Minimum Non-Detect | 0.15 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 24.32% | 0.00% |
| Minimum Detected | 0.06 | 0.18 |
| Maximum Detected | 4.3 | 1 |
| Mean of Detected Data | 0.588 | 0.636 |
| Median of Detected Data | 0.47 | 0.665 |
| SD of Detected Data | 0.765 | 0.229 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 5

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_BERYLLIUM**Background Data: Background_SS_BERYLLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 9 | 0 |
| Number of Detect Data | 28 | 16 |
| Minimum Non-Detect | 0.15 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 24.32% | 0.00% |
| Minimum Detected | 0.06 | 0.18 |
| Maximum Detected | 4.3 | 1 |
| Mean of Detected Data | 0.588 | 0.636 |
| Median of Detected Data | 0.47 | 0.665 |
| SD of Detected Data | 0.765 | 0.229 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_BORON**Background Data: Background_SS_BORON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 33 | 4 |
| Number of Detect Data | 4 | 12 |
| Minimum Non-Detect | 18 | 1.4 |
| Maximum Non-Detect | 225 | 1.9 |
| Percent Non detects | 89.19% | 25.00% |
| Minimum Detected | 4.1 | 1.7 |
| Maximum Detected | 57.2 | 10.1 |
| Mean of Detected Data | 32.83 | 3.792 |
| Median of Detected Data | 35 | 3.3 |
| SD of Detected Data | 27.7 | 2.256 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_BORON**Background Data: Background_SS_BORON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 33 | 4 |
| Number of Detect Data | 4 | 12 |
| Minimum Non-Detect | 18 | 1.4 |
| Maximum Non-Detect | 225 | 1.9 |
| Percent Non detects | 89.19% | 25.00% |
| Minimum Detected | 4.1 | 1.7 |
| Maximum Detected | 57.2 | 10.1 |
| Mean of Detected Data | 32.83 | 3.792 |
| Median of Detected Data | 35 | 3.3 |
| SD of Detected Data | 27.7 | 2.256 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 225 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 999
 WMW Test U-Stat -0.00969
 WMW Critical Value (0.050) 1.645
 P-Value 0.496

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_CADMIUM**Background Data: Background_SS_CADMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 10 | 8 |
| Number of Detect Data | 27 | 8 |
| Minimum Non-Detect | 0.47 | 0.02 |
| Maximum Non-Detect | 0.75 | 0.08 |
| Percent Non detects | 27.03% | 50.00% |
| Minimum Detected | 0.11 | 0.04 |
| Maximum Detected | 184 | 0.53 |
| Mean of Detected Data | 15.21 | 0.175 |
| Median of Detected Data | 1.3 | 0.135 |
| SD of Detected Data | 36.01 | 0.155 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_CADMIUM**Background Data: Background_SS_CADMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 10 | 8 |
| Number of Detect Data | 27 | 8 |
| Minimum Non-Detect | 0.47 | 0.02 |
| Maximum Non-Detect | 0.75 | 0.08 |
| Percent Non detects | 27.03% | 50.00% |
| Minimum Detected | 0.11 | 0.04 |
| Maximum Detected | 184 | 0.53 |
| Mean of Detected Data | 15.21 | 0.175 |
| Median of Detected Data | 1.3 | 0.135 |
| SD of Detected Data | 36.01 | 0.155 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 1135
 WMW Test U-Stat 2.625
 WMW Critical Value (0.050) 1.645
 P-Value 0.00433

Conclusion with Alpha = 0.05**Reject H0, Conclude Site > Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_CALCIUM**Background Data: Background_SS_CALCIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1500 | 994 |
| Maximum Detected | 196000 | 45200 |
| Mean of Detected Data | 14703 | 8612 |
| Median of Detected Data | 6170 | 3700 |
| SD of Detected Data | 32475 | 12898 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_CALCIUM**Background Data: Background_SS_CALCIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1500 | 994 |
| Maximum Detected | 196000 | 45200 |
| Mean of Detected Data | 14703 | 8612 |
| Median of Detected Data | 6170 | 3700 |
| SD of Detected Data | 32475 | 12898 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_CHROMIUM**Background Data: Background_SS_CHROMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 8.8 | N/A |
| Maximum Non-Detect | 8.8 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 6.2 | 5.3 |
| Maximum Detected | 4960 | 24.3 |
| Mean of Detected Data | 223.9 | 17.26 |
| Median of Detected Data | 31.6 | 17.25 |
| SD of Detected Data | 827.4 | 5.022 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8
 Approximate K Value (0.052) 8
 R Value Adjusted for Ties in Data 9
 K Value Adjusted for Ties in Data 9
 Number of Site Observations in 'R' Largest 9
 Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_CHROMIUM**Background Data: Background_SS_CHROMIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 8.8 | N/A |
| Maximum Non-Detect | 8.8 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 6.2 | 5.3 |
| Maximum Detected | 4960 | 24.3 |
| Mean of Detected Data | 223.9 | 17.26 |
| Median of Detected Data | 31.6 | 17.25 |
| SD of Detected Data | 827.4 | 5.022 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_COBALT**Background Data: Background_SS_COBALT****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 2.9 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 2 | 2.2 |
| Maximum Detected | 43.3 | 57.4 |
| Mean of Detected Data | 8.333 | 11.97 |
| Median of Detected Data | 6 | 9.25 |
| SD of Detected Data | 8.26 | 13.07 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 4

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_COBALT**Background Data: Background_SS_COBALT****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 2.9 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 2 | 2.2 |
| Maximum Detected | 43.3 | 57.4 |
| Mean of Detected Data | 8.333 | 11.97 |
| Median of Detected Data | 6 | 9.25 |
| SD of Detected Data | 8.26 | 13.07 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_COPPER**Background Data: Background_SS_COPPER****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3.3 | 4.4 |
| Maximum Detected | 4790 | 34.7 |
| Mean of Detected Data | 359.1 | 18.34 |
| Median of Detected Data | 60.3 | 19.5 |
| SD of Detected Data | 838.8 | 9.816 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_COPPER**Background Data: Background_SS_COPPER****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 3.3 | 4.4 |
| Maximum Detected | 4790 | 34.7 |
| Mean of Detected Data | 359.1 | 18.34 |
| Median of Detected Data | 60.3 | 19.5 |
| SD of Detected Data | 838.8 | 9.816 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_IRON**Background Data: Background_SS_IRON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 4480 | 6240 |
| Maximum Detected | 182000 | 36400 |
| Mean of Detected Data | 30544 | 20984 |
| Median of Detected Data | 16400 | 20400 |
| SD of Detected Data | 39163 | 8905 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_IRON**Background Data: Background_SS_IRON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 4480 | 6240 |
| Maximum Detected | 182000 | 36400 |
| Mean of Detected Data | 30544 | 20984 |
| Median of Detected Data | 16400 | 20400 |
| SD of Detected Data | 39163 | 8905 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_LEAD**Background Data: Background_SS_LEAD****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 15 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 15 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 0.99 | 4.7 |
| Maximum Detected | 2760 | 55.2 |
| Mean of Detected Data | 495.6 | 16.41 |
| Median of Detected Data | 75.6 | 12.9 |
| SD of Detected Data | 779.2 | 12.71 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0513

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_LEAD**Background Data: Background_SS_LEAD****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 15 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 15 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 0.99 | 4.7 |
| Maximum Detected | 2760 | 55.2 |
| Mean of Detected Data | 495.6 | 16.41 |
| Median of Detected Data | 75.6 | 12.9 |
| SD of Detected Data | 779.2 | 12.71 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_LITHIUM**Background Data: Background_SS_LITHIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 2 | 0 |
| Number of Detect Data | 35 | 16 |
| Minimum Non-Detect | 0.47 | N/A |
| Maximum Non-Detect | 1.8 | N/A |
| Percent Non detects | 5.41% | 0.00% |
| Minimum Detected | 0.53 | 4.6 |
| Maximum Detected | 36.3 | 27.9 |
| Mean of Detected Data | 11.76 | 15.74 |
| Median of Detected Data | 9.6 | 14.1 |
| SD of Detected Data | 9.798 | 7.407 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 5

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_LITHIUM**Background Data: Background_SS_LITHIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 2 | 0 |
| Number of Detect Data | 35 | 16 |
| Minimum Non-Detect | 0.47 | N/A |
| Maximum Non-Detect | 1.8 | N/A |
| Percent Non detects | 5.41% | 0.00% |
| Minimum Detected | 0.53 | 4.6 |
| Maximum Detected | 36.3 | 27.9 |
| Mean of Detected Data | 11.76 | 15.74 |
| Median of Detected Data | 9.6 | 14.1 |
| SD of Detected Data | 9.798 | 7.407 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_MAGNESIUM**Background Data: Background_SS_MAGNESIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 632 | 931 |
| Maximum Detected | 97300 | 10200 |
| Mean of Detected Data | 12519 | 4469 |
| Median of Detected Data | 7000 | 3900 |
| SD of Detected Data | 17605 | 2805 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_MAGNESIUM**Background Data: Background_SS_MAGNESIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 632 | 931 |
| Maximum Detected | 97300 | 10200 |
| Mean of Detected Data | 12519 | 4469 |
| Median of Detected Data | 7000 | 3900 |
| SD of Detected Data | 17605 | 2805 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_MANGANESE**Background Data: Background_SS_MANGANESE****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 18.5 | 70 |
| Maximum Detected | 1390 | 6650 |
| Mean of Detected Data | 285.6 | 817 |
| Median of Detected Data | 183 | 422 |
| SD of Detected Data | 272.2 | 1577 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_MANGANESE**Background Data: Background_SS_MANGANESE****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 18.5 | 70 |
| Maximum Detected | 1390 | 6650 |
| Mean of Detected Data | 285.6 | 817 |
| Median of Detected Data | 183 | 422 |
| SD of Detected Data | 272.2 | 1577 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

| | |
|----------------------------|-------|
| Site Rank Sum W-Stat | N/A |
| WMW Test U-Stat | N/A |
| WMW Critical Value (0.050) | 1.645 |
| P-Value | N/A |

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_MERCURY**Background Data: Background_SS_MERCURY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 10 | 7 |
| Number of Detect Data | 27 | 9 |
| Minimum Non-Detect | 0.06 | 0.05 |
| Maximum Non-Detect | 0.081 | 0.07 |
| Percent Non detects | 27.03% | 43.75% |
| Minimum Detected | 0.014 | 0.02 |
| Maximum Detected | 0.62 | 0.27 |
| Mean of Detected Data | 0.106 | 0.08 |
| Median of Detected Data | 0.0585 | 0.06 |
| SD of Detected Data | 0.129 | 0.0747 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 7

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_MERCURY**Background Data: Background_SS_MERCURY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 10 | 7 |
| Number of Detect Data | 27 | 9 |
| Minimum Non-Detect | 0.06 | 0.05 |
| Maximum Non-Detect | 0.081 | 0.07 |
| Percent Non detects | 27.03% | 43.75% |
| Minimum Detected | 0.014 | 0.02 |
| Maximum Detected | 0.62 | 0.27 |
| Mean of Detected Data | 0.106 | 0.08 |
| Median of Detected Data | 0.0585 | 0.06 |
| SD of Detected Data | 0.129 | 0.0747 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 0.081 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 1043

WMW Test U-Stat 0.843

WMW Critical Value (0.050) 1.645

P-Value 0.2

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_NICKEL**Background Data: Background_SS_NICKEL****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 2.4 | N/A |
| Maximum Non-Detect | 2.4 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 6.8 | 5.8 |
| Maximum Detected | 699 | 37.5 |
| Mean of Detected Data | 60.95 | 18.53 |
| Median of Detected Data | 21.7 | 18.85 |
| SD of Detected Data | 124.4 | 8.9 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_NICKEL**Background Data: Background_SS_NICKEL****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 2.4 | N/A |
| Maximum Non-Detect | 2.4 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 6.8 | 5.8 |
| Maximum Detected | 699 | 37.5 |
| Mean of Detected Data | 60.95 | 18.53 |
| Median of Detected Data | 21.7 | 18.85 |
| SD of Detected Data | 124.4 | 8.9 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_POTASSIUM**Background Data: Background_SS_POTASSIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 118 | 138 |
| Maximum Detected | 4540 | 1820 |
| Mean of Detected Data | 845.1 | 898.4 |
| Median of Detected Data | 610 | 802.5 |
| SD of Detected Data | 871.2 | 458.4 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 7

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_POTASSIUM**Background Data: Background_SS_POTASSIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 37 | 16 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 118 | 138 |
| Maximum Detected | 4540 | 1820 |
| Mean of Detected Data | 845.1 | 898.4 |
| Median of Detected Data | 610 | 802.5 |
| SD of Detected Data | 871.2 | 458.4 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_SELENIUM**Background Data: Background_SS_SELENIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 15 |
| Number of Non-Detect Data | 12 | 8 |
| Number of Detect Data | 25 | 7 |
| Minimum Non-Detect | 0.47 | 0.18 |
| Maximum Non-Detect | 3.75 | 0.52 |
| Percent Non detects | 32.43% | 53.33% |
| Minimum Detected | 0.29 | 0.21 |
| Maximum Detected | 24 | 0.37 |
| Mean of Detected Data | 2.101 | 0.297 |
| Median of Detected Data | 0.93 | 0.3 |
| SD of Detected Data | 4.665 | 0.0596 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8
 Approximate K Value (0.052) 8
 R Value Adjusted for Ties in Data 9
 K Value Adjusted for Ties in Data 9
 Number of Site Observations in 'R' Largest 9

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_SELENIUM**Background Data: Background_SS_SELENIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 15 |
| Number of Non-Detect Data | 12 | 8 |
| Number of Detect Data | 25 | 7 |
| Minimum Non-Detect | 0.47 | 0.18 |
| Maximum Non-Detect | 3.75 | 0.52 |
| Percent Non detects | 32.43% | 53.33% |
| Minimum Detected | 0.29 | 0.21 |
| Maximum Detected | 24 | 0.37 |
| Mean of Detected Data | 2.101 | 0.297 |
| Median of Detected Data | 0.93 | 0.3 |
| SD of Detected Data | 4.665 | 0.0596 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 995.5

WMW Test U-Stat 0.293

WMW Critical Value (0.050) 1.645

P-Value 0.385

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_SILVER**Background Data: Background_SS_SILVER****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 14 | 14 |
| Number of Detect Data | 23 | 2 |
| Minimum Non-Detect | 0.12 | 0.11 |
| Maximum Non-Detect | 3.6 | 0.23 |
| Percent Non detects | 37.84% | 87.50% |
| Minimum Detected | 0.037 | 0.27 |
| Maximum Detected | 1.6 | 0.27 |
| Mean of Detected Data | 0.255 | 0.27 |
| Median of Detected Data | 0.14 | 0.27 |
| SD of Detected Data | 0.347 | 0 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8
 Approximate K Value (0.052) 8
 R Value Adjusted for Ties in Data 10
 K Value Adjusted for Ties in Data 10
 Number of Site Observations in 'R' Largest 10

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_SILVER**Background Data: Background_SS_SILVER****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 14 | 14 |
| Number of Detect Data | 23 | 2 |
| Minimum Non-Detect | 0.12 | 0.11 |
| Maximum Non-Detect | 3.6 | 0.23 |
| Percent Non detects | 37.84% | 87.50% |
| Minimum Detected | 0.037 | 0.27 |
| Maximum Detected | 1.6 | 0.27 |
| Mean of Detected Data | 0.255 | 0.27 |
| Median of Detected Data | 0.14 | 0.27 |
| SD of Detected Data | 0.347 | 0 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3.6 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 999
 WMW Test U-Stat -0.00969
 WMW Critical Value (0.050) 1.645
 P-Value 0.496

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_SODIUM**Background Data: Background_SS_SODIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 9 | 0 |
| Number of Detect Data | 28 | 16 |
| Minimum Non-Detect | 60 | N/A |
| Maximum Non-Detect | 211 | N/A |
| Percent Non detects | 24.32% | 0.00% |
| Minimum Detected | 27 | 51.7 |
| Maximum Detected | 1470 | 286 |
| Mean of Detected Data | 174.4 | 125.5 |
| Median of Detected Data | 71.65 | 118 |
| SD of Detected Data | 297.3 | 49.55 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 7

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_SODIUM**Background Data: Background_SS_SODIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 9 | 0 |
| Number of Detect Data | 28 | 16 |
| Minimum Non-Detect | 60 | N/A |
| Maximum Non-Detect | 211 | N/A |
| Percent Non detects | 24.32% | 0.00% |
| Minimum Detected | 27 | 51.7 |
| Maximum Detected | 1470 | 286 |
| Mean of Detected Data | 174.4 | 125.5 |
| Median of Detected Data | 71.65 | 118 |
| SD of Detected Data | 297.3 | 49.55 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_THALLIUM**Background Data: Background_SS_THALLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 32 | 16 |
| Number of Detect Data | 5 | 0 |
| Minimum Non-Detect | 0.3 | 0.13 |
| Maximum Non-Detect | 3.75 | 0.5 |
| Percent Non detects | 86.49% | 100.00% |
| Minimum Detected | 0.063 | N/A |
| Maximum Detected | 1.8 | N/A |
| Mean of Detected Data | 0.763 | N/A |
| Median of Detected Data | 0.64 | N/A |
| SD of Detected Data | 0.679 | N/A |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_THALLIUM**Background Data: Background_SS_THALLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 32 | 16 |
| Number of Detect Data | 5 | 0 |
| Minimum Non-Detect | 0.3 | 0.13 |
| Maximum Non-Detect | 3.75 | 0.5 |
| Percent Non detects | 86.49% | 100.00% |
| Minimum Detected | 0.063 | N/A |
| Maximum Detected | 1.8 | N/A |
| Mean of Detected Data | 0.763 | N/A |
| Median of Detected Data | 0.64 | N/A |
| SD of Detected Data | 0.679 | N/A |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 3.75 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 999
 WMW Test U-Stat -0.00969
 WMW Critical Value (0.050) 1.645
 P-Value 0.496

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_VANADIUM**Background Data: Background_SS_VANADIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 3 | 0 |
| Number of Detect Data | 34 | 16 |
| Minimum Non-Detect | 10.5 | N/A |
| Maximum Non-Detect | 52.5 | N/A |
| Percent Non detects | 8.11% | 0.00% |
| Minimum Detected | 4 | 9.9 |
| Maximum Detected | 220 | 34 |
| Mean of Detected Data | 20.19 | 22.31 |
| Median of Detected Data | 11.85 | 23.35 |
| SD of Detected Data | 35.99 | 7.119 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 5

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_VANADIUM**Background Data: Background_SS_VANADIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 3 | 0 |
| Number of Detect Data | 34 | 16 |
| Minimum Non-Detect | 10.5 | N/A |
| Maximum Non-Detect | 52.5 | N/A |
| Percent Non detects | 8.11% | 0.00% |
| Minimum Detected | 4 | 9.9 |
| Maximum Detected | 220 | 34 |
| Mean of Detected Data | 20.19 | 22.31 |
| Median of Detected Data | 11.85 | 23.35 |
| SD of Detected Data | 35.99 | 7.119 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_SS_ZINC**Background Data: Background_SS_ZINC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 18.2 | N/A |
| Maximum Non-Detect | 18.2 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 9.3 | 23.1 |
| Maximum Detected | 52300 | 78 |
| Mean of Detected Data | 8643 | 52.58 |
| Median of Detected Data | 3480 | 54.7 |
| SD of Detected Data | 13029 | 15.62 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.052) 8

Approximate K Value (0.052) 8

Number of Site Observations in 'R' Largest 8

Calculated Alpha 0.0436

Conclusion with Alpha = 0.052**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-SS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_SS_ZINC**Background Data: Background_SS_ZINC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 37 | 16 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 36 | 16 |
| Minimum Non-Detect | 18.2 | N/A |
| Maximum Non-Detect | 18.2 | N/A |
| Percent Non detects | 2.70% | 0.00% |
| Minimum Detected | 9.3 | 23.1 |
| Maximum Detected | 52300 | 78 |
| Mean of Detected Data | 8643 | 52.58 |
| Median of Detected Data | 3480 | 54.7 |
| SD of Detected Data | 13029 | 15.62 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_ALUMINUM**Background Data: Background_TS_ALUMINUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1310 | 4380 |
| Maximum Detected | 32800 | 19100 |
| Mean of Detected Data | 10399 | 11304 |
| Median of Detected Data | 9975 | 10600 |
| SD of Detected Data | 5540 | 4184 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 3

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Do Not Reject H0, Perform Wilcoxon-Mann-Whitney or Gehan Test**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_ALUMINUM**Background Data: Background_TS_ALUMINUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 1310 | 4380 |
| Maximum Detected | 32800 | 19100 |
| Mean of Detected Data | 10399 | 11304 |
| Median of Detected Data | 9975 | 10600 |
| SD of Detected Data | 5540 | 4184 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

| | |
|----------------------------|-------|
| Site Rank Sum W-Stat | N/A |
| WMW Test U-Stat | N/A |
| WMW Critical Value (0.050) | 1.645 |
| P-Value | N/A |

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_ANTIMONY**Background Data: Background_TS_ANTIMONY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 40 | 21 |
| Number of Detect Data | 15 | 13 |
| Minimum Non-Detect | 0.48 | 0.23 |
| Maximum Non-Detect | 15 | 0.3 |
| Percent Non detects | 72.73% | 61.76% |
| Minimum Detected | 0.36 | 0.26 |
| Maximum Detected | 10.1 | 0.94 |
| Mean of Detected Data | 2.196 | 0.59 |
| Median of Detected Data | 1.3 | 0.62 |
| SD of Detected Data | 2.432 | 0.168 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_ANTIMONY**Background Data: Background_TS_ANTIMONY****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 40 | 21 |
| Number of Detect Data | 15 | 13 |
| Minimum Non-Detect | 0.48 | 0.23 |
| Maximum Non-Detect | 15 | 0.3 |
| Percent Non detects | 72.73% | 61.76% |
| Minimum Detected | 0.36 | 0.26 |
| Maximum Detected | 10.1 | 0.94 |
| Mean of Detected Data | 2.196 | 0.59 |
| Median of Detected Data | 1.3 | 0.62 |
| SD of Detected Data | 2.432 | 0.168 |

Wilcoxon-Mann-Whitney Site vs Background Test**All observations <= 15 (Max DL) are ranked the same****Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat 2475
 WMW Test U-Stat -0.00422
 WMW Critical Value (0.050) 1.645
 P-Value 0.498

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value >= alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_ARSENIC**Background Data: Background_TS_ARSENIC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 33 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 33 |
| Minimum Non-Detect | 15 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 1 | 1.7 |
| Maximum Detected | 27.1 | 11.4 |
| Mean of Detected Data | 4.792 | 4.112 |
| Median of Detected Data | 3.35 | 3.8 |
| SD of Detected Data | 4.943 | 1.738 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 5

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_ARSENIC**Background Data: Background_TS_ARSENIC****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 33 |
| Number of Non-Detect Data | 1 | 0 |
| Number of Detect Data | 54 | 33 |
| Minimum Non-Detect | 15 | N/A |
| Maximum Non-Detect | 15 | N/A |
| Percent Non detects | 1.82% | 0.00% |
| Minimum Detected | 1 | 1.7 |
| Maximum Detected | 27.1 | 11.4 |
| Mean of Detected Data | 4.792 | 4.112 |
| Median of Detected Data | 3.35 | 3.8 |
| SD of Detected Data | 4.943 | 1.738 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

| | |
|----------------------------|-------|
| Site Rank Sum W-Stat | N/A |
| WMW Test U-Stat | N/A |
| WMW Critical Value (0.050) | 1.645 |
| P-Value | N/A |

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_BARIUM**Background Data: Background_TS_BARIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 5.4 | 45.2 |
| Maximum Detected | 9710 | 279 |
| Mean of Detected Data | 954.4 | 110.6 |
| Median of Detected Data | 134 | 99.45 |
| SD of Detected Data | 1791 | 52.65 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Calculated Alpha 0.0499

Conclusion with Alpha = 0.047**Reject H0, Conclude Site Concentration > Background Concentration**

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_BARIUM**Background Data: Background_TS_BARIUM****Raw Statistics**

| | Site | Background |
|---------------------------|-------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 0 | 0 |
| Number of Detect Data | 55 | 34 |
| Minimum Non-Detect | N/A | N/A |
| Maximum Non-Detect | N/A | N/A |
| Percent Non detects | 0.00% | 0.00% |
| Minimum Detected | 5.4 | 45.2 |
| Maximum Detected | 9710 | 279 |
| Mean of Detected Data | 954.4 | 110.6 |
| Median of Detected Data | 134 | 99.45 |
| SD of Detected Data | 1791 | 52.65 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_BERYLLIUM**Background Data: Background_TS_BERYLLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 15 | 0 |
| Number of Detect Data | 40 | 34 |
| Minimum Non-Detect | 0.15 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 27.27% | 0.00% |
| Minimum Detected | 0.06 | 0.12 |
| Maximum Detected | 4.3 | 1 |
| Mean of Detected Data | 0.588 | 0.593 |
| Median of Detected Data | 0.56 | 0.59 |
| SD of Detected Data | 0.64 | 0.235 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Substantial Difference (S) 0
 Selected Null Hypothesis Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
 Alternative Hypothesis Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: EU8_TS_BERYLLIUM**Background Data: Background_TS_BERYLLIUM****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 15 | 0 |
| Number of Detect Data | 40 | 34 |
| Minimum Non-Detect | 0.15 | N/A |
| Maximum Non-Detect | 2.9 | N/A |
| Percent Non detects | 27.27% | 0.00% |
| Minimum Detected | 0.06 | 0.12 |
| Maximum Detected | 4.3 | 1 |
| Mean of Detected Data | 0.588 | 0.593 |
| Median of Detected Data | 0.56 | 0.59 |
| SD of Detected Data | 0.64 | 0.235 |

Wilcoxon-Mann-Whitney Site vs Background Test**Wilcoxon-Mann-Whitney (WMW) Test****H0: Mean/Median of Site or AOC <= Mean/Median of Background**

Site Rank Sum W-Stat N/A
 WMW Test U-Stat N/A
 WMW Critical Value (0.050) 1.645
 P-Value N/A

Conclusion with Alpha = 0.05**Do Not Reject H0, Conclude Site <= Background****P-Value < alpha (0.05)**

Quantile Site vs Background Comparison Hypothesis Test for Data Sets with Non-Detects**User Selected Options**

From File Z:\Projects\LOOW\Phase IV Background 20080916\background comparisons\EU8\ProUCL_Output\inp_EU8-TS
 Full Precision OFF
 Confidence Coefficient 95%
 Null Hypothesis Site or AOC Concentration Less Than or Equal to Background Concentration (Form 1)
 Alternative Hypothesis Site or AOC Concentration Greater Than Background Concentration

Area of Concern Data: EU8_TS_BORON**Background Data: Background_TS_BORON****Raw Statistics**

| | Site | Background |
|---------------------------|--------|------------|
| Number of Valid Data | 55 | 34 |
| Number of Non-Detect Data | 46 | 5 |
| Number of Detect Data | 9 | 29 |
| Minimum Non-Detect | 9 | 1.3 |
| Maximum Non-Detect | 225 | 1.9 |
| Percent Non detects | 83.64% | 14.71% |
| Minimum Detected | 3.4 | 1.4 |
| Maximum Detected | 57.2 | 10.1 |
| Mean of Detected Data | 18.92 | 4.503 |
| Median of Detected Data | 7.6 | 3.8 |
| SD of Detected Data | 21.99 | 2.284 |

Quantile Test**H0: Site Concentration <= Background Concentration (Form 1)**

Approximate R Value (0.047) 6

Approximate K Value (0.047) 6

Number of Site Observations in 'R' Largest 6

Non-Detect Values in the 'R' Largest - Cannot complete Quantile Test

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

SS_Benzo[a]pyrene**General Statistics**

| | |
|-------------------------------------|-----------------------------|
| Number of Valid Data 16 | Number of Detected Data 12 |
| Number of Distinct Detected Data 11 | Number of Non-Detect Data 4 |
| Tolerance Factor 2.033 | Percent Non-Detects 25.00% |

Raw Statistics

Minimum Detected 2.8
 Maximum Detected 240
 Mean of Detected 39.63
 SD of Detected 67.55
 Minimum Non-Detect 2.4
 Maximum Non-Detect 5

Log-transformed Statistics

Minimum Detected 1.03
 Maximum Detected 5.481
 Mean of Detected 2.83
 SD of Detected 1.262
 Minimum Non-Detect 0.875
 Maximum Non-Detect 1.609

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 6
 Number treated as Detected with Single DL 10
 Single DL Non-Detect Percentage 37.50%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.575
 5% Shapiro Wilk Critical Value 0.859

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.949
 5% Shapiro Wilk Critical Value 0.859

Data not Normal at 5% Significance Level**Data appear Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 30.2
 SD 60.26
 95% UTL 90% Coverage 152.7
 95% UPL (t) 139.1
 90% Percentile (z) 107.4
 95% Percentile (z) 129.3
 99% Percentile (z) 170.4

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 2.269
 SD (Log Scale) 1.484
 95% UTL 90% Coverage 197.6
 95% UPL (t) 141.3
 90% Percentile (z) 64.79
 95% Percentile (z) 111.1
 99% Percentile (z) 305.4

Maximum Likelihood Estimate(MLE) Method

Mean 7.652
 SD 79.67
 95% UTL with 90% Coverage 169.6
 95% UPL (t) 151.6
 90% Percentile (z) 109.7
 95% Percentile (z) 138.7
 99% Percentile (z) 193

Log ROS Method
 Mean in Original Scale 30.04
 SD in Original Scale 60.33
 95% UTL with 90% Coverage 243.3
 95% BCA UTL with 90% Coverage 240
 95% Bootstrap (%) UTL with 90% Coverage 240
 95% UPL (t) 167.8
 90% Percentile (z) 70.7
 95% Percentile (z) 128.5
 99% Percentile (z) 394.2

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.588
 Theta Star 67.41
 nu star 14.11

Data Distribution Test with Detected Values Only

Data follow Appx. Gamma Distribution at 5% Significance Level

A-D Test Statistic 0.839
 5% A-D Critical Value 0.769
 K-S Test Statistic 0.235
 5% K-S Critical Value 0.255

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 30.48
 SD 58.21
 SE of Mean 15.2
 95% KM UTL with 90% Coverage 148.8
 95% KM Chebyshev UPL 292

Data follow Appx. Gamma Distribution at 5% Significance Level

95% KM UPL (t) 135.7
 90% Percentile (z) 105.1
 95% Percentile (z) 126.2
 99% Percentile (z) 165.9

Assuming Gamma Distribution

Gamma ROS Statistics with Extrapolated Data
 Mean 29.73
 Median 9.3
 SD 60.5
 k star 0.173
 Theta star 172.3
 Nu star 5.52
 95% Percentile of Chisquare (2k) 1.843
 90% Percentile 89.42
 95% Percentile 158.8
 99% Percentile 354.8

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 140.4
 95% Hawkins Wixley (HW) Approx. Gamma UPL 179.4
 95% WH Approx. Gamma UTL with 90% Coverage 174.1
 95% HW Approx. Gamma UTL with 90% Coverage 235.3

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

SS_Benzo[b]fluoranthene**General Statistics**

| | |
|-------------------------------------|-----------------------------|
| Number of Valid Data 16 | Number of Detected Data 13 |
| Number of Distinct Detected Data 12 | Number of Non-Detect Data 3 |
| Tolerance Factor 2.033 | Percent Non-Detects 18.75% |

Raw Statistics

Minimum Detected 2.5
 Maximum Detected 260
 Mean of Detected 45.44
 SD of Detected 75.16
 Minimum Non-Detect 3.9
 Maximum Non-Detect 10

Log-transformed Statistics

Minimum Detected 0.916
 Maximum Detected 5.561
 Mean of Detected 2.908
 SD of Detected 1.353
 Minimum Non-Detect 1.361
 Maximum Non-Detect 2.303

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 6
 Number treated as Detected with Single DL 10
 Single DL Non-Detect Percentage 37.50%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.596
 5% Shapiro Wilk Critical Value 0.866

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.948
 5% Shapiro Wilk Critical Value 0.866

Data not Normal at 5% Significance Level**Data appear Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 37.51
 SD 69.35
 95% UTL 90% Coverage 178.5
 95% UPL (t) 162.8
 90% Percentile (z) 126.4
 95% Percentile (z) 151.6
 99% Percentile (z) 198.8

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 2.563
 SD (Log Scale) 1.431
 95% UTL 90% Coverage 237.9
 95% UPL (t) 172.2
 90% Percentile (z) 81.16
 95% Percentile (z) 136.5
 99% Percentile (z) 362

Maximum Likelihood Estimate(MLE) Method

Mean 13.2
 SD 90.8
 95% UTL with 90% Coverage 197.8
 95% UPL (t) 177.3
 90% Percentile (z) 129.6
 95% Percentile (z) 162.6
 99% Percentile (z) 224.4

Log ROS Method
 Mean in Original Scale 37.39
 SD in Original Scale 69.41
 95% UTL with 90% Coverage 242.1
 95% BCA UTL with 90% Coverage 260
 95% Bootstrap (%) UTL with 90% Coverage 260
 95% UPL (t) 174.3
 90% Percentile (z) 81.21
 95% Percentile (z) 137.7
 99% Percentile (z) 370.8

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.566
 Theta Star 80.22
 nu star 14.73

Data Distribution Test with Detected Values Only

Data follow Appx. Gamma Distribution at 5% Significance Level

A-D Test Statistic 0.845
 5% A-D Critical Value 0.777
 K-S Test Statistic 0.238
 5% K-S Critical Value 0.247

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 37.46
 SD 67.17
 SE of Mean 17.48

95% KM UTL with 90% Coverage 174

95% KM Chebyshev UPL 339.3
 95% KM UPL (t) 158.8
 90% Percentile (z) 123.5
 95% Percentile (z) 148
 99% Percentile (z) 193.7

Assuming Gamma Distribution

Gamma ROS Statistics with Extrapolated Data
 Mean 36.92
 Median 12
 SD 69.67
 k star 0.198
 Theta star 186.1
 Nu star 6.349
 95% Percentile of Chisquare (2k) 2.049
 90% Percentile 111.7
 95% Percentile 190.6
 99% Percentile 408.3

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 169.6
 95% Hawkins Wixley (HW) Approx. Gamma UPL 212.1
 95% WH Approx. Gamma UTL with 90% Coverage 208.6
 95% HW Approx. Gamma UTL with 90% Coverage 274.6

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

SS_Benzo[g,h,i]perylene**General Statistics**

| | |
|-------------------------------------|-----------------------------|
| Number of Valid Data 16 | Number of Detected Data 10 |
| Number of Distinct Detected Data 10 | Number of Non-Detect Data 6 |
| Tolerance Factor 2.033 | Percent Non-Detects 37.50% |

Raw Statistics

Minimum Detected 6.5
 Maximum Detected 110
 Mean of Detected 24.47
 SD of Detected 31.39
 Minimum Non-Detect 1.8
 Maximum Non-Detect 20

Log-transformed Statistics

Minimum Detected 1.872
 Maximum Detected 4.7
 Mean of Detected 2.749
 SD of Detected 0.897
 Minimum Non-Detect 0.588
 Maximum Non-Detect 2.996

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 12
 Number treated as Detected with Single DL 4
 Single DL Non-Detect Percentage 75.00%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.61
 5% Shapiro Wilk Critical Value 0.842

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.88
 5% Shapiro Wilk Critical Value 0.842

Data not Normal at 5% Significance Level**Data appear Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 17.06
 SD 26.31
 95% UTL 90% Coverage 70.54
 95% UPL (t) 64.6
 90% Percentile (z) 50.77
 95% Percentile (z) 60.33
 99% Percentile (z) 78.26

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 2.21
 SD (Log Scale) 1.11
 95% UTL 90% Coverage 87.08
 95% UPL (t) 67.76
 90% Percentile (z) 37.81
 95% Percentile (z) 56.59
 99% Percentile (z) 120.6

Maximum Likelihood Estimate(MLE) Method

Mean -20.71
 SD 56.6
 95% UTL with 90% Coverage 94.36
 95% UPL (t) 81.57
 90% Percentile (z) 51.83
 95% Percentile (z) 72.39
 99% Percentile (z) 111

Log ROS Method
 Mean in Original Scale 17.1
 SD in Original Scale 26.28
 95% UTL with 90% Coverage 77.22
 95% BCA UTL with 90% Coverage 71
 95% Bootstrap (%) UTL with 90% Coverage 110
 95% UPL (t) 61.15
 90% Percentile (z) 35.54
 95% Percentile (z) 51.72
 99% Percentile (z) 104.5

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.946
 Theta Star 25.86
 nu star 18.92

Data Distribution Test with Detected Values Only

Data follow Appx. Gamma Distribution at 5% Significance Level

A-D Test Statistic 0.791
 5% A-D Critical Value 0.744
 K-S Test Statistic 0.214
 5% K-S Critical Value 0.272

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 18.03
 SD 24.98
 SE of Mean 6.588

Data follow Appx. Gamma Distribution at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics with Extrapolated Data
 Mean 16.12
 Median 8.2
 SD 26.9
 k star 0.181
 Theta star 88.9
 Nu star 5.803
 95% Percentile of Chisquare (2k) 1.915
 90% Percentile 48.64
 95% Percentile 85.14
 99% Percentile 187.3

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 79.29
 95% Hawkins Wixley (HW) Approx. Gamma UPL 107.5
 95% WH Approx. Gamma UTL with 90% Coverage 97.57
 95% HW Approx. Gamma UTL with 90% Coverage 140.1

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

SS_Indeno[1,2,3-c,d]pyrene**General Statistics**

| | |
|-------------------------------------|-----------------------------|
| Number of Valid Data 16 | Number of Detected Data 11 |
| Number of Distinct Detected Data 11 | Number of Non-Detect Data 5 |
| Tolerance Factor 2.033 | Percent Non-Detects 31.25% |

Raw Statistics

Minimum Detected 6.1
 Maximum Detected 160
 Mean of Detected 26.6
 SD of Detected 44.77
 Minimum Non-Detect 1.3
 Maximum Non-Detect 25

Log-transformed Statistics

Minimum Detected 1.808
 Maximum Detected 5.075
 Mean of Detected 2.7
 SD of Detected 0.925
 Minimum Non-Detect 0.262
 Maximum Non-Detect 3.219

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 14
 Number treated as Detected with Single DL 2
 Single DL Non-Detect Percentage 87.50%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.476
 5% Shapiro Wilk Critical Value 0.85

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.812
 5% Shapiro Wilk Critical Value 0.85

Data not Normal at 5% Significance Level**Data not Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 19.48
 SD 38.23
 95% UTL 90% Coverage 97.2
 95% UPL (t) 88.56
 90% Percentile (z) 68.47
 95% Percentile (z) 82.36
 99% Percentile (z) 108.4

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 2.102
 SD (Log Scale) 1.325
 95% UTL 90% Coverage 120.9
 95% UPL (t) 89.61
 90% Percentile (z) 44.68
 95% Percentile (z) 72.29
 99% Percentile (z) 178.3

Maximum Likelihood Estimate(MLE) Method N/A

Log ROS Method
 Mean in Original Scale 19.25
 SD in Original Scale 38.26
 Mean in Log Scale 2.162
 SD in Log Scale 1.157
 95% UTL 90% Coverage 91.25
 95% UPL (t) 70.26
 90% Percentile (z) 38.25
 95% Percentile (z) 58.24
 99% Percentile (z) 128.1

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.784
 Theta Star 33.93
 nu star 17.25

Data Distribution Test with Detected Values Only

Data do not follow a Discernable Distribution (0.05)

A-D Test Statistic 1.433
 5% A-D Critical Value 0.752
 K-S Test Statistic 0.271
 5% K-S Critical Value 0.262

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 20.44
 SD 36.59
 SE of Mean 9.599

Data not Gamma Distributed at 5% Significance Level**Assuming Gamma Distribution**

Gamma ROS Statistics with Extrapolated Data
 Mean 18.29
 Median 9.15
 SD 38.71
 k star 0.159
 Theta star 115.2
 Nu star 5.078
 95% Percentile of Chisquare (2k) 1.727
 90% Percentile 54.61
 95% Percentile 99.51
 99% Percentile 228.4

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 89.28
 95% Hawkins Wixley (HW) Approx. Gamma UPL 119.3
 95% WH Approx. Gamma UTL with 90% Coverage 111
 95% HW Approx. Gamma UTL with 90% Coverage 157.6

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

TS_Benzo[a]pyrene**General Statistics**

| | |
|-------------------------------------|------------------------------|
| Number of Valid Data 34 | Number of Detected Data 14 |
| Number of Distinct Detected Data 13 | Number of Non-Detect Data 20 |
| Tolerance Factor 1.732 | Percent Non-Detects 58.82% |

Raw Statistics

Minimum Detected 2.8
 Maximum Detected 240
 Mean of Detected 35.58
 SD of Detected 63.06
 Minimum Non-Detect 2.1
 Maximum Non-Detect 5

Log-transformed Statistics

Minimum Detected 1.03
 Maximum Detected 5.481
 Mean of Detected 2.725
 SD of Detected 1.236
 Minimum Non-Detect 0.742
 Maximum Non-Detect 1.609

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 23
 Number treated as Detected with Single DL 11
 Single DL Non-Detect Percentage 67.65%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.545
 5% Shapiro Wilk Critical Value 0.874

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.95
 5% Shapiro Wilk Critical Value 0.874

Data not Normal at 5% Significance Level**Data appear Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 15.82
 SD 42.99
 95% UTL 90% Coverage 90.26
 95% UPL (t) 89.63
 90% Percentile (z) 70.91
 95% Percentile (z) 86.53
 99% Percentile (z) 115.8

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 1.489
 SD (Log Scale) 1.336
 95% UTL 90% Coverage 44.78
 95% UPL (t) 43.92
 90% Percentile (z) 24.55
 95% Percentile (z) 39.88
 99% Percentile (z) 99.1

Maximum Likelihood Estimate(MLE) Method

Mean -44.43
 SD 88.49
 95% UTL with 90% Coverage 108.8
 95% UPL (t) 107.5
 90% Percentile (z) 68.97
 95% Percentile (z) 101.1
 99% Percentile (z) 161.4

Log ROS Method

Mean in Original Scale 15.19
 SD in Original Scale 43.2
 95% UTL with 90% Coverage 72.54
 95% BCA UTL with 90% Coverage 74.1
 95% Bootstrap (%) UTL with 90% Coverage 90
 95% UPL (t) 70.43
 90% Percentile (z) 28.89
 95% Percentile (z) 60.75
 99% Percentile (z) 245

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.607
 Theta Star 58.58
 nu star 17.01

Data Distribution Test with Detected Values Only

Data appear Lognormal at 5% Significance Level

Data not Gamma Distributed at 5% Significance Level**Assuming Gamma Distribution**

Gamma ROS Statistics with Extrapolated Data
 Mean 14.65
 Median 0.000001
 SD 43.38
 k star 0.0975
 Theta star 150.2
 Nu star 6.631
 95% Percentile of Chisquare (2k) 1.133
 90% Percentile 38.58
 95% Percentile 85.15
 99% Percentile 235.7

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 16.38
 SD 42.17
 SE of Mean 7.506

95% KM UTL with 90% Coverage 89.4

95% KM Chebyshev UPL 202.9
 95% KM UPL (t) 88.79
 90% Percentile (z) 70.42
 95% Percentile (z) 85.75
 99% Percentile (z) 114.5

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 55.79
 95% Hawkins Wixley (HW) Approx. Gamma UPL 60.28
 95% WH Approx. Gamma UTL with 90% Coverage 56.8
 95% HW Approx. Gamma UTL with 90% Coverage 61.69

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

TS_Benzo[b]fluoranthene**General Statistics**

| | |
|-------------------------------------|------------------------------|
| Number of Valid Data 34 | Number of Detected Data 18 |
| Number of Distinct Detected Data 17 | Number of Non-Detect Data 16 |
| Tolerance Factor 1.732 | Percent Non-Detects 47.06% |

Raw Statistics

Minimum Detected 1.6
 Maximum Detected 260
 Mean of Detected 34.89
 SD of Detected 65.7
 Minimum Non-Detect 3.4
 Maximum Non-Detect 10

Log-transformed Statistics

Minimum Detected 0.47
 Maximum Detected 5.561
 Mean of Detected 2.516
 SD of Detected 1.403
 Minimum Non-Detect 1.224
 Maximum Non-Detect 2.303

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 23
 Number treated as Detected with Single DL 11
 Single DL Non-Detect Percentage 67.65%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.531
 5% Shapiro Wilk Critical Value 0.897

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.95
 5% Shapiro Wilk Critical Value 0.897

Data not Normal at 5% Significance Level**Data appear Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 19.61
 SD 49.94
 95% UTL 90% Coverage 106.1
 95% UPL (t) 105.4
 90% Percentile (z) 83.62
 95% Percentile (z) 101.8
 99% Percentile (z) 135.8

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 1.732
 SD (Log Scale) 1.326
 95% UTL 90% Coverage 56.13
 95% UPL (t) 55.07
 90% Percentile (z) 30.91
 95% Percentile (z) 50.04
 99% Percentile (z) 123.5

Maximum Likelihood Estimate(MLE) Method

Mean -46.33
 SD 100.9
 95% UTL with 90% Coverage 128.4
 95% UPL (t) 127
 90% Percentile (z) 83.01
 95% Percentile (z) 119.7
 99% Percentile (z) 188.5

Log ROS Method

Mean in Original Scale 19.75
 SD in Original Scale 49.91
 95% UTL with 90% Coverage 65.09
 95% BCA UTL with 90% Coverage 116.4
 95% Bootstrap (%) UTL with 90% Coverage 116.4
 95% UPL (t) 63.75
 90% Percentile (z) 34.12
 95% Percentile (z) 57.48
 99% Percentile (z) 152.9

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.534
 Theta Star 65.32
 nu star 19.23

Data Distribution Test with Detected Values Only

Data follow Appx. Gamma Distribution at 5% Significance Level

A-D Test Statistic 1.082
 5% A-D Critical Value 0.792
 K-S Test Statistic 0.197
 5% K-S Critical Value 0.214

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 19.71
 SD 49.17
 SE of Mean 8.678

Data follow Appx. Gamma Distribution at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics with Extrapolated Data
 Mean 18.98
 Median 2.75
 SD 50.22
 k star 0.121
 Theta star 156.5
 Nu star 8.246
 95% Percentile of Chisquare (2k) 1.382
 90% Percentile 53.93
 95% Percentile 108.2
 99% Percentile 273.3

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 76.88
 95% Hawkins Wixley (HW) Approx. Gamma UPL 90.45
 95% WH Approx. Gamma UTL with 90% Coverage 78.15
 95% HW Approx. Gamma UTL with 90% Coverage 92.36

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

TS_Benzo[g,h,i]perylene**General Statistics**

| | |
|-------------------------------------|------------------------------|
| Number of Valid Data 34 | Number of Detected Data 12 |
| Number of Distinct Detected Data 12 | Number of Non-Detect Data 22 |
| Tolerance Factor 1.732 | Percent Non-Detects 64.71% |

Raw Statistics

Minimum Detected 4.1
 Maximum Detected 110
 Mean of Detected 22.07
 SD of Detected 29.05
 Minimum Non-Detect 1.5
 Maximum Non-Detect 20

Log-transformed Statistics

Minimum Detected 1.411
 Maximum Detected 4.7
 Mean of Detected 2.64
 SD of Detected 0.899
 Minimum Non-Detect 0.405
 Maximum Non-Detect 2.996

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 30
 Number treated as Detected with Single DL 4
 Single DL Non-Detect Percentage 88.24%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.594
 5% Shapiro Wilk Critical Value 0.859

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.936
 5% Shapiro Wilk Critical Value 0.859

Data not Normal at 5% Significance Level**Data appear Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 10.49
 SD 18.96
 95% UTL 90% Coverage 43.32
 95% UPL (t) 43.04
 90% Percentile (z) 34.79
 95% Percentile (z) 41.67
 99% Percentile (z) 54.59

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 1.757
 SD (Log Scale) 0.982
 95% UTL 90% Coverage 31.74
 95% UPL (t) 31.29
 90% Percentile (z) 20.4
 95% Percentile (z) 29.15
 99% Percentile (z) 56.92

Maximum Likelihood Estimate(MLE) Method

Mean -58.71
 SD 65.26
 95% UTL with 90% Coverage 54.28
 95% UPL (t) 53.34
 90% Percentile (z) 24.92
 95% Percentile (z) 48.63
 99% Percentile (z) 93.1

Log ROS Method
 Mean in Original Scale 9.896
 SD in Original Scale 19.23
 95% UTL with 90% Coverage 35.44
 95% BCA UTL with 90% Coverage 30.5
 95% Bootstrap (%) UTL with 90% Coverage 32
 95% UPL (t) 34.83
 90% Percentile (z) 20.63
 95% Percentile (z) 31.93
 99% Percentile (z) 72.46

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.986
 Theta Star 22.38
 nu star 23.67

Data Distribution Test with Detected Values Only

Data appear Gamma Distributed at 5% Significance Level

Data appear Gamma Distributed at 5% Significance Level**Assuming Gamma Distribution**

Gamma ROS Statistics with Extrapolated Data
 Mean 9.284
 Median 0.000001
 SD 19.86
 k star 0.109
 Theta star 85.39
 Nu star 7.394
 95% Percentile of Chisquare (2k) 1.254
 90% Percentile 25.51
 95% Percentile 53.55
 99% Percentile 141.4

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 11.11
 SD 18.46
 SE of Mean 3.326

95% KM UTL with 90% Coverage 43.08

95% KM Chebyshev UPL 92.76
 95% KM UPL (t) 42.81
 90% Percentile (z) 34.77
 95% Percentile (z) 41.48
 99% Percentile (z) 54.06

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 41.81
 95% Hawkins Wixley (HW) Approx. Gamma UPL 51.27
 95% WH Approx. Gamma UTL with 90% Coverage 42.52
 95% HW Approx. Gamma UTL with 90% Coverage 52.4

Note: DL/2 is not a recommended method.

General Background Statistics for Data Sets with Non-Detects**User Selected Options**

From File Sheet1.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Coverage 90%
 Different or Future K Values 1
 Number of Bootstrap Operations 2000

TS_Indeno[1,2,3-c,d]pyrene**General Statistics**

| | |
|-------------------------------------|------------------------------|
| Number of Valid Data 34 | Number of Detected Data 12 |
| Number of Distinct Detected Data 12 | Number of Non-Detect Data 22 |
| Tolerance Factor 1.732 | Percent Non-Detects 64.71% |

Raw Statistics

Minimum Detected 6.1
 Maximum Detected 160
 Mean of Detected 25.12
 SD of Detected 42.99
 Minimum Non-Detect 1.1
 Maximum Non-Detect 25

Log-transformed Statistics

Minimum Detected 1.808
 Maximum Detected 5.075
 Mean of Detected 2.656
 SD of Detected 0.895
 Minimum Non-Detect 0.0953
 Maximum Non-Detect 3.219

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL 32
 Number treated as Detected with Single DL 2
 Single DL Non-Detect Percentage 94.12%

Background Statistics**Normal Distribution Test with Detected Values Only**

Shapiro Wilk Test Statistic 0.456
 5% Shapiro Wilk Critical Value 0.859

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic 0.79
 5% Shapiro Wilk Critical Value 0.859

Data not Normal at 5% Significance Level**Data not Lognormal at 5% Significance Level****Assuming Normal Distribution**

DL/2 Substitution Method
 Mean 10.37
 SD 27.24
 95% UTL 90% Coverage 57.54
 95% UPL (t) 57.14
 90% Percentile (z) 45.28
 95% Percentile (z) 55.18
 99% Percentile (z) 73.74

Assuming Lognormal Distribution

DL/2 Substitution Method
 Mean (Log Scale) 1.295
 SD (Log Scale) 1.288
 95% UTL 90% Coverage 33.97
 95% UPL (t) 33.35
 90% Percentile (z) 19.03
 95% Percentile (z) 30.38
 99% Percentile (z) 73.09

Maximum Likelihood Estimate(MLE) Method N/A

Log ROS Method
 Mean in Original Scale 9.822
 SD in Original Scale 27.35
 Mean in Log Scale 1.014
 SD in Log Scale 1.49
 95% UTL 90% Coverage 36.38
 95% UPL (t) 35.61
 90% Percentile (z) 18.61
 95% Percentile (z) 31.97
 99% Percentile (z) 88.28

Gamma Distribution Test with Detected Values Only

k star (bias corrected) 0.818
 Theta Star 30.72
 nu star 19.62

Data Distribution Test with Detected Values Only

Data do not follow a Discernable Distribution (0.05)

A-D Test Statistic 1.656
 5% A-D Critical Value 0.756
 K-S Test Statistic 0.266
 5% K-S Critical Value 0.252

Nonparametric Statistics

Kaplan-Meier (KM) Method
 Mean 12.86
 SD 26.08
 SE of Mean 4.674

Data not Gamma Distributed at 5% Significance Level**Assuming Gamma Distribution**

Gamma ROS Statistics with Extrapolated Data
 Mean 8.865
 Median 0.000001
 SD 27.65
 k star 0.0941
 Theta star 94.2
 Nu star 6.399
 95% Percentile of Chisquare (2k) 1.095
 90% Percentile 22.97
 95% Percentile 51.6
 99% Percentile 145.1

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL 33.64
 95% Hawkins Wixley (HW) Approx. Gamma UPL 35.69
 95% WH Approx. Gamma UTL with 90% Coverage 34.25
 95% HW Approx. Gamma UTL with 90% Coverage 36.55

Note: DL/2 is not a recommended method.

Appendix B
Soil Boring Collection Records

**S0 - 2**Former Phase II location C10-GS2-2
Occidental Chemical Corporation Property (EU8)

SHEET 1 OF 1

| PROJECT NAME: | Lake Ontario Ordnance Works | PROJECT NUMBER: | 3047- | DATE: | 8/25/10 | | |
|----------------------|---|------------------|-----------------------------------|--------|---------------------------------------|---------|-------------------|
| LOCATION: | Niagara County | ADDRESS: | N/A | | | | |
| DRILLING CONTRACTOR: | Parratt-Wolff Inc. | DRILLER: | | | | | |
| DRILL RIG TYPE: | Tractor Mounted Geoprobe | DRILLING METHOD: | Direct Push | | | | |
| DRILLING FLUID: | NA | SAMPLE METHOD: | 4-ft Macro Core | | | | |
| BORING: | 8-FT DIAMETER 2-INCHES | RISER INTERVAL: | N/A TO N/A | FT BGS | | | |
| WELL DEPTH: | NA | SCREEN INTERVAL: | N/A TO N/A | FT BGS | | | |
| WELL DIAMETER: | NA | GEOLOGIST: | | | | | |
| DEPTH (ft bgs) | Geologic Description | USCS | FIELD SCREENING PID RESULTS (ppm) | μg/Hr | RECOVERY (ft) / MACROCORE LENGTH (ft) | DROP-EX | INTERVAL (ft bgs) |
| 2 | TOPSOIL - 0-0.3 ft: Dark brown/black SILT, some organics (roots, vegetation) trace coarse sand, moist, moderately loose, poorly sorted. 0.3-3.0 ft: Gray/white sandy GRAVEL (sub-angular), little silt, loose, dry, well sorted, weathered cement (apparent fill material). 3.0-4.0 ft: Brown CLAY, little to some silt, trace fine sand, trace fine gravel, moderately soft, dry, poorly sorted (apparent fill interface at 3.0 ft bgs). | ML GP CL | 0 0 0 | | 4 / 4 | NA | 0-4 |
| 4 | | | | | | | |
| 6 | 4.0-8.0 ft: Brown CLAY, trace silt, trace fine sand, cobble at 7 ft bgs, stiff, dry, poorly sorted. | CL | 0 | | 4 / 4 | NA | 4-8 |
| 8 | | | | | | | |
| 10 | | | | | | | |
| 12 | ND = non-detect NA = Not applicable Sample Depth: 7 ft bgs. Analysis: TAL Metals, Hex. Chrom. | | | | | | |
| 14 | Boring location was determined based on elevated laboratory results (total chromium) from samples collected during the former Phase II investigation. | | | | | | |



BORING LOG: CI0-AA03-01

SHEET 1 of 1

| PROJECT NAME: LOOW | PROJECT NUMBER: 3047 | DATE: 10/12/11 | | | | | |
|------------------------------------|---|----------------|-------------------------------|------------|----------|-----------|----------|
| LOCATION: Location #3 | ADDRESS: Occidental Property | | | | | | |
| DRILLING CONTRACTOR: Parratt Wolff | DRILLER: [REDACTED] (Parratt Wolfe) | | | | | | |
| DRILL RIG TYPE: Direct-Push | DRILLING METHOD: Direct Push | | | | | | |
| DRILLING FLUID: | SAMPLE METHOD: 4 foot Macro Core | | | | | | |
| BORING 4 FT DIAMETER 2.25 INCHES | RISER INTERVAL TO FT BGS | | | | | | |
| WELL DEPTH FT | SCREEN INTERVAL: TO FT BGS | | | | | | |
| WELL DIAMETER IN | GEOLOGIST: [REDACTED] | | | | | | |
| DEPTH | Geologic Description | USCS | FIELD SCREENING RESULTS (ppm) | BLOW COUNT | RECOVERY | SAMPLE ID | INTERVAL |
| 1 | 0-12in Brom F-M SAND, some SILT, trace root fragments, Dry 12-24in Light Brown, F-M SAND and SILT, tight, Dry 24-48in Reddish Brown, F-M SAND, some SILT, trace Gravel to 1.0in diameter, Dry | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | End of Boring at 4.0' | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| | <u>Samples Collected</u> | | | | | | |
| | CI0-AA03-SO-01-0.5 (@1220) | | | | | | |
| | CI0-AA03-SO-DUP2 (from 0.0' - 0.5' interval) | | | | | | |
| | CI0-AA03-SO-01-4.0 (@1230) | | | | | | |



BORING LOG: CI0-AA03-02

SHEET _1_ of _1_

| PROJECT NAME: LOOW | PROJECT NUMBER: 3047 | DATE: 10/12/11 | | | | | |
|---|--|----------------|-------------------------------|------------|----------|-----------|--------------|
| LOCATION: Location #3 | ADDRESS: Occidental Property | | | | | | |
| DRILLING CONTRACTOR: Parratt Wolff | DRILLER: [REDACTED] (Parratt Wolfe) | | | | | | |
| DRILL RIG TYPE: Direct-Push | DRILLING METHOD: Direct Push | | | | | | |
| DRILLING FLUID: | SAMPLE METHOD: 4 foot Macro Core | | | | | | |
| BORING 6 FT DIAMETER 2.25 INCHES | RISER INTERVAL TO | FT BGS | | | | | |
| WELL DEPTH FT | SCREEN INTERVAL: TO | FT BGS | | | | | |
| WELL DIAMETER IN | GEOLOGIST: [REDACTED] | | | | | | |
| DEPTH | Geologic Description | USCS | FIELD SCREENING RESULTS (ppm) | BLOW COUNT | RECOVERY | SAMPLE ID | INTERVAL |
| 1 | 0-12in Dark Brown, F-M SAND, some SILT, trace Brick fragments, Dry 12-36in Tan, F-C SAND, some SILT, Dry, tight, trace Gravel to 1.0' diameter 48in Reddish.Tan, F-M SAND, some Gravel to 10.' diameter | 36- | | N/A | 24 | | 0.0 0.5 |
| 2 | | | | | 24 | | 3.0 / 4.0 |
| 3 | | | | | | | |
| 4 | 48-72in Same as Above | | | | | | |
| 5 | | | | | 24 | | |
| 6 | End of Boring at 6.0' | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| <u>Samples Collected</u> | | | | | | | |
| CI0-AA03-SO-02-0.5 (@1315) | | | | | | | |
| CI0-AA03-SO-02-4.0 (@1330) | | | | | | | |
| CI0-AA03-GW- RI801 (@1340) Rinsate sample | | | | | | | |



BORING LOG: CI0-AA04-01

SHEET _1_ of _1_

| PROJECT NAME: LOOW | PROJECT NUMBER: 3047 | DATE: 10/12/11 | | | | | |
|------------------------------------|--|----------------|-------------------------------|------------|----------|-----------|-----------|
| LOCATION: Location #4 | ADDRESS: Occidental Property | | | | | | |
| DRILLING CONTRACTOR: Parratt Wolff | DRILLER: [REDACTED] (Parratt Wolfe) | | | | | | |
| DRILL RIG TYPE: Direct-Push | DRILLING METHOD: Direct Push | | | | | | |
| DRILLING FLUID: | SAMPLE METHOD: 4 foot Macro Core | | | | | | |
| BORING 4 FT DIAMETER 2.25 INCHES | RISER INTERVAL TO FT BGS | | | | | | |
| WELL DEPTH FT | SCREEN INTERVAL: TO FT BGS | | | | | | |
| WELL DIAMETER IN | GEOLOGIST: [REDACTED] | | | | | | |
| DEPTH | Geologic Description | USCS | FIELD SCREENING RESULTS (ppm) | BLOW COUNT | RECOVERY | SAMPLE ID | INTERVAL |
| 1 | 0-8in Dark Brown, F-M SAND and SILT, Trace root fragments, Fill Debris, roof shingles, faom, etc 24in Tan, SILT and Fine SAND, Trace root material 24-48in Same as above | 8- | | | 24 | | 0.0 / 1.0 |
| 2 | | | | | 12 | | 3.0 / 4.0 |
| 3 | | | | | 12 | | |
| 4 | End of Boring at 4.0' | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| | <u>Samples Collected</u> | | | | | | |
| | CI0-AA04-SO-01-0.5 (@1115) ms/msd | | | | | | |
| | CI0-AA04-SO-01-4.0 (@1130) | | | | | | |



BORING LOG: CI0-AA04-02

SHEET _1_ of _1_



BORING LOG: CI0-AA04-03

SHEET 1 of 1

| PROJECT NAME: LOOW | PROJECT NUMBER: 3047 | DATE: 10/12/11 | | | | | | |
|----------------------------------|---|----------------|-------------------------------|------------|----------|-----------|-----------|--|
| LOCATION: Location #4 | ADDRESS: Occidental Property | | | | | | | |
| DRILLING CONTRACTOR: | DRILLER: | | | | | | | |
| DRILL RIG TYPE: N/A | DRILLING METHOD: Hand Auger | | | | | | | |
| DRILLING FLUID: | SAMPLE METHOD: Hand Auger | | | | | | | |
| BORING 4 FT DIAMETER 3.25 INCHES | RISER INTERVAL TO | FT BGS | | | | | | |
| WELL DEPTH FT | SCREEN INTERVAL: TO | FT BGS | | | | | | |
| WELL DIAMETER IN | GEOLOGIST: | | | | | | | |
| DEPTH | Geologic Description | USCS | FIELD SCREENING RESULTS (ppm) | BLOW COUNT | RECOVERY | SAMPLE ID | INTERVAL | |
| 1 | 0-12in Brown, F-M SAND, some SILT, trace root fragments 12-24in Tan, SILT, trace SAND, trace rock fragments 24-36in Same as Above 36-48in Same as Above, trace gravel to 0.75" | | | N/A | 24 | | 0.0 / 0.5 | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | End of Boring at 4.0' | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| <u>Samples Collected</u> | | | | | | | | |
| CI0-AA03-SO-03-0.5 surface | | | | | | | | |
| CI0-AA03-SO-03-4.0 subsurface | | | | | | | | |



BORING LOG: CI0-AA07-01

SHEET _1_ of _1_



BORING LOG: CI0-AA07-02

SHEET _1_ of _1_

| PROJECT NAME: LOOW | PROJECT NUMBER: 3047 | DATE: 10/12/11 | | | | | |
|--|---|----------------|-------------------------------|------------|----------|-----------|-----------|
| LOCATION: Location #7 | ADDRESS: Occidental Property | | | | | | |
| DRILLING CONTRACTOR: Parratt Wolff | DRILLER: [REDACTED] (Parratt Wolfe) | | | | | | |
| DRILL RIG TYPE: Direct-Push | DRILLING METHOD: Direct Push | | | | | | |
| DRILLING FLUID: | SAMPLE METHOD: 4 foot Macro Core | | | | | | |
| BORING 8 FT DIAMETER 2.25 INCHES | RISER INTERVAL TO FT BGS | | | | | | |
| WELL DEPTH FT | SCREEN INTERVAL: TO FT BGS | | | | | | |
| WELL DIAMETER IN | GEOLOGIST: [REDACTED] | | | | | | |
| DEPTH | Geologic Description | USCS | FIELD SCREENING RESULTS (ppm) | BLOW COUNT | RECOVERY | SAMPLE ID | INTERVAL |
| 1 | 0-24in Dark Brown, F-C SAND, some silt, Dry, trace root fragments 24-36in Light Brown, F-C SAND and SILT, Dry 48in Tan, SILT, some fine sand, Dry | 36- | | | 24 | | 0.0 / 1.0 |
| 2 | | | | N/A | | | 3.0 / 4.0 |
| 3 | | | | | 24 | | |
| 4 | 48-96in Same as above, Some root fragments, trace rock fragments, increasing with depth | | | | 24 | | |
| 5 | | | | | 24 | | |
| 6 | | | | | | | |
| 7 | | | | | 24 | | |
| 8 | End of Boring at 8.0' | | | | | | |
| <u>Samples Collected</u> | | | | | | | |
| CI0-AA07-SO-02-0.5 (@1020) | | | | | | | |
| CI0-AA07-SO-02-4.0 (@1020) | | | | | | | |
| CI0-AA07-SO-DUP1 (from 0.0'-0.5' interval) | | | | | | | |

Appendix C
Radiological Screening Results

| | | |
|---|-----------|-----------|
| Date | 8-24-10 | 1025 |
| Borehole/Location ID | A mon # 3 | A nom # 3 |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 9 | |
| Direct Count Observed at Borehole/Location (cpm) | 7163 | |
| Depth (ft) | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 7155 | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

A-3

| | | |
|---|-----------|------|
| Date | 8-24-10 | 1130 |
| Borehole/Location ID | A mon # 7 | A-7 |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 8 | |
| Direct Count Observed at Borehole/Location (cpm) | 7631 | |
| Depth (ft) A-7-1 | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 7 | |
| Average Direct Count Observed over Core (cpm) | 7631 7357 | |
| Depth (ft) A-7-2 | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 7 | |
| Average Direct Count Observed over Core (cpm) | 7771 | |
| Depth (ft) A-7-3 | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 7536 | |
| Depth (ft) A-7-4 | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 7308 | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

$\mu\text{R}/\text{hr}$ = microRoentgen per hour; cpm = counts per minute

| | | | |
|---|---------|--------|--|
| Date | 8-24-10 | 1220 | |
| Borehole/Location ID | A-4 | A-4 | |
| <hr/> | | | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | | 6 | |
| Direct Count Observed at Borehole/Location (cpm) | | 7554 | |
| <hr/> | | | |
| Depth (ft) | | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | 6 | |
| Average Direct Count Observed over Core (cpm) | | 7429 | |
| <hr/> | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |
| <hr/> | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |
| <hr/> | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |

| | | | |
|---|---------|--------|--|
| Date | 8-24-10 | 1245 | |
| Borehole/Location ID | A-5 | A-5 | |
| <hr/> | | | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | | 6 | |
| Direct Count Observed at Borehole/Location (cpm) | | 7799 | |
| <hr/> | | | |
| Depth (ft) | | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | 6 | |
| Average Direct Count Observed over Core (cpm) | | 7899 | |
| <hr/> | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |
| <hr/> | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |
| <hr/> | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |

$\mu\text{R}/\text{hr}$ = microRoentgen per hour; cpm = counts per minute

| | | |
|---|---------|------|
| Date | 8-24-10 | 1345 |
| Borehole/Location ID | A-2 | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 7 | |
| Direct Count Observed at Borehole/Location (cpm) | 8355 | |
| Depth (ft) | A-2-1 | 0-4' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 7 | |
| Average Direct Count Observed over Core (cpm) | 7985 | |
| Depth (ft) | A-2-1 | 4-8' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 7771 | |
| Depth (ft) | A-2-2 | 0-4' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 7983 | |
| Depth (ft) | A-2-2 | 4-8' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | |
| Average Direct Count Observed over Core (cpm) | 8314 | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

| | | |
|---|---------|------|
| Date | 8-24-10 | 1410 |
| Borehole/Location ID | A-2 | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 6 | |
| Direct Count Observed at Borehole/Location (cpm) | 8615 | |
| Depth (ft) | A-2-3 | 0-4' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 8127 | |
| Depth (ft) | A-2-4 | 0-4' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 7 | |
| Average Direct Count Observed over Core (cpm) | 8221 | |
| Depth (ft) | A-2-4 | 4-8' |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 8371 | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

$\mu\text{R}/\text{hr}$ = microRoentgen per hour; cpm = counts per minute

| | | |
|---|---------|------|
| Date | 8-24-10 | 1500 |
| Borehole/Location ID | A-8 | A-8 |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 0 - 4' | 7 |
| Direct Count Observed at Borehole/Location (cpm) | 7984 | |
| Depth (ft) | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 8254 | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

| | | |
|---|---------|------|
| Date | 8-24-10 | 1600 |
| Borehole/Location ID | A-6 | A-6 |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 6 | |
| Direct Count Observed at Borehole/Location (cpm) | 7676 | |
| Depth (ft) | 0 - 4' | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | |
| Average Direct Count Observed over Core (cpm) | 7666 | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

$\mu\text{R}/\text{hr}$ = microRoentgen per hour; cpm = counts per minute

| | | |
|---|---------|------|
| Date | 8-25-10 | 0800 |
| Borehole/Location ID | A1 | A-1 |
| <hr/> | | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 6 | |
| Direct Count Observed at Borehole/Location (cpm) | 8964 | |
| <hr/> | | |
| Depth (ft) | 0-4 | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | |
| Average Direct Count Observed over Core (cpm) | 7326 | |
| <hr/> | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| <hr/> | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| <hr/> | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

| | | |
|---|---------|------|
| Date | 8-25-10 | 0930 |
| Borehole/Location ID | A-10 | A-10 |
| <hr/> | | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 8 | |
| Direct Count Observed at Borehole/Location (cpm) | 10062 | |
| <hr/> | | |
| Depth (ft) | A-10-1 | 0-4 |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | |
| Average Direct Count Observed over Core (cpm) | 9707 | |
| <hr/> | | |
| Depth (ft) | A-10-2 | 0-4 |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | |
| Average Direct Count Observed over Core (cpm) | 9201 | |
| <hr/> | | |
| Depth (ft) | A-10-3 | 0-4 |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 8711 | |
| <hr/> | | |
| Depth (ft) | A-10-4 | 0-4 |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | |
| Average Direct Count Observed over Core (cpm) | 8506 | |
| <hr/> | | |
| Depth (ft) | A-10-A | 0-4 |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 6 | |
| Average Direct Count Observed over Core (cpm) | 7497 | |

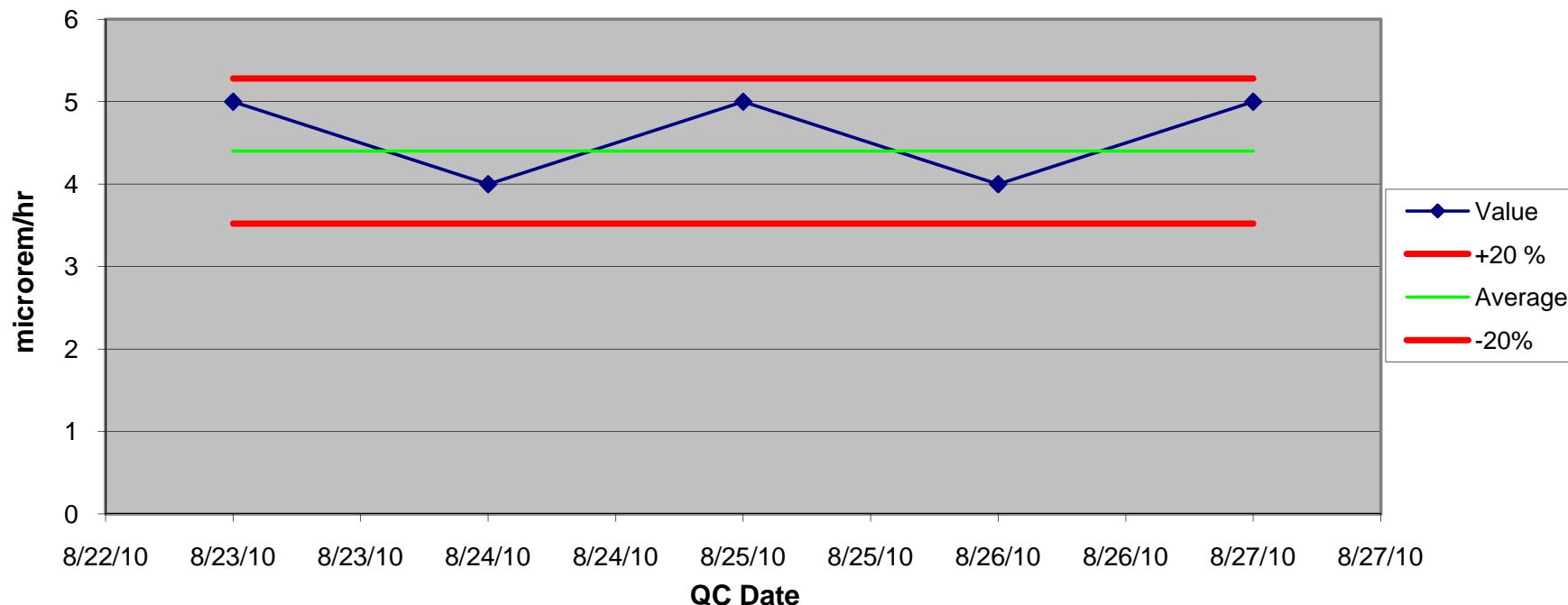
$\mu\text{R}/\text{hr}$ = microRoentgen per hour, cpm = counts per minute

| | | | |
|---|---------|------|---------|
| Date | 8-25-10 | 1030 | 8-25-10 |
| Borehole/Location ID | A-9 | | A-9 |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | 7 | | |
| Direct Count Observed at Borehole/Location (cpm) | 8216 | | |
| Depth (ft) | 0 - 4 | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | 5 | | |
| Average Direct Count Observed over Core (cpm) | 6769 | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |
| Depth (ft) | | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | | |
| Average Direct Count Observed over Core (cpm) | | | |

| | | |
|---|--|--|
| Date | | |
| Borehole/Location ID | | |
| Dose Rate Observed at Borehole/Location ($\mu\text{R}/\text{hr}$) | | |
| Direct Count Observed at Borehole/Location (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |
| Depth (ft) | | |
| Average Dose Rate Observed over Core ($\mu\text{R}/\text{hr}$) | | |
| Average Direct Count Observed over Core (cpm) | | |

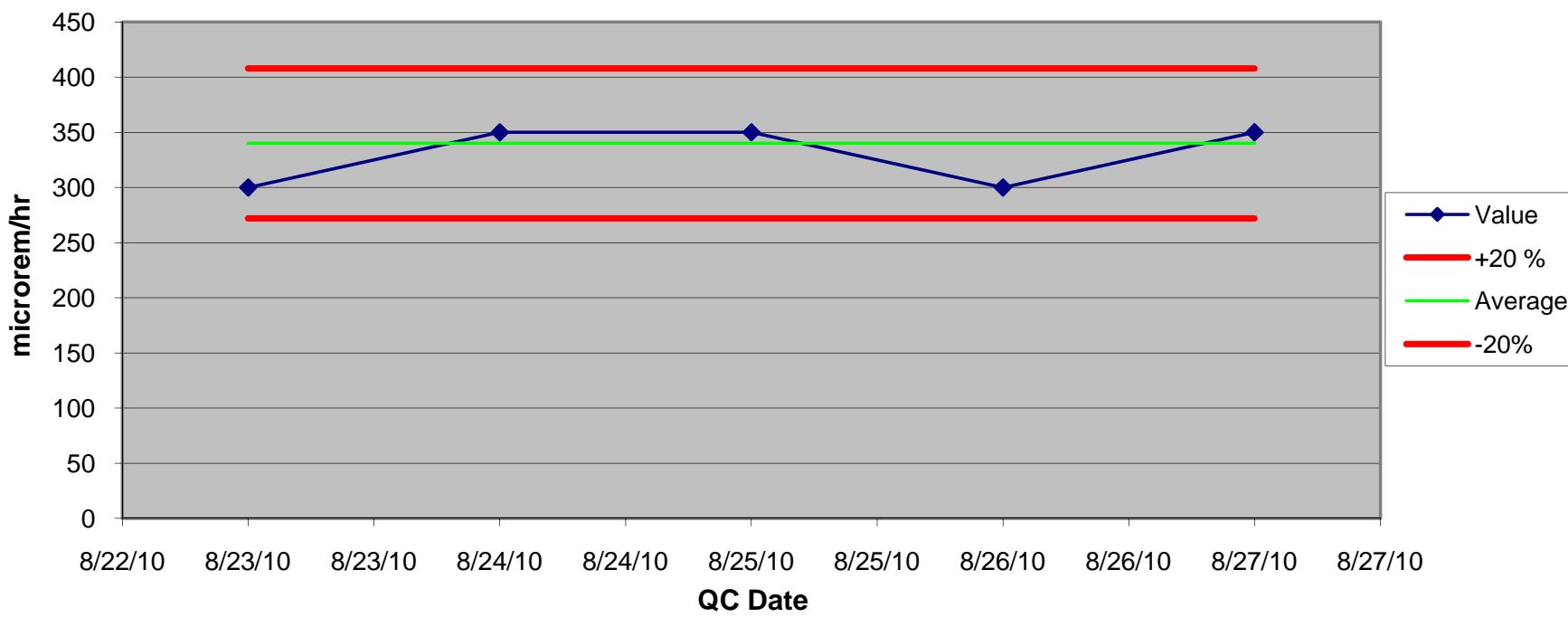
$\mu\text{R}/\text{hr}$ = microRoentgen per hour; cpm = counts per minute

Inst.#C801F-Bkg, Daily QC Trend Graph



| Inst.#C801F-Bkg | | Source Ser. # | BKG |
|-------------------------|------------------------|---------------|-----|
| Initial Source Readings | | Nuclide | BKG |
| Date | Result (μ rem/hr) | | |
| 8/23/2010 | 3 | | |
| 8/23/2010 | 4 | | |
| 8/23/2010 | 5 | | |
| 8/23/2010 | 4 | | |
| 8/23/2010 | 5 | | |
| 8/23/2010 | 3 | | |
| 8/23/2010 | 4 | | |
| 8/23/2010 | 5 | | |
| 8/23/2010 | 6 | | |
| 8/23/2010 | 5 | | |
| | Average | | |
| | 4 | | |

Inst.#C801F, Daily QC Trend Graph



| Inst.#C801F | | Source Ser. # | 1127 |
|-------------------------|------------------------|---------------|-------|
| Initial Source Readings | | Nuclide | Cs137 |
| Date | Result (μ rem/hr) | | |
| 8/23/2010 | 300 | | |
| 8/23/2010 | 350 | | |
| 8/23/2010 | 300 | | |
| 8/23/2010 | 350 | | |
| 8/23/2010 | 400 | | |
| 8/23/2010 | 300 | | |
| 8/23/2010 | 350 | | |
| 8/23/2010 | 400 | | |
| 8/23/2010 | 300 | | |
| 8/23/2010 | 350 | | |
| | Average | | |
| | 340 | | |



Calibration Certificate
ID Number: C801F37479-0

Customer: [REDACTED]

Cabrera Services, Inc.
473 Silver Lane
East Hartford, CT 06118-

Instrument

Bicron Model MicroRem

Serial Number
C801F

| Precision Check | | | | |
|-----------------|--------------|--------------|--------------|--------------|
| Test 1 | Test 2 | Test 3 | Mean | Results |
| 4.00 mrem/hr | 4.00 mrem/hr | 4.00 mrem/hr | 4.00 mrem/hr | Satisfactory |

| Accuracy Check | | | |
|----------------|------------------|-------------------|-------------------|
| Range | Target Value | As Found | As Left |
| X1000 | 160 mrem/hr | 155 mrem/hr | 170 mrem/hr |
| X1000 | 40 mrem/hr | 35 mrem/hr | 40 mrem/hr |
| X100 | 16 mrem/hr | 15 mrem/hr | 16.5 mrem/hr |
| X100 | 4 mrem/hr | 3 mrem/hr * | 4 mrem/hr |
| X10 | 1.6 mrem/hr | 1.6 mrem/hr | 1.6 mrem/hr |
| X10 | 0.4 mrem/hr | 0.4 mrem/hr | 0.4 mrem/hr |
| X1 | 160 μ rem/hr | 165 μ rem/hr | 165 μ rem/hr |
| X1 | 40 μ rem/hr | 40 μ rem/hr # | 40 μ rem/hr # |
| X0.1 | 16 μ rem/hr | 16 μ rem/hr # | 16 μ rem/hr # |
| X0.1 | 4 μ rem/hr | 4 μ rem/hr # | 4 μ rem/hr # |

Readings with * indicate ranges where As-Found readings are >20% of Target value. Readings with ** indicate As-left readings are >10.00% of Target value
Readings with # indicate ranges where pulser was used.

| MTE Instrument Type | Model | CalDueDate |
|---------------------|------------------------|------------|
| Pulser | Ludlum 500-4 SN: 66151 | 01/29/2011 |
| | | |

Outer Physical Check: Pass
Internal Check: Pass
Geotropism Check: Pass

Calibrated by:

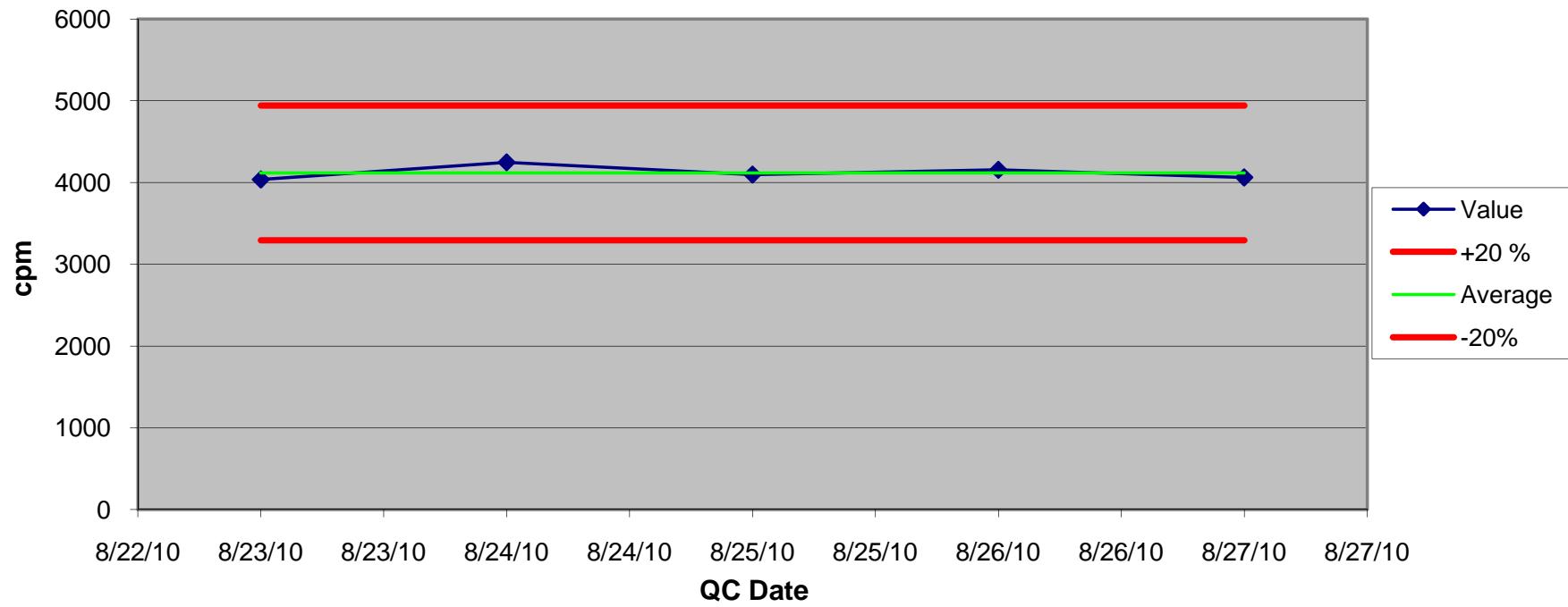
QA
Review:

Calibration Date: 05/13/2010

Expires: 05/13/2011

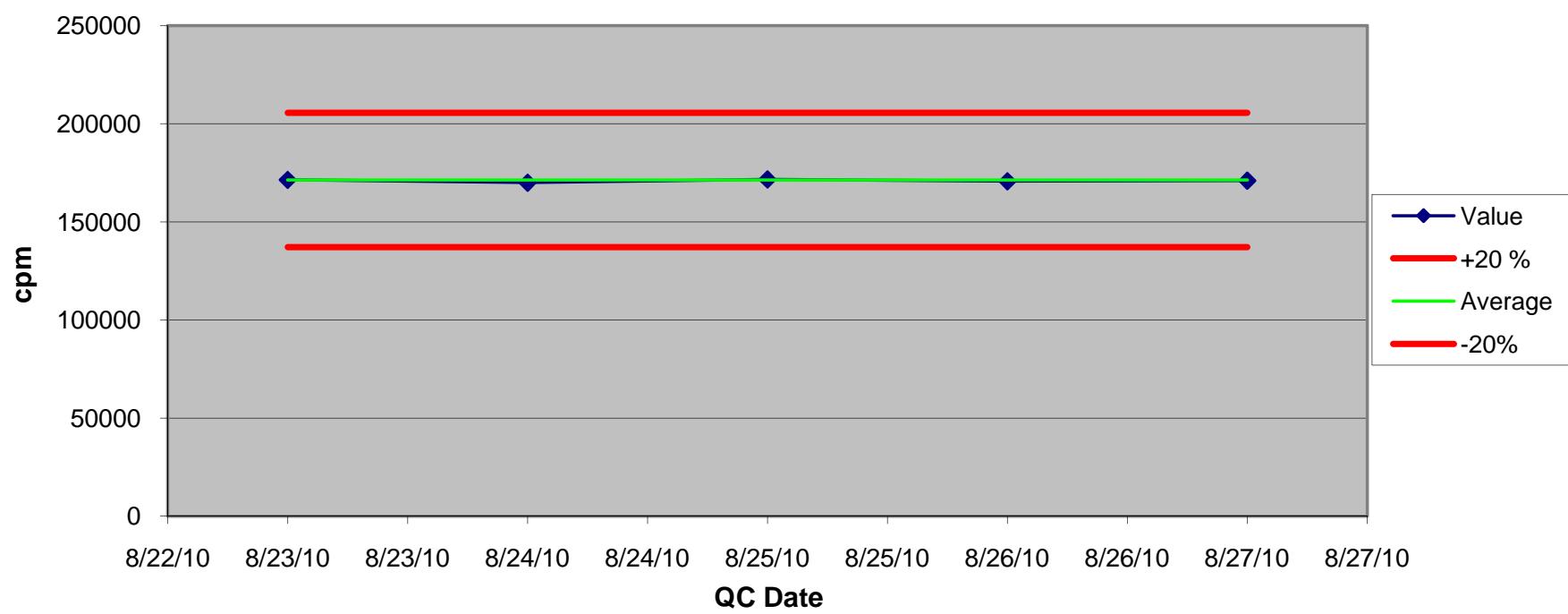
Atmospheric Conditions - Temperature: 76°F Humidity: 23% Barometric Pressure: 30.20"hg
This calibration was performed by RSCS Inc. 91 Portsmouth ave, Stratham NH 03885 using a NIST Traceable radiation source, in conformance to the following standards: ANSI NS23A (1997). RSCS New Hampshire Radioactive Material License Number: 381R. RSCS calibration services are performed in accordance with the RSCS Radiation Protection Program Manual and Standard Operating Procedure . This calibration certificate shall not be reproduced except in full without the express written consent of RSCS, Inc

Inst.#163673, Daily QC Trend Graph



| Inst.#163673 | | Source Ser. # | bkgd |
|-------------------------|--------------|---------------|------|
| Initial Source Readings | | Nuclide | bkgd |
| Date | Result (cpm) | | |
| 8/23/2010 | 4120 | | |
| 8/23/2010 | 4096 | | |
| 8/23/2010 | 4141 | | |
| 8/23/2010 | 4262 | | |
| 8/23/2010 | 3952 | | |
| 8/23/2010 | 4043 | | |
| 8/23/2010 | 4212 | | |
| 8/23/2010 | 4176 | | |
| 8/23/2010 | 4087 | | |
| 8/23/2010 | 4091 | | |
| | Average | | |
| | 4118 | | |

Inst.#163673, Daily QC Trend Graph



| Inst.#163673 | | Source Ser. # | 1127 |
|-------------------------|--------------|---------------|--------|
| Initial Source Readings | | Nuclide | Cs-137 |
| Date | Result (cpm) | | |
| 8/23/2010 | 170504 | | |
| 8/23/2010 | 171322 | | |
| 8/23/2010 | 170774 | | |
| 8/23/2010 | 171907 | | |
| 8/23/2010 | 170158 | | |
| 8/23/2010 | 171912 | | |
| 8/23/2010 | 171847 | | |
| 8/23/2010 | 171535 | | |
| 8/23/2010 | 172026 | | |
| 8/23/2010 | 171073 | | |
| | Average | | |
| | 171306 | | |

Equipment Chi-Square Distribution Worksheet

| <u>Count No.</u> | <u>X_i</u> | <u>X_m-X_i</u> | <u>(X_m-X_i)²</u> | | |
|------------------|----------------------|------------------------------------|--|-------------------------------|---------------|
| 1 | 170504 | 848.25 | 719528.1 | Instrument/Detector | 2221/44-10 |
| 2 | 171322 | 30.25 | 915.0625 | Serial # / Serial# | 163673/208815 |
| 3 | 170774 | 578.25 | 334373.1 | Date Performed | 23-Aug-10 |
| 4 | 171907 | -554.75 | 307747.6 | Count time interval (minutes) | 1 |
| 5 | 170158 | 1194.25 | 1426233 | Source Used | Cs-137/1127 |
| 6 | 171912 | -559.75 | 313320.1 | | |
| 7 | 171847 | -494.75 | 244777.6 | | |
| 8 | 171535 | -182.75 | 33397.56 | | |
| 9 | 172026 | -673.75 | 453939.1 | | |
| 10 | 171073 | 279.25 | 77980.56 | | |
| 11 | 171688 | -335.75 | 112728.1 | | |
| 12 | 171292 | 60.25 | 3630.063 | | |
| 13 | 170994 | 358.25 | 128343.1 | | |
| 14 | 171154 | 198.25 | 39303.06 | | |
| 15 | 171660 | -307.75 | 94710.06 | | |
| 16 | 171109 | 243.25 | 59170.56 | | |
| 17 | 171424 | -71.75 | 5148.063 | | |
| 18 | 171170 | 182.25 | 33215.06 | | |
| 19 | 171920 | -567.75 | 322340.1 | | |
| 20 | 171576 | -223.75 | 50064.06 | | |
| Sum total | | 3427045 | 4760864 | | |
| X _m | | 171352.25 | | | |

X² = 27.78

Note: Accept χ^2 if between 8.91 and 32.8



Calibration Certificate
ID Number: 16367334610-0

Customer: [REDACTED] Instrument Serial Number
Cabrera Services, Inc. Ludlum Model 2221 163673
473 Silver Lane Probe Model Serial Number
East Hartford, CT 06118- Ludlum 44-10 208815

| Precision Check | | | | |
|-----------------|-----------|-----------|-----------|--------------|
| Test 1 | Test 2 | Test 3 | Mean | Results |
| 3.96 Kcpm | 4.00 Kcpm | 4.00 Kcpm | 3.99 Kcpm | Satisfactory |

| Accuracy Check | | | | |
|----------------|--------------|----------------|----------------|--|
| Range | Target Value | As Found | As Left | |
| X1000 | 400 Kcpm | 399.250 Kcpm # | 399.250 Kcpm # | |
| X1000 | 100 Kcpm | 100.254 Kcpm # | 100.254 Kcpm # | |
| X100 | 40 Kcpm | 39.942 Kcpm # | 39.942 Kcpm # | |
| X100 | 10 Kcpm | 10.021 Kcpm # | 10.021 Kcpm # | |
| X10 | 4 Kcpm | 3.962 Kcpm # | 3.962 Kcpm # | |
| X10 | 1 Kcpm | 0.976 Kcpm # | 0.976 Kcpm # | |
| X1 | 400 cpm | 400 cpm # | 400 cpm # | |
| X1 | 100 cpm | 100 cpm # | 100 cpm # | |

Readings with * indicate ranges where As-Found readings are >20% of Target value. Readings with ** indicate As-left readings are >10% of Target value
Readings with # indicate ranges were calibrated using a pulser

| Probe Model & SN | Isotope | Efficiency | NIST Source ID | Geometry |
|----------------------------|-----------------------|----------------------------|---------------------------|-----------|
| 44-10 208815 | Cs-137 | 0.0838 C/D | Cs-137(Gamma) (SN: 14290) | @1cm |
| MTE Instrument Type | Model | | CalDueDate | |
| Pulser | Ludlum 500SN: 134720 | | 08/26/2010 | |
| Outer Physical Check: Pass | Mechanical Zero: Pass | Electronics Checks | As Found | As Left |
| Internal Check: Pass | Tap Test: Pass | High Voltage | 975 Volts | 975 Volts |
| Geotropism Check: Pass | | Low Level Discriminator #1 | 11.5 mV | 11.5 mV |
| | | Window | OUT | OUT |

Comments: Analog and digital displays reflect appropriate congruence

Calibrated by: [REDACTED]

QA Review: [REDACTED]

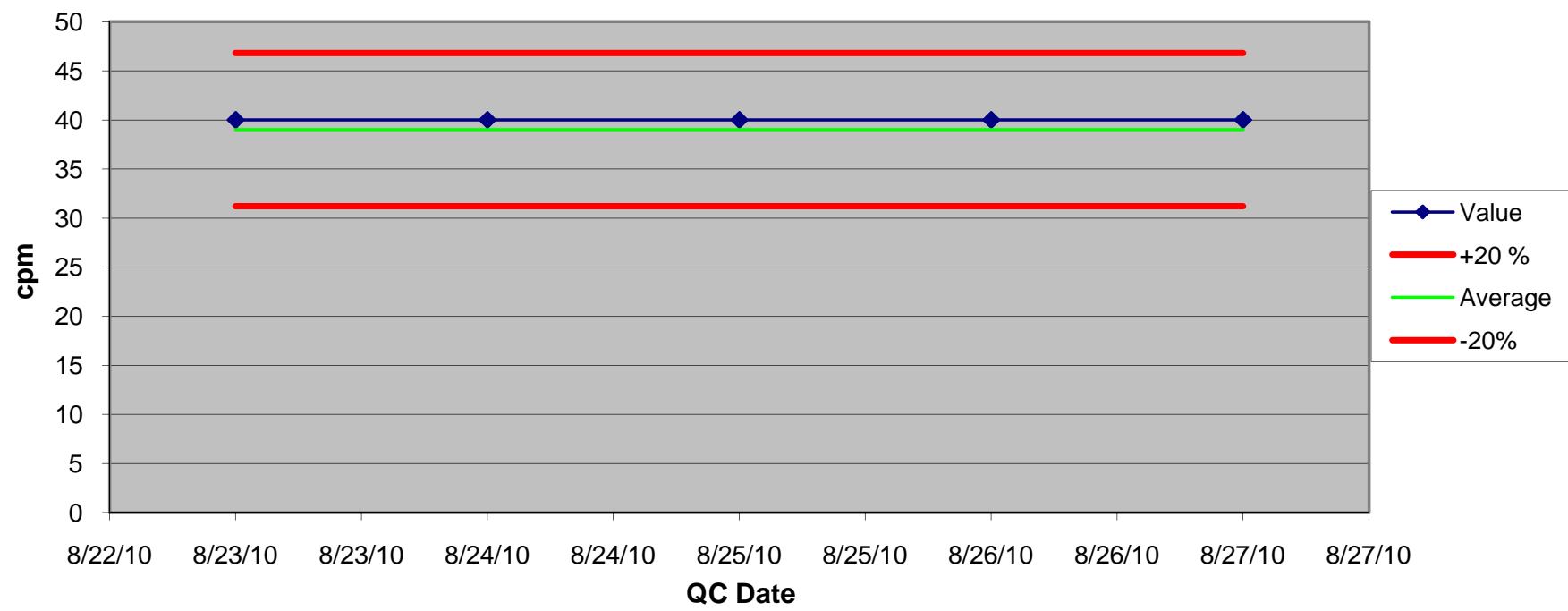
Date: 01/18/2010

Expires: 01/18/2011

Atmospheric Conditions - Temperature: 75° F Humidity: 14% Barometric Pressure: 29.55 in/hg

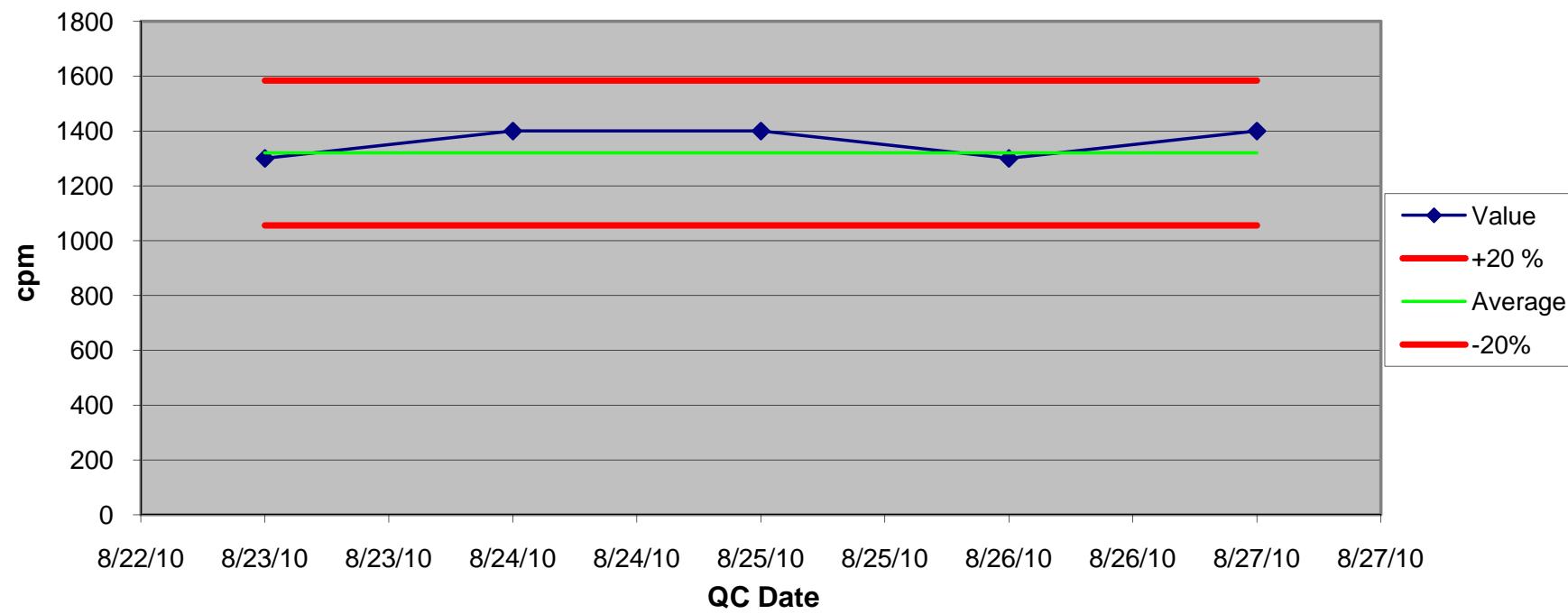
This calibration was performed by RSCS Inc. 91 Portsmouth ave, Stratham NH 03885 using a NIST Traceable radiation source, in conformance to the following standards: ANSI N323A (1997). RSCS New Hampshire Radioactive Material License Number: 381R. RSCS calibration services are performed in accordance with the RSCS Radiation Protection Program Manual and Standard Operating Procedure. This calibration certificate shall not be reproduced except in full without the express written consent of RSCS, Inc.

Inst.#89973, Daily QC Trend Graph



| Inst.#89973 | | Source Ser. # | bkgd |
|-------------------------|--------------|---------------|------|
| Initial Source Readings | | Nuclide | bkgd |
| Date | Result (cpm) | | |
| 8/23/2010 | 40 | | |
| 8/23/2010 | 30 | | |
| 8/23/2010 | 50 | | |
| 8/23/2010 | 30 | | |
| 8/23/2010 | 40 | | |
| 8/23/2010 | 30 | | |
| 8/23/2010 | 50 | | |
| 8/23/2010 | 30 | | |
| 8/23/2010 | 40 | | |
| 8/23/2010 | 50 | | |
| | Average | | |
| | 39 | | |

Inst.#89973, Daily QC Trend Graph



| Inst.#89973 | | Source Ser. # | 1753 |
|-------------------------|--------------|---------------|-------|
| Initial Source Readings | | Nuclide | Tc-99 |
| Date | Result (cpm) | | |
| 8/23/2010 | 1400 | | |
| 8/23/2010 | 1300 | | |
| 8/23/2010 | 1400 | | |
| 8/23/2010 | 1300 | | |
| 8/23/2010 | 1200 | | |
| 8/23/2010 | 1300 | | |
| 8/23/2010 | 1400 | | |
| 8/23/2010 | 1300 | | |
| 8/23/2010 | 1200 | | |
| 8/23/2010 | 1400 | | |
| | Average | | |
| | 1320 | | |



**Designer and Manufacturer
of
Scientific and Industrial
Instruments**

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.
POST OFFICE BOX 810 PH. 325-235-5494
501 OAK STREET FAX NO. 325-235-4672
SWEETWATER, TEXAS 79556, U.S.A.

| | | | | | | |
|-----------|---------------------------|--------------|----------|---------------|-----------------|-----------|
| CUSTOMER | CABRERA SERVICES | | | ORDER NO. | 20147733/346471 | |
| Mfg. | Ludlum Measurements, Inc. | Model | 3 | Serial No. | 89973 | |
| Mfg. | Ludlum Measurements, Inc. | Model | 44-9 | Serial No. | Pn084781 | |
| Cal. Date | 5-Mar-10 | Cal Due Date | 5-Mar-11 | Cal. Interval | 1 Year | Meterface |

Check mark applies to applicable instr. and/or detector IAW mfg. spec. T. 73 °F RH 36 % Alt 698.8 mm Hg

- | | | | | | | |
|---|--|--|--|--|--|---|
| <input type="checkbox"/> New Instrument | Instrument Received | <input type="checkbox"/> Within Toler. +/-10% | <input type="checkbox"/> 10-20% | <input type="checkbox"/> Out of Tol. | <input checked="" type="checkbox"/> Requiring Repair | <input type="checkbox"/> Other-See comments |
| <input checked="" type="checkbox"/> Mechanical ck. | <input checked="" type="checkbox"/> Meter Zeroed | <input type="checkbox"/> Background Subtract | <input type="checkbox"/> Input Sens. Linearity | | | |
| <input checked="" type="checkbox"/> F/S Resp. ck | <input checked="" type="checkbox"/> Reset ck. | <input type="checkbox"/> Window Operation | <input checked="" type="checkbox"/> Geotropism | | | |
| <input checked="" type="checkbox"/> Audio ck. | <input type="checkbox"/> Alarm Setting ck. | <input type="checkbox"/> Batt. ck. (Min. Volt) | _____ VDC. | | | |
| <input type="checkbox"/> Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. | | | | <input checked="" type="checkbox"/> Calibrated in accordance with LMI SOP 14.8 rev 02/07/97. | | |

Instrument Volt Set 900 V Input Sens. 27 mV Det. Oper. 900 V at 27 mV Threshold Dif.Pratio - mV

HV Boardout (2 points) Ref./Inst. _____ / _____ HV Ref./Inst. _____ / _____

COMMENTS:

COMMENTS:

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

| RANGE/MULTIPLIER | REFERENCE CAL. POINT | INSTRUMENT REC'D "AS FOUND READING" | INSTRUMENT METER READING* |
|------------------|----------------------|-------------------------------------|---------------------------|
| X 100 | 150 mR/hr | 150 | 1.5 |
| X 100 | 50 mR/hr | | 0.5 |
| X 10 | 15 mR/hr | | 1.5 |
| X 10 | 5 mR/hr | | 0.5 |
| X 1 | 1.5 mR/hr = 4920 cpm | | 1.5 |
| X 1 | 1.0 mR/hr | | 1.0 |
| X 0.1 | 492 cpm | | 1.5 |
| X 0.1 | 164 cpm | | 0.5 |

*Uncertainty within $\pm 10\%$ C.F. within $\pm 20\%$

X.0.1 Range(s) Calibrated Electronically

| REFERENCE CAL. POINT | INSTRUMENT RECEIVED | INSTRUMENT METER READING* | REFERENCE CAL. POINT | INSTRUMENT RECEIVED | INSTRUMENT METER READING* |
|-------------------------|------------------------|------------------------------|-------------------------|------------------------|------------------------------|
| Digital Readout | | | Log Scale | | |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |

Ludium Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques. The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323-1978 State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: 73410 1131 781 059 280 60646 70897
Cs-137 Gamma S/N 1162 G112 M565 5105 T1008 T879 E552 E551 720 734 1616 Neutron Am-241 Be S/N T-304

Alpha S/N Beta S/N Other

m 500 S/N 190564 Oscilloscope S/N Multimeter S/N 86250390

Page 11

© 2013 Pearson Education, Inc.



**Designer and Manufacturer
of
Scientific and Industrial
Instruments**

LUDLUM MEASUREMENTS, INC.
POST OFFICE BOX 810 PH. 325-235-5494
501 OAK STREET FAX NO. 325-235-4672
SWEETWATER, TEXAS 79556, U.S.A.

Bench Test Data For Detector

| | | | | | |
|------------|-----------------------------|------------|------------|-------------------------|-----------------|
| Detector | 43-93 | Serial No. | PR 244 545 | Order #. | 20158716/353237 |
| Customer | CABRERA SERVICES | | | Alpha Input Sensitivity | 120 mV |
| Counter | 2224-1 | Serial No. | 227244 | Beta Input Sensitivity | 3.5 mV |
| Count Time | 1Minute | | | Beta Window | 30 mV |
| Other | Distance Source to Detector | | | | |
| | Surface | | | | |

- Gas Proportional detector count rate decreased \leq 10% after 15 hour static test using 39" cable.
 Gas proportional detector count rate decreased \leq 10% after 5 hour static test using 39" cable and alpha/beta counter.

Signature

Date 7 Aug 10



Designer and Manufacturer
of
Scientific and Industrial
Instruments

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.
POST OFFICE BOX 810 PH. 325-235-5494
501 OAK STREET FAX NO. 325-235-4672
SWEETWATER, TEXAS 79556, U.S.A.

CUSTOMER CABRERA SERVICES

| | | | | | |
|------|---------------------------|-------|--------|------------|----------|
| Mfg. | Ludlum Measurements, Inc. | Model | 2224-1 | Serial No. | 227244 |
| Mfg. | Ludlum Measurements, Inc. | Model | 43-93 | Serial No. | PRZ44545 |

Cal. Date 7-Aug-10 Cal Due Date 7-Aug-11 Cal. Interval 1 Year Meterface 202-848

Check mark applies to applicable instr. and/or detector IAW mfg. spec. T. 73 °F RH 44 % Alt 699.8 mm Hg

New Instrument Instrument Received Within Toler. +10% 10-20% Out of Tol. Requiring Repair Other-See comments

Mechanical ck. Meter Zeroed Background Subtract

F/S Resp. ck

Reset ck.

Audio ck.

Alarm Setting ck.

Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

Instrument Volt Set 875 V Input Sens. Comments mV Det. Oper. 875 V at Comments mV Threshold Dial Ratio = mV

HV Readout (2 points) Ref./Inst. 500 / 513 V Ref./Inst. 1000 / 1020 V

COMMENTS:

Alpha: 120mV

Firmware: 390094 cal'd using 5' cable

Beta: 3.5mV

Overload set to simulated light leak

Beta window: 30mV

HV set with detector connected

Eff for Th230: 13.9 % 4Pi

Eff for Tc99: 17.97 % 4Pi

Eff for Sr90Y90: 29.3 % 4Pi

activity: 4328 dpm

activity: 33.2 kdpm

activity: 120 kdpm

source count: 603 cpm

source count: 6181 cpm

source count: 35373 cpm

background: 1 cpm

background: 213 cpm

background: 213 cpm

Eff for Ni63: 0.1518 % 4Pi activity: 282,519dpm source count: 1642 cpm background: 213 cpm

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

| RANGE/MULTIPLIER | REFERENCE CAL. POINT | INSTRUMENT REC'D "AS FOUND READING" | INSTRUMENT METER READING* |
|------------------|----------------------|-------------------------------------|---------------------------|
| x1000 | 800k cpm | 800 | 800 |
| x1000 | 200k cpm | 200 | 200 |
| x100 | 80k cpm | 800 | 800 |
| x100 | 20k cpm | 200 | 200 |
| x10 | 8k cpm | 800 | 800 |
| x10 | 2k cpm | 200 | 200 |
| x1 | 800 cpm | 800 | 800 |
| x1 | 200 cpm | 200 | 200 |

*Uncertainty within ± 10% C.F. within ± 20% ALL Range(s) Calibrated Electronically

| REFERENCE CAL. POINT | INSTRUMENT RECEIVED | INSTRUMENT METER READING* | REFERENCE CAL. POINT | INSTRUMENT RECEIVED | INSTRUMENT METER READING* |
|----------------------|---------------------|---------------------------|----------------------|---------------------|---------------------------|
| Digital Readout | | | Log Scale | | |
| 800k cpm | 800163 | 800163 | | | |
| 80k cpm | 80020 | 80020 | | | |
| 8k cpm | 8002 | 8002 | | | |
| 800 cpm | 800 | 800 | | | |
| 80 cpm | 80 | 80 | | | |

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.

State of Texas Calibration License No. LO-1963

The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323-1978

Reference Instruments and/or Sources: 73410 1131 781 059 280 60646 70887
Cs-137 Gamma S/N 1162 G112 M565 5105 T1008 T879 E552 E551 720 734 1616 Neutron Am-241 Be S/N T-304

Alpha S/N Th230, s/n 5020 Beta S/N Tc99 s/n 5296/Sr90Y90 s/n 5281 Other

m 500 S/N 114520 Oscilloscope S/N Multimeter S/N 78401030

Calibrated By: _____ Date 7 Aug 10
Reviewed By: _____ Date 9 Aug 10



CERTIFICATE OF CALIBRATION

Electroplated Alpha Standard

S.O. # 7008
P.O. # 10-0260

Description of Standard:

Model No. DNS-11 Serial No. 7103-10 Isotope Th-230

Electroplated on polished SS disc, 0.79 mm thick.

Total diameter of 4.77 cm and an active diameter of 4.45 cm.

The radioactive material is permanently fixed to the disc by heat treatment without any covering over the active surface.

Measurement Method:

The 2pi alpha emission rate was measured using an internal gas flow proportional chamber. Absolute counting of alpha particles emitted in the hemisphere above the active surface was verified by counting above, below, and at the operative voltage. The calibration is traceable to NIST by reference to an NIST calibrated alpha source S/N 75322-201

Measurement Result:

The observed alpha particles emitted from the surface of the disc per minute (cpm) on the calibration date was:

7,900 ± 237

The total disintegration rate (dpm) assuming 1.5% backscatter of alpha particles from the surface of the disc, was:

15,600 ± 467 (0.00701 µCi)

The uncertainty of the measurement is 3 %, which is the sum of random counting error at the 99% confidence level, and the estimated upper limit of systematic error in this measurement.

Calibrated by: [REDACTED] Reviewed by [REDACTED]

Calibration Technician: [REDACTED] Q.A. Manager: [REDACTED]

Calibration Date: 6-16-2010 Reviewed Date: 6/22/10

Source Manufacturing Lab
7021 Pan American Freeway NE
Albuquerque, New Mexico 87109-4238
(505) 761-5413 Fax (505) 761-5416
areust@eberlineservices.com



CERTIFICATE OF CALIBRATION

Electroplated Beta Standard

S.O. # 7008
P.O. # 10-0260

Description of Standard:

Model No. DNS-12 Serial No. 7105-10 Isotope Tc-99

Electroplated on polished SS disc, 0.79 mm thick.

Total diameter of 4.77 cm and an active diameter of 4.45 cm.

The radioactive material is permanently fixed to the disc by heat treatment without any covering over the active surface.

Measurement Method:

The 2π beta emission rate was measured using an internal gas flow proportional chamber. Absolute counting of beta particles emitted in the hemisphere above the active surface was verified by counting above, below, and at the operative voltage. The calibration is traceable to NIST by reference to an NIST calibrated beta source S/N 75323-201.

Measurement Result:

The observed beta count rate from the surface of the disc per minute (cpm) on the calibration date was:

8,930 \pm 357

The total disintegration rate (dpm) assuming 25 % backscatter of beta particles from the surface of the disc, was:

14,300 \pm 571 (0.00643 μCi)

The uncertainty of the measurement is 4 %, which is the sum of random counting error at the 99% confidence level, and the estimated upper limit of systematic error in this measurement.

Calibrated by: _____

Reviewed by: _____

Calibration Technician: _____

Q.A. Manager: _____

Calibration Date: 6-21-2010

Reviewed Date: 6/22/10

Appendix D
Explosives Screening Results

**Occidental Chemical Corporation Property Data Gap at the former LOOW
DropEx Field Sampling Form**

**Occidental Chemical Corporation Property Data Gap at the former LOOW
DropEx Field Sampling Form**

**Occidental Chemical Corporation Property Data Gap at the former LOOW
DropEx Field Sampling Form**

Appendix E
Test Pit Photographic Log

PHOTOGRAPHIC LOG

| No. | Year | AOC | Investigation | Location | Description |
|-----|------|-------|--------------------------------|-----------|---|
| 1. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Slag Mound. |
| 2. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Corroded Drum. |
| 3. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Corroded Drum. |
| 4. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | North Edge with Drum, South Lobe. |
| 5. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Sample C2-OXY-SO-HE. |
| 6. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Sample C2-OXY-SO-SOE. |
| 7. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Terracotta Pipe Pile. |
| 8. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Corroded Drum. |
| 9. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Debris Piles |
| 10. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Detonator Rings |
| 11. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Explosives Field Screening |
| 12. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Occidental Grid Looking South. |
| 13. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Occidental Grid, Center. |
| 14. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Occidental Looking South |
| 15. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Occidental Property Center Grid. |
| 16. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8 | Occidental Grid Facing West |
| 17. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP1 | Soil/Debris From TP 1. |
| 18. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP1 | Center Grid TP 1: 10" to Native Soil. |
| 19. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP2 | SE Edge of TP: 8" to Native Soil. |
| 20. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP3 | TP3 |
| 21. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP3 | Center of TP 3: 11" Deep to Native Soil. |
| 22. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP4 | SW Edge of TP 4. |
| 23. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP5 | Combined East TP 5: 6" to Native Soil |
| 24. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP6 | SW Corner of TP 6. Native Soil. |
| 25. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP7 | Center of TP 7: Detonator Ring at 6" Below Grade |
| 26. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP8 | Center TP8: Burn Evidence. |
| 27. | 2010 | AOC 1 | Debris Field Delineation Visit | EU 8, TP9 | SW Corner of TP9: Native Soil |



1.) AOC 1 – EU 8: Slag Mound.



2.) AOC 1 – EU 8: Corroded Drum.



3.) AOC 1 – EU 8. Corroded Drum.



4.) AOC 1 – EU 8. North Edge of Corroded Drum.



5.) AOC 1 – EU 8. Sample C2-OXY-SO-HE.



6.) AOC 1 – EU 8. Sample C2-OXY-SO-SOE.



7.) AOC 1 – EU 8. Terracotta Pipe Pile.



8.) AOC 1 – EU 8. Corroded Drum.



9.) AOC 1 – EU 8. Debris Piles.



10.) AOC 1 – EU 8. Detonator Rings.



11.) AOC 1 – EU 8. Explosives Field Screening



12.) AOC 1 – EU 8. Occidental Grid Looking South.



13.) AOC 1 – EU 8. Occidental Grid, Center of EU 8.



14.) AOC 1 – EU 8. Center of EU 8 Looking South.



15.) AOC 1 – EU 8. EU 8 Center Grid.



16.) AOC 1 – EU 8. Center Grid Facing West.



17.) AOC 1 – EU 8. TP1 – Soil/Debris From TP 1.



18.) AOC 1 – EU 8. TP1 – Center Grid TP 1: 10" to Native Soil.



19.) AOC 1 – EU 8. TP2 – SE Edge of TP: 8" to Native Soil.



20.) AOC 1 – EU 8. TP3.



21.) AOC 1 – EU 8. TP3 – Center of TP 3: 11" to Native Soil.



22.) AOC 1 – EU 8. TP4 – SW Edge of TP 4



23.) AOC 1 – EU 8. TP 5: 6" bgs to Native Soil



24.) AOC 1 – EU 8. TP6 – SW Corner of TP 6. Native Soil



25.) AOC 1 – EU 8. Center of TP 7: Detonator Ring at 6" bgs



26.) AOC 1 – EU 8. Center TP8: Burn Evidence..



27.) AOC 1 – EU 8. SW Corner of TP9: Native Soil

PHOTOS FOR TP 10 and TP 11 ARE NOT AVAILABLE.

Appendix F
Analytical Laboratory Data and Summary Tables

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-AA03-BP01 | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-AA07-BP02 | | |
|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------|
| Sample Name: | C10-AA03-SO-01-0.5 | C10-AA03-SO-DUP2 | C10-AA03-SO-02-0.5 | C10-AA04-SO-01-0.5 | C10-AA04-SO-02-0.5 | C10-AA04-SO-03-0.5 | C10-AA07-SO-01-0.5 | C10-AA07-SO-02-0.5 | C10-AA07-SO-DUP1 | | |
| Sample Date: | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | | |
| Parent Sample: | | C10-AA03-SO-01-0.5 | | | | | | | C10-AA07-SO-02-0.5 | | |
| Sample Depth (ft bgs): | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | | |
| Analyte | USEPA RSL | | | | | | | | | | |
| VOCs (SW8260B) (µg/kg) | | | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 1,1,1-trichloroethane | 870000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| 1,1,2,2-tetrachloroethane | 560 | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | 2.4 U | 2.4 U | 2.5 U | 2.5 U | 2.6 U | 2.5 U | 2.5 U | 2.6 U | 2.6 U | |
| 1,1,2-trichloroethane | 160 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 1,1-dichloroethane | 3300 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| 1,1-dichloroethene | 24000 * | 6 U | 6.1 U | 6.2 U | 6.2 U | 6.5 U | 6.2 U | 6.1 U | 6.5 U | 6.5 U | |
| 1,2,3-trichlorobenzene | 4900 * | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a | a | |
| 1,2,3-trichloropropane | 5 | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 1,2,4-trichlorobenzene | 6200 * | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a | a | |
| 1,2,4-trimethylbenzene | 6200 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 1,2-Dibromo-3-chloropropane | 5.4 | 1.2 U | 1.2 U | a | a | a | 1.2 UJ | 1.2 UJ | a | a | |
| 1,2-dibromoethane | 34 | 1.2 U | 1.2 U | 1.2 U | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 U | |
| 1,2-dichlorobenzene | 190000 * | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a | a | |
| 1,2-dichloroethane | 430 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| 1,2-dichloroethene | 70000 * | 2.4 U | 2.4 U | 2.5 U | 2.5 U | 2.6 U | 2.5 U | 2.5 U | 2.6 U | 2.6 U | |
| 1,2-dichloropropane | 940 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| 1,3,5-trimethylbenzene | 78000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 1,3-dichlorobenzene | 610 * | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a | a | |
| 1,3-dichloropropane | 160000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 U | |
| 1,4-dichlorobenzene | 2400 | 1.2 U | 1.2 UJ | 0.86 J | a | a | 1.2 UJ | 1.2 UJ | a | a | |
| 2,2-dichloropropane | NSA | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| 2-butanone | 2800000 * | a | a | a | 6.2 U | 6.5 U | 22 J | 6.1 U | 6.5 U | 6.5 U | |
| 2-chlorotoluene | 160000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 2-hexanone | 21000 * | 6 U | 6.1 U | 6.2 UJ | 6.2 UJ | 6.5 UJ | 6.2 UJ | 6.1 U | 6.5 UJ | 6.5 UJ | |
| 4-chlorotoluene | 160000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| 4-Isopropyltoluene | NSA | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 11 J | a | a | |
| 4-methyl-2-pentanone | 530000 * | 6 U | 6.1 U | 6.2 UJ | 6.2 UJ | 6.5 UJ | 6.2 UJ | 6.1 U | 6.5 UJ | 6.5 UJ | |
| Acetone | 6100000 * | 48 J | 28 J | 39 J | 22 U | 45 U | 130 J | 27 U | 20 U | 26 U | |
| Benzene | 1100 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Bromobenzene | 30000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| Bromochloromethane | 16000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Bromodichloromethane | 270 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Bromoform | 62000 | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| Bromomethane | 730 * | 6 U | 6.1 U | 6.2 U | 6.2 U | 6.5 U | 6.2 U | 6.1 U | 6.5 U | 6.5 U | |
| Carbon disulfide | 82000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Carbon tetrachloride | 610 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Chlorobenzene | 29000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ | 1.3 UJ | |
| Chloroethane | 1500000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Chloroform | 290 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Chloromethane | 12000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Cis-1,2-dichloroethene | 16000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Cis-1,3-dichloropropene | 160000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Cyclohexane | 700000 * | 6 U | 6.1 U | 6.2 U | 6.2 U | 6.5 U | 6.2 U | 6.1 U | 6.5 U | 6.5 U | |
| Dibromochloromethane | 680 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Dibromomethane | 2500 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U | 1.3 U | |
| Dichlorodifluoromethane | 9400 * | 6 U | 6.1 U | 6.2 U | 6.2 U | 6.5 U | 6.2 U | 6.1 U | 6.5 U | 6.5 U | |
| Ethylbenzene | 5400 | 1.2 U | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 3.3 J | 1.3 J | 1.2 U | 1.3 UJ | 1.3 UJ |
| Hexachloro-1,3-butadiene | 6100 * | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a | a | |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-AA03-BP01 | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-AA07-BP02 |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sample Name: | C10-AA03-SO-01-0.5 | C10-AA03-SO-DUP2 | C10-AA03-SO-02-0.5 | C10-AA04-SO-01-0.5 | C10-AA04-SO-02-0.5 | C10-AA04-SO-03-0.5 | C10-AA07-SO-01-0.5 | C10-AA07-SO-02-0.5 | C10-AA07-SO-DUP1 |
| Sample Date: | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 |
| Parent Sample: | | C10-AA03-SO-01-0.5 | | | | | | | C10-AA07-SO-02-0.5 |
| Sample Depth (ft bgs): | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Isopropylbenzene | 210000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ |
| m,p-Xylene | 63000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 35 J | 7.9 J | 1.2 U | 1.3 UJ |
| Methyl acetate | 7800000 * | 18 J | 12 J | 5.1 J | a | a | 6.7 J | a | a |
| Methyl tert-butyl ether | 43000 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U |
| Methylcyclohexane | 700000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U |
| Methylene Chloride | 11000 | 4.8 J | 1.9 U | 4.2 J | 6.2 U | 6.5 U | 6.2 U | 6.1 U | 6.5 U |
| n-Butylbenzene | 390000 * | 1.2 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a |
| N-propylbenzene | 340000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ |
| o-Xylene | 69000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 20 J | 3.9 J | 1.2 U | 1.3 UJ |
| Sec-butylbenzene | NSA | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ |
| Styrene | 630000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ |
| Tert-butylbenzene | NSA | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.1 J | 1.3 UJ |
| Tetrachloroethene | 550 | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ |
| Toluene | 500000 * | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.6 J | 1.2 U | 1.3 UJ |
| trans-1,2-dichloroethene | 15000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U |
| trans-1,3-dichloropropene | 1700 | 1.2 U | 1.2 U | 1.2 UJ | 1.2 UJ | 1.3 UJ | 1.2 UJ | 1.2 U | 1.3 UJ |
| Trichloroethene | 440 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U |
| Trichlorofluoromethane | 79000 * | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U |
| Vinyl chloride | 60 | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.3 U | 1.2 U | 1.2 U | 1.3 U |
| Xylenes, Total | 63000 * | 3.6 U | 3.6 U | 3.7 UJ | 3.7 UJ | 55 J | 12 J | 3.7 U | 3.9 UJ |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | |
| 1,1-biphenyl | 5100 * | 4 U | 4 U | 4 U | 210 U | 4 U | 4.1 U | 3.8 U | 4.3 U |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b |
| 1-Methylnaphthalene | 22000 | b | b | b | b | b | b | b | b |
| 2,2-oxybis(1-chloropropane) | 4600 | 2 U | 2 U | 2 U | 110 U | 2 U | 2 U | 1.9 U | 2.2 U |
| 2,4,5-trichlorophenol | 610000 * | 12 U | 12 U | 12 U | 630 U | 12 U | 12 U | 11 U | 13 U |
| 2,4,6-trichlorophenol | 6100 * | 16 U | 16 U | 16 U | 840 U | 16 U | 16 U | 15 U | 17 U |
| 2,4-dichlorophenol | 18000 * | 2.4 U | 2.4 U | 2.4 U | 130 U | 2.4 U | 2.5 U | 2.3 U | 2.6 U |
| 2,4-dimethylphenol | 120000 * | 9.9 U | 10 U | 10 U | 520 U | 9.9 U | 10 U | 9.5 U | 11 U |
| 2,4-dinitrophenol | 12000 * | 60 U | 60 U | 61 U | 3100 U | 60 U | 61 U | 57 U | 65 U |
| 2-chloronaphthalene | 630000 * | 1.6 U | 1.6 U | 1.6 U | 84 U | 1.6 U | 1.6 U | 1.5 U | 1.7 U |
| 2-chlorophenol | 39000 * | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| 2-Methyl-4,6-dinitrophenol | 490 * | 24 U | 24 U | 24 U | 1300 U | 24 U | 25 U | 23 U | 26 U |
| 2-methylnaphthalene | 31000 * | 1.2 U | 1.3 J | 3.8 J | 63 U | 1.2 U | 1.2 U | 1.1 U | 4.6 J |
| 2-methylphenol | 310000 * | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| 2-nitroaniline | 61000 * | 40 U | 40 U | 40 U | 2100 U | 40 U | 41 U | 38 U | 43 U |
| 2-nitrophenol | 2900 | 12 U | 12 U | 12 U | 630 U | 12 U | 12 U | 11 U | 13 U |
| 3,3-dichlorobenzidine | 1100 | 12 U | 12 U | 12 U | 630 U | 12 U | 12 U | 11 U | 13 U |
| 3-nitroaniline | 610 * | 30 U | 30 U | 30 U | 1600 U | 30 U | 31 U | 28 U | 32 U |
| 4-bromophenyl phenyl ether | NSA | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| 4-chloro-3-methylphenol | 610000 * | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| 4-chloroaniline | 2400 | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| 4-chlorophenyl phenyl ether | NSA | 6 U | 6 U | 6.1 U | 310 U | 6 U | 6.1 U | 5.7 U | 6.5 U |
| 4-methylphenol | 31000 * | 9.9 U | 10 U | 10 U | 520 U | 9.9 U | 10 U | 9.5 U | 11 U |
| 4-nitroaniline | 24000 | 20 U | 20 U | 20 U | 1100 U | 20 U | 20 U | 19 U | 22 U |
| 4-nitrophenol | 24000 * | 40 U | 40 U | 40 U | 2100 U | 40 U | 41 U | 38 U | 43 U |
| Acenaphthene | 340000 * | 1.6 U | 1.6 U | 4.1 J | 84 U | 1.6 U | 1.6 U | 1.5 U | 3.6 J |
| Acenaphthylene | 3600 | 1.6 U | 1.6 U | 1.6 U | 84 U | 1.6 U | 1.6 U | 1.5 U | 1.7 U |
| Acetophenone | 780000 * | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| Anthracene | 1700000 * | 1.6 U | 1.1 J | 3.3 J | 84 U | 1.6 U | 1.6 U | 1.5 U | 4.7 J |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-AA03-BP01 | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-AA07-BP02 |
|-------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sample Name: | C10-AA03-SO-01-0.5 | C10-AA03-SO-DUP2 | C10-AA03-SO-02-0.5 | C10-AA04-SO-01-0.5 | C10-AA04-SO-02-0.5 | C10-AA04-SO-03-0.5 | C10-AA07-SO-01-0.5 | C10-AA07-SO-02-0.5 | C10-AA07-SO-DUP1 |
| Sample Date: | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 |
| Parent Sample: | | C10-AA03-SO-01-0.5 | | | | | | | C10-AA07-SO-02-0.5 |
| Sample Depth (ft bgs): | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Atrazine | 2100 | 9.9 U | 10 U | 10 U | 520 U | 9.9 U | 10 U | 9.5 U | 11 U |
| Benzaldehyde | 780000 * | 18 U | 18 U | 18 U | 940 U | 18 U | 18 U | 17 U | 19 U |
| Benzo[a]anthracene | 150 | 1.6 U | 5.1 J | 15 | 84 U | 2.9 J | 3.1 J | 1.5 U | 33 |
| Benzo[a]pyrene | 15 | 2.6 J | 6.5 J | 20 | 84 U | 4.3 J | 4.3 J | 1.5 U | 35 |
| Benzo[b]fluoranthene | 150 | 4 J | 5.7 J | 31 | 84 U | 4.9 J | 4.3 J | 1.5 U | 45 |
| Benzo[g,h,i]perylene | 1700000 * | 2.9 J | 5.1 J | 18 | 84 U | 4.4 J | 4.1 J | 1.5 U | 29 |
| Benzo[k]fluoranthene | 1500 | 4 U | 4 U | 4 U | 210 U | 4 U | 4.1 U | 3.8 U | 4.3 U |
| Benzoic acid | 24000000 * | b | b | b | b | b | b | b | b |
| Benzyl alcohol | 610000 * | b | b | b | b | b | b | b | b |
| Benzyl butyl phthalate | 260000 | 12 U | 12 U | 7.6 J | 630 U | 12 U | 12 U | 6.8 J | 13 U |
| Bis(2-chloroethoxy) methane | 18000 * | 6 U | 6 U | 6.1 U | 310 U | 6 U | 6.1 U | 5.7 U | 6.5 U |
| Bis(2-chloroethyl) ether | 210 | 3 U | 3 U | 3 U | 160 U | 3 U | 3.1 U | 2.8 U | 3.2 U |
| Bis(2-ethylhexyl) phthalate | 35000 | 44 J | 62 J | 55 J | 1100 U | 34 J | 7 J | 7.1 J | 59 J |
| Caprolactam | 3100000 * | 80 U | 80 U | 81 U | 4200 U | 79 U | 82 U | 76 U | 86 U |
| Carbazole | NSA | 1.6 U | 1.6 U | 1.6 U | 84 U | 1.6 U | 1.6 U | 1.5 U | 4.4 J |
| Chrysene | 15000 | 1.6 U | 6 J | 24 | 84 U | 3.6 J | 4.4 J | 1.5 U | 35 |
| Cresols | 750000 * | b | b | b | b | b | b | b | b |
| Dibenz[a,h]anthracene | 15 | 1.6 U | 1.6 U | 1.6 U | 84 U | 1.6 U | 1.6 U | 1.5 U | 5.6 J |
| Dibenzofuran | 7800 * | 6 U | 6 U | 6.1 U | 310 U | 6 U | 6.1 U | 5.7 U | 6.5 U |
| Diethyl phthalate | 4900000 * | 12 U | 12 U | 12 U | 630 U | 12 U | 12 U | 11 U | 13 U |
| Dimethyl phthalate | NSA | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| Di-n-butyl phthalate | 610000 * | 12 U | 12 U | 12 U | 630 U | 12 U | 12 U | 11 U | 13 U |
| Di-n-octyl phthalate | 610000 * | 12 U | 12 U | 12 U | 630 U | 12 U | 12 U | 11 U | 13 U |
| Fluoranthene | 230000 * | 3.6 J | 10 | 39 | 84 U | 4.4 J | 4.2 J | 1.5 U | 56 |
| Fluorene | 230000 * | 2 U | 2 U | 5.1 J | 110 U | 2 U | 2 U | 1.9 U | 3 J |
| Hexachloro-1,3-butadiene | 6100 * | 1.6 U | 1.6 U | 1.6 U | 84 U | 1.6 U | 1.6 U | 1.5 U | 1.7 U |
| Hexachlorobenzene | 300 | 2 U | 2 U | 2 U | 110 U | 2 U | 2 U | 1.9 U | 2.2 U |
| Hexachlorocyclopentadiene | 37000 * | 6 U | 6 U | 6.1 U | 310 U | 6 U | 6.1 U | 5.7 U | 6.5 U |
| Hexachloroethane | 4300 * | 6 U | 6 U | 6.1 U | 310 U | 6 U | 6.1 U | 5.7 U | 6.5 U |
| Indeno[1,2,3-c,d]pyrene | 150 | 2.4 J | 4.2 J | 17 | 110 U | 4.2 J | 3.9 J | 1.9 U | 23 |
| Isophorone | 510000 | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| Naphthalene | 3600 | 1.6 U | 1.6 U | 7.6 J | 84 U | 1.6 U | 1.6 U | 1.5 U | 3.2 J |
| Naphthalene (by 8260B) | 3600 | 1.4 U | 1.2 UJ | a | a | a | 1.2 UJ | 1.2 UJ | a |
| N-nitrosodi-n-propylamine | 69 | 2 U | 2 U | 2 U | 110 U | 2 U | 2 U | 1.9 U | 2.2 U |
| N-nitrosodiphenylamine | 99000 | 9.9 U | 10 U | 10 U | 520 U | 9.9 U | 10 U | 9.5 U | 11 U |
| Pentachlorophenol | 890 | 7.9 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| Phenanthrene | 1700000 * | 3 U | 8.5 | 32 | 160 U | 3 U | 3.4 J | 2.8 U | 32 |
| Phenol | 1800000 * | 2.4 U | 2.4 U | 2.4 U | 130 U | 2.4 U | 2.5 U | 2.3 U | 2.6 U |
| Pyrene | 170000 * | 2.9 J | 8.5 | 34 | 84 U | 4.8 J | 4.9 J | 1.5 U | 49 |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | |
| 4,4-DDD | 2000 | b | b | b | b | b | b | b | b |
| 4,4-DDE | 1400 | b | b | b | b | b | b | b | b |
| 4,4-DDT | 1700 | b | b | b | b | b | b | b | b |
| Aldrin | 29 | b | b | b | b | b | b | b | b |
| alpha-BHC | 77 | b | b | b | b | b | b | b | b |
| alpha-Chlordane | 1600 | b | b | b | b | b | b | b | b |
| Beta-BHC | 270 | b | b | b | b | b | b | b | b |
| delta-BHC | 77 | b | b | b | b | b | b | b | b |
| Dieldrin | 30 | b | b | b | b | b | b | b | b |
| Endosulfan I | 37000 * | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-AA03-BP01 | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-AA07-BP02 |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sample Name: | C10-AA03-SO-01-0.5 | C10-AA03-SO-DUP2 | C10-AA03-SO-02-0.5 | C10-AA04-SO-01-0.5 | C10-AA04-SO-02-0.5 | C10-AA04-SO-03-0.5 | C10-AA07-SO-01-0.5 | C10-AA07-SO-02-0.5 | C10-AA07-SO-DUP1 |
| Sample Date: | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 |
| Parent Sample: | | C10-AA03-SO-01-0.5 | | | | | | | C10-AA07-SO-02-0.5 |
| Sample Depth (ft bgs): | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Endosulfan II | 37000 * | b | b | b | b | b | b | b | b |
| Endosulfan sulfate | 37000 * | b | b | b | b | b | b | b | b |
| Endrin | 1800 * | b | b | b | b | b | b | b | b |
| Endrin aldehyde | 1800 * | b | b | b | b | b | b | b | b |
| Endrin ketone | 1800 * | b | b | b | b | b | b | b | b |
| Gamma-BHC (Lindane) | 520 | b | b | b | b | b | b | b | b |
| Heptachlor | 110 | b | b | b | b | b | b | b | b |
| Heptachlor epoxide | 53 | b | b | b | b | b | b | b | b |
| Methoxychlor | 31000 * | b | b | b | b | b | b | b | b |
| Toxaphene | 440 | b | b | b | b | b | b | b | b |
| trans-Chlordane | 1600 | b | b | b | b | b | b | b | b |
| PCBs (SW8082) (µg/kg) | | | | | | | | | |
| Aroclor 1016 | 390 * | 2 U | 2 U | 2 U | 2.1 U | 2 U | 2.1 U | 1.9 U | 2.2 U |
| Aroclor 1221 | 140 | 3.6 U | 3.6 U | 3.7 U | 3.8 U | 3.6 U | 3.7 U | 3.4 U | 3.9 U |
| Aroclor 1232 | 140 | 2 U | 2 U | 2 U | 2.1 U | 2 U | 2.1 U | 1.9 U | 2.2 U |
| Aroclor 1242 | 220 | 2 U | 2 U | 2 U | 2.1 U | 2 U | 2.1 U | 1.9 U | 2.2 U |
| Aroclor 1248 | 220 | 4.8 U | 4.8 U | 4.9 U | 5.1 U | 4.8 U | 4.9 U | 4.6 U | 5.2 U |
| Aroclor 1254 | 110 * | 3.6 U | 3.6 U | 3.7 U | 3.8 U | 3.6 U | 3.7 U | 3.4 U | 3.9 U |
| Aroclor 1260 | 220 | 2 U | 2 U | 27 | 11 J | 2 U | 2.1 U | 1.9 U | 14 |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/kg) | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | 36 U | 36 U | 37 U | 37 U | 39 U | 37 U | 37 U | 39 U |
| 1,3-Dinitrobenzene | 610 * | 36 U | 36 U | 37 U | 37 U | 39 U | 37 U | 37 U | 39 U |
| 2,4,6-trinitrotoluene | 3600 * | 36 U | 36 U | 37 U | 37 U | 39 U | 37 U | 37 U | 39 U |
| 2,4-dinitrotoluene (by 8270) | 1600 | 6 U | 6 U | 6.1 U | 310 U | 6 U | 6.1 U | 5.7 U | 6.5 U |
| 2,4-dinitrotoluene | 1600 | 36 U | 36 U | 37 U | 37 U | 39 U | 37 U | 37 U | 39 U |
| 2,6-dinitrotoluene (by 8270) | 6100 * | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| 2,6-dinitrotoluene | 6100 * | 36 U | 36 U | 37 U | 37 U | 39 U | 37 U | 37 U | 39 U |
| 2-amino-4,6-dinitrotoluene | 15000 * | 60 U | 61 U | 62 U | 62 U | 65 U | 62 U | 61 U | 65 U |
| 2-nitrotoluene | 2900 | 120 U | 120 U | 120 U | 120 U | 130 U | 120 U | 120 U | 130 U |
| 3-nitrotoluene | 610 * | 240 U | 240 U | 250 U | 250 U | 260 U | 250 U | 250 U | 260 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | 60 U | 61 U | 62 U | 62 U | 65 U | 62 U | 61 U | 65 U |
| 4-Nitrotoluene | 24000 * | 240 U | 240 U | 250 U | 250 U | 260 U | 250 U | 250 U | 260 U |
| HMX | 380000 * | 120 U | 120 U | 120 U | 120 U | 130 U | 120 U | 120 U | 130 U |
| Nitrobenzene (by 8270) | 4800 | 8 U | 8 U | 8.1 U | 420 U | 7.9 U | 8.2 U | 7.6 U | 8.6 U |
| Nitrobenzene | 4800 | 120 U | 120 U | 120 U | 120 U | 130 U | 120 U | 120 U | 130 U |
| RDX | 5600 | 120 U | 120 U | 120 U | 120 U | 130 U | 120 U | 120 U | 130 U |
| Tetryl | 24000 * | 36 U | 36 U | 37 U | 37 U | 39 U | 37 U | 37 U | 39 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) (mg/kg) | | | | | | | | | |
| Aluminum | 7700 * | 10500 J | 9560 J | 7950 J | 10400 J | 10400 J | 13300 J | 7870 J | 10900 J |
| Antimony | 3.1 * | 0.6 UJ |
| Arsenic | 0.39 | 2.5 | 2.5 | 3.4 | 3.5 | 3.2 | 2.4 | 2.9 | 4.5 |
| Barium | 1500 * | 110 | 104 | 87 | 154 | 113 | 204 | 76.5 | 94.7 |
| Beryllium | 16 * | 0.55 | 0.49 | 0.39 | 0.65 | 0.64 | 1.1 | 0.39 | 0.62 |
| Boron | 1600 * | 6.6 U | 9 U | 4.7 U | 9.8 U | 12.5 U | 5 U | 4.1 U | 9.5 U |
| Cadmium | 7 * | 0.082 | 0.092 | 0.59 | 0.84 | 0.18 | 0.36 | 0.2 | 0.45 |
| Calcium | NSA | 2780 | 2850 J | 2600 | 7120 | 3690 | 4450 | 14600 | 16000 |
| Chromium ^c | 12,000 * | 12.9 | 12.5 | 13.3 | 18.1 | 15.2 | 18 | 11.8 | 18.7 |
| Chromium (hexavalent) (by SW7196A) | 0.29 | 0.27 J | 0.24 U | 0.25 U | b | b | 0.25 U | b | b |
| Cobalt | 2.3 * | 4.8 | 4.3 | 3.6 | 6 | 5.1 | 5.3 | 5.8 | 7.4 |
| Copper | 310 * | 15.9 | 13.2 | 22.7 | 42.7 | 17.8 | 47.8 | 29.3 | 24.8 |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-AA03-BP01 | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-AA07-BP02 |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sample Name: | C10-AA03-SO-01-0.5 | C10-AA03-SO-DUP2 | C10-AA03-SO-02-0.5 | C10-AA04-SO-01-0.5 | C10-AA04-SO-02-0.5 | C10-AA04-SO-03-0.5 | C10-AA07-SO-01-0.5 | C10-AA07-SO-02-0.5 | C10-AA07-SO-DUP1 |
| Sample Date: | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 |
| Parent Sample: | | C10-AA03-SO-01-0.5 | | | | | | | C10-AA07-SO-02-0.5 |
| Sample Depth (ft bgs): | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Cyanide (by SW9012) | 160 * | b | b | b | b | b | b | b | b |
| Iron | 5500 * | 15100 | 14400 | 13800 | 21800 | 16100 | 12700 | 16000 | 20100 |
| Lead | 400 | 9.2 | 9.9 | 49.9 | 98.3 | 18.2 | 12.1 | 11.4 | 39.3 |
| Lithium | 16 * | 16.8 | 15.8 | 13.3 | 19.8 | 22.7 | 20.4 | 15 | 17.1 |
| Magnesium | NSA | 2430 J | 2240 J | 1850 J | 3230 J | 2670 J | 2930 J | 4230 J | 7050 J |
| Manganese | 180 * | 242 J | 228 J | 123 J | 260 J | 133 J | 89 J | 546 J | 644 J |
| Mercury (by 7471) | 0.78 * | 0.034 U | 0.041 U | 0.12 U | 0.1 U | 0.06 U | 0.054 U | 0.051 U | 0.13 U |
| Nickel | 150 * | 11.2 | 9.9 | 10.2 | 23 | 14.2 | 18.1 | 12.3 | 17.6 |
| Potassium | NSA | 746 | 661 | 572 | 1190 | 984 | 782 | 615 | 1200 |
| Selenium | 39 * | 1.2 | 1.4 | 0.52 J | 1.6 | 2 | 2.6 | 1.4 | 1.1 |
| Silver | 39 * | 0.035 J | 0.027 J | 0.39 | 0.18 J | 0.056 J | 0.054 J | 0.024 J | 0.082 J |
| Sodium | NSA | 38.7 U | 36.8 U | 34.4 U | 257 U | 60.4 U | 56 U | 51.2 U | 68.9 |
| Strontium (by SR-03-RC Mod) | 999999 * | b | b | b | b | b | b | b | b |
| Thallium | 0.078 * | 0.16 J | 0.14 J | 0.14 J | 0.15 U | 0.19 J | 0.17 J | 0.14 J | 0.16 J |
| Vanadium | 39 * | 20.6 | 19.6 | 16 | 19.4 | 20.6 | 28.1 | 16.7 | 24.6 |
| Zinc | 2300 * | 31.6 J | 30.2 J | 158 J | 377 J | 50.9 J | 46.1 J | 57.1 J | 90.5 J |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-1 | C10-GS2-10 | C10-GS2-10 | C10-GS2-2 | C10-GS2-3 | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 |
|--|----------------|-------------------|--------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Name: | C10-GS2-SO-1-1 | C10-GS2-SO-10-0.5 | C10-GS2-SO-10A-0.5 | C10-GS2-SO-2-1 | C10-GS2-SO-3-1 | FIELD DUPLICATE | C10-GS2-SO-4-1 | C10-GS2-SO-5-1 | C10-GS2-SO-6-1 | C10-GS2-SO-7-1 | C10-GS2-SO-8-1 |
| Sample Date: | 5/9/2001 | 5/10/2001 | 6/13/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 |
| Parent Sample: | | | | | | C10-GS2-SO-3-1 | | | | | |
| Sample Depth (ft bgs): | 0 - 1 | 0 - 0.5 | 0.5 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Analyte | USEPA RSL | | | | | | | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | b | b | b | b | b | b | b | b | b | b |
| 1,1,1-trichloroethane | 870000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,1,2,2-tetrachloroethane | 560 | 5 U | 28 U | b | 7.9 U | 8.2 UJ | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | b | b | b | b | b | b | b | b | b | b |
| 1,1,2-trichloroethane | 160 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,1-dichloroethane | 3300 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,1-dichloroethene | 24000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,2,3-trichlorobenzene | 4900 * | b | b | b | b | b | b | b | b | b | b |
| 1,2,3-trichloropropane | 5 | b | b | b | b | b | b | b | b | b | b |
| 1,2,4-trichlorobenzene | 6200 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U |
| 1,2,4-trimethylbenzene | 6200 * | b | b | b | b | b | b | b | b | b | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | b | b | b | b | b | b | b | b | b | b |
| 1,2-dibromoethane | 34 | b | b | b | b | b | b | b | b | b | b |
| 1,2-dichlorobenzene | 190000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U |
| 1,2-dichloroethane | 430 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,2-dichloroethene | 70000 * | b | b | b | b | b | b | b | b | b | b |
| 1,2-dichloropropane | 940 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| 1,3,5-trimethylbenzene | 78000 * | b | b | b | b | b | b | b | b | b | b |
| 1,3-dichlorobenzene | 610 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U |
| 1,3-dichloropropane | 160000 * | b | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b | b | b |
| 2,2-dichloropropane | NSA | b | b | b | b | b | b | b | b | b | b |
| 2-butanone | 2800000 * | 10 U | 40.8 J | b | 16 U | 16 U | 15 U | 18 U | 13 U | 10 U | 13 U |
| 2-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b | b | b |
| 2-hexanone | 21000 * | 10 U | 55 U | b | 16 U | 16 U | 15 U | 18 U | 13 U | 10 U | 13 U |
| 4-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b | b | b |
| 4-Isopropyltoluene | NSA | b | b | b | b | b | b | b | b | b | b |
| 4-methyl-2-pentanone | 530000 * | 10 U | 55 U | b | 16 U | 16 U | 15 U | 18 U | 13 U | 10 U | 13 U |
| Acetone | 6100000 * | 110 | 1040 | b | 235 | 2800 J | 69.9 J | 60.2 J | 212 | 2000 J | 2380 J |
| Benzene | 1100 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Bromobenzene | 30000 * | b | b | b | b | b | b | b | b | b | b |
| Bromochloromethane | 16000 * | b | b | b | b | b | b | b | b | b | b |
| Bromodichloromethane | 270 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Bromoform | 62000 | 5 U | 28 U | b | 7.9 U | 8.2 UJ | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Bromomethane | 730 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Carbon disulfide | 82000 * | 10 U | 55 U | b | 16 U | 16 U | 15 U | 18 U | 13 U | 10 U | 13 U |
| Carbon tetrachloride | 610 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Chlorobenzene | 29000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Chloroethane | 1500000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Chloroform | 290 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Chloromethane | 12000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Cis-1,2-dichloroethene | 16000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Cis-1,3-dichloropropene | 160000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Cyclohexane | 700000 * | b | b | b | b | b | b | b | b | b | b |
| Dibromochloromethane | 680 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Dibromomethane | 2500 * | b | b | b | b | b | b | b | b | b | b |
| Dichlorodifluoromethane | 9400 * | b | b | b | b | b | b | b | b | b | b |
| Ethylbenzene | 5400 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U |
| Hexachloro-1,3-butadiene | 6100 * | b | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-1 | C10-GS2-10 | C10-GS2-10 | C10-GS2-2 | C10-GS2-3 | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | | |
|---|----------------|-------------------|--------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------|---------|
| Sample Name: | C10-GS2-SO-1-1 | C10-GS2-SO-10-0.5 | C10-GS2-SO-10A-0.5 | C10-GS2-SO-2-1 | C10-GS2-SO-3-1 | FIELD DUPLICATE | C10-GS2-SO-4-1 | C10-GS2-SO-5-1 | C10-GS2-SO-6-1 | C10-GS2-SO-7-1 | C10-GS2-SO-8-1 | | |
| Sample Date: | 5/9/2001 | 5/10/2001 | 6/13/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | | |
| Parent Sample: | | | | | | C10-GS2-SO-3-1 | | | | | | | |
| Sample Depth (ft bgs): | 0 - 1 | 0 - 0.5 | 0.5 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | | |
| Analyte | USEPA RSL | | | | | | | | | | | | |
| Isopropylbenzene | 210000 * | b | b | b | b | b | b | b | b | b | b | | |
| m,p-Xylene | 63000 * | b | b | b | b | b | b | b | b | b | b | | |
| Methyl acetate | 7800000 * | b | b | b | b | b | b | b | b | b | b | | |
| Methyl tert-butyl ether | 43000 | b | b | b | b | b | b | b | b | b | b | | |
| Methylcyclohexane | 700000 * | b | b | b | b | b | b | b | b | b | b | | |
| Methylene Chloride | 11000 | 10 U | 55 U | b | 16 U | 16 U | 15 U | 18 U | 13 U | 10 U | 13 U | 10 UJ | |
| n-Butylbenzene | 390000 * | b | b | b | b | b | b | b | b | b | b | b | |
| N-propylbenzene | 340000 * | b | b | b | b | b | b | b | b | b | b | b | |
| o-Xylene | 69000 * | b | b | b | b | b | b | b | b | b | b | b | |
| Sec-butylbenzene | NSA | b | b | b | b | b | b | b | b | b | b | b | |
| Styrene | 630000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5.9 | 10.3 | 5 UJ | |
| Tert-butylbenzene | NSA | b | b | b | b | b | b | b | b | b | b | b | |
| Tetrachloroethene | 550 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U | 5 UJ | |
| Toluene | 500000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U | 5 UJ | |
| trans-1,2-dichloroethene | 15000 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U | 5 UJ | |
| trans-1,3-dichloropropene | 1700 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U | 5 UJ | |
| Trichloroethene | 440 * | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U | 5 UJ | |
| Trichlorofluoromethane | 79000 * | b | b | b | b | b | b | b | b | b | b | b | |
| Vinyl chloride | 60 | 5 U | 28 U | b | 7.9 U | 8.2 U | 7.3 U | 9.1 U | 6.3 U | 5 U | 6.4 U | 5 UJ | |
| Xylenes, Total | 63000 * | 15 U | 83 U | b | 24 U | 25 U | 15 U | 27 U | 19 U | 15 U | 19 U | 15 UJ | |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | | | | | |
| 1,1-biphenyl | 5100 * | b | b | b | b | b | b | b | b | b | b | b | |
| 1,4-dichlorobenzene | 2400 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 1-Methylnaphthalene | 22000 | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U | |
| 2,2-oxybis(1-chloropropane) | 4600 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2,4,5-trichlorophenol | 610000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2,4,6-trichlorophenol | 6100 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2,4-dichlorophenol | 18000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2,4-dimethylphenol | 120000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2,4-dinitrophenol | 12000 * | 990 U | 3100 UJ | b | 1000 U | | | 1000 UJ | 1100 U | 1000 UJ | 970 UJ | 1100 UJ | 1000 UJ |
| 2-chloronaphthalene | 630000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2-chlorophenol | 39000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2-Methyl-4,6-dinitrophenol | 490 * | 400 U | 1200 U | b | 410 U | 420 UJ | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U | |
| 2-methylnaphthalene | 31000 * | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U | |
| 2-methylphenol | 310000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 2-nitroaniline | 61000 * | 990 U | 3100 U | b | 1000 U | 1000 U | 1000 U | 1100 U | 1000 U | 970 U | 1100 U | 1000 U | |
| 2-nitrophenol | 2900 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 3,3-dichlorobenzidine | 1100 | 400 U | 1200 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U | |
| 3-nitroaniline | 610 * | 990 U | 3100 U | b | 1000 U | 1000 U | 1000 U | 1100 U | 1000 U | 970 U | 1100 U | 1000 U | |
| 4-bromophenyl phenyl ether | NSA | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 4-chloro-3-methylphenol | 610000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 4-chloroaniline | 2400 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 4-chlorophenyl phenyl ether | NSA | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U | |
| 4-methylphenol | 31000 * | b | b | b | b | b | b | b | b | b | b | b | |
| 4-nitroaniline | 24000 | 990 U | 3100 U | b | 1000 U | 1000 U | 1000 U | 1100 U | 1000 U | 970 U | 1100 U | 1000 U | |
| 4-nitrophenol | 24000 * | 990 U | 3100 U | b | 1000 U | 1000 U | 1000 U | 1100 U | 1000 U | 970 U | 1100 U | 1000 U | |
| Acenaphthene | 340000 * | 800 U | 1400 U | b | 820 U | 840 U | 830 U | 860 U | 810 U | 780 U | 860 U | 820 U | |
| Acenaphthylene | 3600 | 800 U | 1400 U | b | 820 U | 840 U | 830 U | 860 U | 810 U | 780 U | 860 U | 820 U | |
| Acetophenone | 780000 * | b | b | b | b | b | b | b | b | b | b | b | |
| Anthracene | 1700000 * | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U | |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-1 | C10-GS2-10 | C10-GS2-10 | C10-GS2-2 | C10-GS2-3 | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | |
|-------------------------------------|----------------|-------------------|--------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------|
| Sample Name: | C10-GS2-SO-1-1 | C10-GS2-SO-10-0.5 | C10-GS2-SO-10A-0.5 | C10-GS2-SO-2-1 | C10-GS2-SO-3-1 | FIELD DUPLICATE | C10-GS2-SO-4-1 | C10-GS2-SO-5-1 | C10-GS2-SO-6-1 | C10-GS2-SO-7-1 | C10-GS2-SO-8-1 | |
| Sample Date: | 5/9/2001 | 5/10/2001 | 6/13/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | |
| Parent Sample: | | | | | | C10-GS2-SO-3-1 | | | | | | |
| Sample Depth (ft bgs): | 0 - 1 | 0 - 0.5 | 0.5 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | |
| Analyte | USEPA RSL | | | | | | | | | | | |
| Atrazine | 2100 | b | b | b | b | b | b | b | b | b | b | |
| Benzaldehyde | 780000 * | b | b | b | b | b | b | b | b | b | b | |
| Benzo[a]anthracene | 150 | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Benzo[a]pyrene | 15 | 80 U | 179 | b | 82 U | 84 U | 83 U | 86 U | 81 U | 78 U | 86 U | 82 U |
| Benzo[b]fluoranthene | 150 | 80 U | 99.4 J | b | 82 U | 84 U | 83 U | 86 U | 81 U | 78 U | 86 U | 82 U |
| Benzo[g,h,i]perylene | 170000 * | 80 U | 184 | b | 82 U | 84 U | 83 U | 86 U | 81 U | 78 U | 86 U | 82 U |
| Benzo[k]fluoranthene | 1500 | 80 U | 140 U | b | 82 U | 84 U | 83 U | 86 U | 81 U | 78 U | 86 U | 82 U |
| Benzoic acid | 24000000 * | 990 U | a | b | 1000 U | a | a | 1100 U | a | a | a | a |
| Benzyl alcohol | 610000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Benzyl butyl phthalate | 260000 | 200 U | 281 J | b | 200 U | 215 | 218 | 220 U | 200 U | 190 U | 210 U | 200 U |
| Bis(2-chloroethoxy) methane | 18000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Bis(2-chloroethyl) ether | 210 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Bis(2-ethylhexyl) phthalate | 35000 | 200 U | 129 J | b | 200 U | 305 | 338 | 220 U | 200 U | 190 U | 205 J | 200 U |
| Caprolactam | 3100000 * | b | b | b | b | b | b | b | b | b | b | b |
| Carbazole | NSA | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Chrysene | 15000 | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Cresols | 750000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Dibenz[a,h]anthracene | 15 | 80 U | 140 U | b | 82 U | 84 U | 83 U | 86 U | 81 U | 78 U | 86 U | 82 U |
| Dibenzofuran | 7800 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Diethyl phthalate | 4900000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Dimethyl phthalate | NSA | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Di-n-butyl phthalate | 610000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Di-n-octyl phthalate | 610000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Fluoranthene | 230000 * | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Fluorene | 230000 * | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Hexachloro-1,3-butadiene | 6100 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Hexachlorobenzene | 300 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Hexachlorocyclopentadiene | 37000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Hexachloroethane | 4300 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Indeno[1,2,3-c,d]pyrene | 150 | 80 U | 124 J | b | 82 U | 84 U | 83 U | 86 U | 81 U | 78 U | 86 U | 82 U |
| Isophorone | 510000 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Naphthalene | 3600 | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Naphthalene (by 8260B) | 3600 | b | b | b | b | b | b | b | b | b | b | b |
| N-nitrosodi-n-propylamine | 69 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| N-nitrosodiphenylamine | 99000 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Pentachlorophenol | 890 | 990 UJ | 3100 UJ | b | 1000 UJ | 1000 UJ | 1000 UJ | 1100 UJ | 1000 UJ | 970 UJ | 1100 UJ | 1000 UJ |
| Phenanthrene | 1700000 * | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Phenol | 1800000 * | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Pyrene | 170000 * | 400 U | 680 U | b | 410 U | 420 U | 410 U | 430 U | 400 U | 390 U | 430 U | 410 U |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | | | | |
| 4,4-DDD | 2000 | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| 4,4-DDE | 1400 | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| 4,4-DDT | 1700 | 4 U | 81.4 J | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | 7.1 J | 3.9 U | 4.3 U | 4.1 U |
| Aldrin | 29 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| alpha-BHC | 77 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| alpha-Chlordane | 1600 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| Beta-BHC | 270 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| delta-BHC | 77 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| Die�din | 30 | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| Endosulfan I | 37000 * | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-1 | C10-GS2-10 | C10-GS2-10 | C10-GS2-2 | C10-GS2-3 | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | |
|---|----------------|-------------------|--------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------|
| Sample Name: | C10-GS2-SO-1-1 | C10-GS2-SO-10-0.5 | C10-GS2-SO-10A-0.5 | C10-GS2-SO-2-1 | C10-GS2-SO-3-1 | FIELD DUPLICATE | C10-GS2-SO-4-1 | C10-GS2-SO-5-1 | C10-GS2-SO-6-1 | C10-GS2-SO-7-1 | C10-GS2-SO-8-1 | |
| Sample Date: | 5/9/2001 | 5/10/2001 | 6/13/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | |
| Parent Sample: | | | | | | C10-GS2-SO-3-1 | | | | | | |
| Sample Depth (ft bgs): | 0 - 1 | 0 - 0.5 | 0.5 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | |
| Analyte | USEPA RSL | | | | | | | | | | | |
| Endosulfan II | 37000 * | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| Endosulfan sulfate | 37000 * | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| Endrin | 1800 * | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| Endrin aldehyde | 1800 * | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| Endrin ketone | 1800 * | 4 U | a | b | 4.1 U | 4.2 U | 4.1 U | 4.3 U | a | 3.9 U | 4.3 U | 4.1 U |
| Gamma-BHC (Lindane) | 520 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| Heptachlor | 110 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| Heptachlor epoxide | 53 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| Methoxychlor | 31000 * | 20 U | a | b | 20 U | 21 U | 20 U | 22 U | a | 20 U | 22 U | 20 U |
| Toxaphene | 440 | 40 U | a | b | 41 U | 42 U | 41 U | 43 U | a | 39 U | 43 U | 41 U |
| trans-Chlordane | 1600 | 2 U | a | b | 2 U | 2.1 U | 2 U | 2.2 U | a | 2 U | 2.2 U | 2 U |
| PCBs (SW8082) (µg/kg) | | | | | | | | | | | | |
| Aroclor 1016 | 390 * | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Aroclor 1221 | 140 | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Aroclor 1232 | 140 | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Aroclor 1242 | 220 | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Aroclor 1248 | 220 | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Aroclor 1254 | 110 * | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Aroclor 1260 | 220 | 20 U | 620 U | b | 20 U | 21 U | 41 U | 22 U | 20 U | 20 U | 22 U | 20 U |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/kg) | | | | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | 500 U | 492 J | 121 J | 500 U | 500 U | 500 U | 500 U | 178 J | 500 U | 500 U | 500 U |
| 1,3-Dinitrobenzene | 610 * | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U |
| 2,4,6-trinitrotoluene | 3600 * | 500 U | 22400 J | 4350 J | 500 U | 672 J | 500 UJ | 500 U | 1840 | 500 U | 500 U | 500 U |
| 2,4-dinitrotoluene (by 8270) | 1600 | 200 U | 297 J | b | 200 U | 461 J | 232 J | 220 U | 200 U | 190 U | 210 U | 200 U |
| 2,4-dinitrotoluene | 1600 | 500 U | 1310 J | 350 J | 500 U | 582 J | 500 UJ | 500 U | 1830 | 500 U | 500 U | 500 U |
| 2,6-dinitrotoluene (by 8270) | 6100 * | 200 U | 3300 | b | 200 U | 135 J | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| 2,6-dinitrotoluene | 6100 * | 500 U | 5530 J | 3590 J | 500 U | 500 U | 500 U | 500 U | 882 | 500 U | 500 U | 500 U |
| 2-amino-4,6-dinitrotoluene | 15000 * | 500 U | 59200 J | 17000 | 500 U | 207 J | 500 U | 500 U | 322 J | 500 U | 500 U | 500 U |
| 2-nitrotoluene | 2900 | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 126 J | 500 U | 500 U | 500 U |
| 3-nitrotoluene | 610 * | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | 500 U | 49800 J | 14800 | 500 U | 430 J | 500 U | 500 U | 326 J | 500 U | 500 U | 500 U |
| 4-Nitrotoluene | 24000 * | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 286 J | 500 U | 500 U | 500 U |
| HMX | 380000 * | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U |
| Nitrobenzene (by 8270) | 4800 | 200 U | 620 U | b | 200 U | 210 U | 210 U | 220 U | 200 U | 190 U | 210 U | 200 U |
| Nitrobenzene | 4800 | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U |
| RDX | 5600 | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U |
| Tetryl | 24000 * | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) | | | | | | | | | | | | |
| Aluminum | 7700 * | 13700 | 3000 J | b | 32800 | 11400 J | 13700 J | 14500 | 14400 J | 16700 J | 14600 J | 14400 J |
| Antimony | 3.1 * | 0.56 UJ | 1.8 UJ | b | 0.59 UJ | 0.6 UJ | 0.56 UJ | 0.57 UJ | 0.55 UJ | 0.53 UJ | 0.55 UJ | 0.58 UJ |
| Arsenic | 0.39 | 3.3 J | 10.5 J | b | 2.5 J | 3.2 J | 1.4 J | 1.9 J | 3.2 J | 2 J | 2.3 J | 1.8 J |
| Barium | 1500 * | 90.1 J | 1650 J | b | 430 J | 309 J | 164 J | 310 J | 126 J | 94.5 J | 133 J | 125 J |
| Beryllium | 16 * | 2.8 U | 1.8 UJ | b | 4.3 | 0.63 J | 0.59 J | 2.9 U | 0.69 J | 0.76 J | 0.67 J | 0.69 J |
| Boron | 1600 * | 28 U | 90 UJ | b | 55.9 J | 30 UJ | 28 UJ | 29 U | 28 UJ | 27 UJ | 28 UJ | 29 UJ |
| Cadmium | 7 * | 0.56 U | 184 J | b | 0.59 U | 0.6 UJ | 0.56 UJ | 1.5 | 0.55 UJ | 0.53 UJ | 0.55 UJ | 0.58 UJ |
| Calcium | NSA | 11700 | 24000 J | b | 196000 | 23400 J | 4230 J | 8860 | 3050 J | 22600 J | 3580 J | 3270 J |
| Chromium ^c | 12,000 * | 18.6 | 128 | b | 8.8 U | 28.9 | 19.1 | 27.4 | 26.2 | 29.3 | 22.9 | 21.7 |
| Chromium (hexavalent) (by SW7196A) | 0.29 | b | b | b | b | b | b | b | b | b | b | b |
| Cobalt | 2.3 * | 6.9 | 43.3 | b | 2.9 U | 6.4 | 7 | 5 | 11.7 | 10.9 | 7 | 6.2 |
| Copper | 310 * | 24.8 | 311 | b | 6.3 | 55.1 J | 23.3 J | 154 | 28.7 | 30.5 | 28.6 | 33.5 |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-1 | C10-GS2-10 | C10-GS2-10 | C10-GS2-2 | C10-GS2-3 | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 |
|-----------------------------|----------------|-------------------|--------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Name: | C10-GS2-SO-1-1 | C10-GS2-SO-10-0.5 | C10-GS2-SO-10A-0.5 | C10-GS2-SO-2-1 | C10-GS2-SO-3-1 | FIELD DUPLICATE | C10-GS2-SO-4-1 | C10-GS2-SO-5-1 | C10-GS2-SO-6-1 | C10-GS2-SO-7-1 | C10-GS2-SO-8-1 |
| Sample Date: | 5/9/2001 | 5/10/2001 | 6/13/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 |
| Parent Sample: | | | | | | C10-GS2-SO-3-1 | | | | | |
| Sample Depth (ft bgs): | 0 - 1 | 0 - 0.5 | 0.5 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Analyte | USEPA RSL | | | | | | | | | | |
| Cyanide (by SW9012) | 160 * | 0.3 U | 1.6 | b | 0.34 | 0.3 UJ | 0.63 J | 0.3 U | 0.3 U | 0.3 U | 0.3 U |
| Iron | 5500 * | 20400 | 74400 | b | 4480 | 19100 | 13300 | 10500 | 29300 | 23100 | 16400 |
| Lead | 400 | 3.5 J | 2760 J | b | 0.99 J | 41.8 J | 6.1 J | 82.6 J | 5.5 J | 5.1 J | 7.4 J |
| Lithium | 16 * | 17.8 J | 1.8 U | b | 16.3 J | 19.4 J | 27 J | 36.3 J | 27.6 J | 26.3 J | 27.4 J |
| Magnesium | NSA | 6020 | 7220 J | b | 11900 | 10300 J | 4050 J | 20400 | 4240 J | 7000 J | 2930 J |
| Manganese | 180 * | 262 | 604 J | b | 1390 | 220 J | 102 J | 162 | 161 J | 304 J | 132 J |
| Mercury (by 7471) | 0.78 * | 0.078 U | 0.31 | b | 0.075 U | 0.079 U | 0.078 U | 0.081 U | 0.079 U | 0.076 U | 0.073 U |
| Nickel | 150 * | 14.9 J | 49.4 J | b | 2.4 U | 13.3 J | 12 J | 21.8 J | 17.8 J | 21.3 J | 15.3 J |
| Potassium | NSA | 1710 J | 653 J | b | 1560 J | 1210 J | 1210 J | 1900 J | 1580 J | 2780 J | 1320 J |
| Selenium | 39 * | 0.56 UJ | 24 J | b | 0.95 J | 0.6 UJ | 0.56 UJ | 0.57 UJ | 0.55 UJ | 0.53 UJ | 0.55 UJ |
| Silver | 39 * | 1.1 U | 3.6 U | b | 1.2 U | 1.2 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U |
| Sodium | NSA | 385 J | 180 U | b | 1470 J | 60 U | 56 U | 557 J | 55 U | 214 J | 55 U |
| Strontium (by SR-03-RC Mod) | 999999 * | b | b | b | b | b | b | b | b | b | b |
| Thallium | 0.078 * | 0.64 | 1.8 UJ | b | 0.59 U | 0.6 UJ | 0.56 UJ | 0.57 U | 0.55 UJ | 0.53 UJ | 0.55 UJ |
| Vanadium | 39 * | 27 | 11.6 J | b | 7.7 | 16.7 J | 19 J | 18.1 | 26.5 J | 27.6 J | 23.8 J |
| Zinc | 2300 * | 34.8 J | 5490 J | b | 9.3 J | 10600 J | 449 J | 3180 J | 43.3 J | 60.3 J | 60.1 J |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-9 | C10-GS2-BP1 | C10-GS2-DET | C10-GS2-DET | C10-GS2-HE | C10-GS2-HE | C10-GS2-HN | C10-GS2-HN | C10-GS2-HN | C10-GS2-HS | C10-GS2-HS | C10-GS2-HW |
|--|----------------|----------------|----------------|--------------|---------------|-------------|---------------|-------------|----------------|---------------|-------------|---------------|
| Sample Name: | C10-GS2-SO-9-1 | C10-GS2-SO-BP1 | C2-OXY-DET-0.5 | C2-OXY-DET-1 | C2-OXY-HE-0.5 | C2-OXY-HE-1 | C2-OXY-HN-0.5 | C2-OXY-HN-1 | C2-OXY-SO-DUP1 | C2-OXY-HS-0.5 | C2-OXY-HS-1 | C2-OXY-HW-0.5 |
| Sample Date: | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | | | | | C2-OXY-HN-1 | | | |
| Sample Depth (ft bgs): | 0 - 1 | z | 0 - 0.5 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | b | b | b | b | b | b | b | b | b | b | b |
| 1,1,1-trichloroethane | 870000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,1,2,2-tetrachloroethane | 560 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,1,2-trichloroethane | 160 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,1-dichloroethane | 3300 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,1-dichloroethene | 24000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,2,3-trichlorobenzene | 4900 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,2,3-trichloropropane | 5 | b | b | b | b | b | b | b | b | b | b | b |
| 1,2,4-trichlorobenzene | 6200 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 1,2,4-trimethylbenzene | 6200 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | b | b | b | b | b | b | b | b | b | b | b |
| 1,2-dibromoethane | 34 | b | b | b | b | b | b | b | b | b | b | b |
| 1,2-dichlorobenzene | 190000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 1,2-dichloroethane | 430 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,2-dichloroethene | 70000 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,2-dichloropropane | 940 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| 1,3,5-trimethylbenzene | 78000 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,3-dichlorobenzene | 610 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 1,3-dichloropropane | 160000 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b | b | b | b |
| 2,2-dichloropropane | NSA | b | b | b | b | b | b | b | b | b | b | b |
| 2-butanone | 2800000 * | 14 U | 24 U | b | b | b | b | b | b | b | b | b |
| 2-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b | b | b | b |
| 2-hexanone | 21000 * | 14 U | 24 U | b | b | b | b | b | b | b | b | b |
| 4-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b | b | b | b |
| 4-Isopropyltoluene | NSA | b | b | b | b | b | b | b | b | b | b | b |
| 4-methyl-2-pentanone | 530000 * | 14 U | 24 U | b | b | b | b | b | b | b | b | b |
| Acetone | 6100000 * | 106 | 104 J | b | b | b | b | b | b | b | b | b |
| Benzene | 1100 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Bromobenzene | 30000 * | b | b | b | b | b | b | b | b | b | b | b |
| Bromochloromethane | 16000 * | b | b | b | b | b | b | b | b | b | b | b |
| Bromodichloromethane | 270 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Bromoform | 62000 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Bromomethane | 730 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Carbon disulfide | 82000 * | 14 U | 24 U | b | b | b | b | b | b | b | b | b |
| Carbon tetrachloride | 610 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Chlorobenzene | 29000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Chloroethane | 1500000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Chloroform | 290 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Chloromethane | 12000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Cis-1,2-dichloroethylene | 16000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Cis-1,3-dichloropropene | 160000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Cyclohexane | 700000 * | b | b | b | b | b | b | b | b | b | b | b |
| Dibromochloromethane | 680 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Dibromomethane | 2500 * | b | b | b | b | b | b | b | b | b | b | b |
| Dichlorodifluoromethane | 9400 * | b | b | b | b | b | b | b | b | b | b | b |
| Ethylbenzene | 5400 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | b | b | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-9 | C10-GS2-BP1 | C10-GS2-DET | C10-GS2-DET | C10-GS2-HE | C10-GS2-HE | C10-GS2-HN | C10-GS2-HN | C10-GS2-HN | C10-GS2-HS | C10-GS2-HS | C10-GS2-HW |
|---|----------------|----------------|----------------|--------------|---------------|-------------|---------------|-------------|----------------|---------------|-------------|---------------|
| Sample Name: | C10-GS2-SO-9-1 | C10-GS2-SO-BP1 | C2-OXY-DET-0.5 | C2-OXY-DET-1 | C2-OXY-HE-0.5 | C2-OXY-HE-1 | C2-OXY-HN-0.5 | C2-OXY-HN-1 | C2-OXY-SO-DUP1 | C2-OXY-HS-0.5 | C2-OXY-HS-1 | C2-OXY-HW-0.5 |
| Sample Date: | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | | | | | C2-OXY-HN-1 | | | |
| Sample Depth (ft bgs): | 0 - 1 | z | 0 - 0.5 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 |
| Analyst | USEPA RSL | | | | | | | | | | | |
| Isopropylbenzene | 210000 * | b | b | b | b | b | b | b | b | b | b | b |
| m,p-Xylene | 63000 * | b | b | b | b | b | b | b | b | b | b | b |
| Methyl acetate | 7800000 * | b | b | b | b | b | b | b | b | b | b | b |
| Methyl tert-butyl ether | 43000 | b | b | b | b | b | b | b | b | b | b | b |
| Methylcyclohexane | 700000 * | b | b | b | b | b | b | b | b | b | b | b |
| Methylene Chloride | 11000 | 14 U | 24 U | b | b | b | b | b | b | b | b | b |
| n-Butylbenzene | 390000 * | b | b | b | b | b | b | b | b | b | b | b |
| N-propylbenzene | 340000 * | b | b | b | b | b | b | b | b | b | b | b |
| o-Xylene | 69000 * | b | b | b | b | b | b | b | b | b | b | b |
| Sec-butylbenzene | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Styrene | 630000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Tert-butylbenzene | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Tetrachloroethene | 550 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Toluene | 500000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| trans-1,2-dichloroethene | 15000 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| trans-1,3-dichloropropene | 1700 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Trichloroethene | 440 * | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Trichlorofluoromethane | 79000 * | b | b | b | b | b | b | b | b | b | b | b |
| Vinyl chloride | 60 | 6.8 U | 12 U | b | b | b | b | b | b | b | b | b |
| Xylenes, Total | 63000 * | 20 U | 37 U | b | b | b | b | b | b | b | b | b |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | | | | |
| 1,1-biphenyl | 5100 * | b | b | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 1-Methylnaphthalene | 22000 | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| 2,2-oxybis(1-chloropropane) | 4600 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2,4,5-trichlorophenol | 610000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2,4,6-trichlorophenol | 6100 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2,4-dichlorophenol | 18000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2,4-dimethylphenol | 120000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2,4-dinitrophenol | 12000 * | 1000 UJ | 13000 UJ | b | b | b | b | b | b | b | b | b |
| 2-chloronaphthalene | 630000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2-chlorophenol | 39000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2-Methyl-4,6-dinitrophenol | 490 * | 400 U | 5100 U | b | b | b | b | b | b | b | b | b |
| 2-methylnaphthalene | 31000 * | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| 2-methylphenol | 310000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 2-nitroaniline | 61000 * | 1000 U | 13000 U | b | b | b | b | b | b | b | b | b |
| 2-nitrophenol | 2900 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 3,3-dichlorobenzidine | 1100 | 400 U | 5100 U | b | b | b | b | b | b | b | b | b |
| 3-nitroaniline | 610 * | 1000 U | 13000 U | b | b | b | b | b | b | b | b | b |
| 4-bromophenyl phenyl ether | NSA | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 4-chloro-3-methylphenol | 610000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 4-chloroaniline | 2400 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 4-chlorophenyl phenyl ether | NSA | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| 4-methylphenol | 31000 * | b | b | b | b | b | b | b | b | b | b | b |
| 4-nitroaniline | 24000 | 1000 U | 13000 U | b | b | b | b | b | b | b | b | b |
| 4-nitrophenol | 24000 * | 1000 U | 13000 U | b | b | b | b | b | b | b | b | b |
| Acenaphthene | 340000 * | 800 U | 120000 U | b | b | b | b | b | b | b | b | b |
| Acenaphthylene | 3600 | 800 U | 120000 U | b | b | b | b | b | b | b | b | b |
| Acetophenone | 780000 * | b | b | b | b | b | b | b | b | b | b | b |
| Anthracene | 1700000 * | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-9 | C10-GS2-BP1 | C10-GS2-DET | C10-GS2-DET | C10-GS2-HE | C10-GS2-HE | C10-GS2-HN | C10-GS2-HN | C10-GS2-HN | C10-GS2-HS | C10-GS2-HS | C10-GS2-HW |
|-------------------------------------|----------------|----------------|----------------|--------------|---------------|-------------|---------------|-------------|----------------|---------------|-------------|---------------|
| Sample Name: | C10-GS2-SO-9-1 | C10-GS2-SO-BP1 | C2-OXY-DET-0.5 | C2-OXY-DET-1 | C2-OXY-HE-0.5 | C2-OXY-HE-1 | C2-OXY-HN-0.5 | C2-OXY-HN-1 | C2-OXY-SO-DUP1 | C2-OXY-HS-0.5 | C2-OXY-HS-1 | C2-OXY-HW-0.5 |
| Sample Date: | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | | | | | C2-OXY-HN-1 | | | |
| Sample Depth (ft bgs): | 0 - 1 | z | 0 - 0.5 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | | | | |
| Atrazine | 2100 | b | b | b | b | b | b | b | b | b | b | b |
| Benzaldehyde | 780000 * | b | b | b | b | b | b | b | b | b | b | b |
| Benzo[a]anthracene | 150 | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Benzo[a]pyrene | 15 | 80 U | 12000 U | b | b | b | b | b | b | b | b | b |
| Benzo[b]fluoranthene | 150 | 80 U | 12000 U | b | b | b | b | b | b | b | b | b |
| Benzo[g,h,i]perylene | 1700000 * | 80 U | 12000 U | b | b | b | b | b | b | b | b | b |
| Benzo[k]fluoranthene | 1500 | 80 U | 12000 U | b | b | b | b | b | b | b | b | b |
| Benzoic acid | 24000000 * | a | a | b | b | b | b | b | b | b | b | b |
| Benzyl alcohol | 610000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Benzyl butyl phthalate | 260000 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Bis(2-chloroethoxy) methane | 18000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Bis(2-chloroethyl) ether | 210 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Bis(2-ethylhexyl) phthalate | 35000 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Caprolactam | 3100000 * | b | b | b | b | b | b | b | b | b | b | b |
| Carbazole | NSA | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Chrysene | 15000 | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Cresols | 750000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Dibenz[a,h]anthracene | 15 | 80 U | 12000 U | b | b | b | b | b | b | b | b | b |
| Dibenzofuran | 7800 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Diethyl phthalate | 4900000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Dimethyl phthalate | NSA | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Di-n-butyl phthalate | 610000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Di-n-octyl phthalate | 610000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Fluoranthene | 230000 * | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Fluorene | 230000 * | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Hexachlorobenzene | 300 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Hexachlorocyclopentadiene | 37000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Hexachloroethane | 4300 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Indeno[1,2,3-c,d]pyrene | 150 | 80 U | 12000 U | b | b | b | b | b | b | b | b | b |
| Isophorone | 510000 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Naphthalene | 3600 | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Naphthalene (by 8260B) | 3600 | b | b | b | b | b | b | b | b | b | b | b |
| N-nitrosodi-n-propylamine | 69 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| N-nitrosodiphenylamine | 99000 | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Pentachlorophenol | 890 | 1000 UJ | 13000 UJ | b | b | b | b | b | b | b | b | b |
| Phenanthrene | 1700000 * | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Phenol | 1800000 * | 200 U | 2500 U | b | b | b | b | b | b | b | b | b |
| Pyrene | 170000 * | 400 U | 62000 U | b | b | b | b | b | b | b | b | b |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | | | | |
| 4,4-DDD | 2000 | 4 U | 500 U | b | b | b | b | b | b | b | b | b |
| 4,4-DDE | 1400 | 4 U | 500 U | b | b | b | b | b | b | b | b | b |
| 4,4-DDT | 1700 | 4 U | 500 U | b | b | b | b | b | b | b | b | b |
| Aldrin | 29 | 2 U | 250 U | b | b | b | b | b | b | b | b | b |
| alpha-BHC | 77 | 2 U | 250 U | b | b | b | b | b | b | b | b | b |
| alpha-Chlordane | 1600 | 2 U | 250 U | b | b | b | b | b | b | b | b | b |
| Beta-BHC | 270 | 2 U | 250 U | b | b | b | b | b | b | b | b | b |
| delta-BHC | 77 | 2 U | 250 U | b | b | b | b | b | b | b | b | b |
| Die�din | 30 | 4 U | 500 U | b | b | b | b | b | b | b | b | b |
| Endosulfan I | 37000 * | 4 U | 500 U | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-9 | C10-GS2-BP1 | C10-GS2-DET | C10-GS2-DET | C10-GS2-HE | C10-GS2-HE | C10-GS2-HN | C10-GS2-HN | C10-GS2-HN | C10-GS2-HS | C10-GS2-HS | C10-GS2-HW | |
|---|----------------|----------------|----------------|--------------|---------------|-------------|---------------|-------------|----------------|---------------|-------------|---------------|--------|
| Sample Name: | C10-GS2-SO-9-1 | C10-GS2-SO-BP1 | C2-OXY-DET-0.5 | C2-OXY-DET-1 | C2-OXY-HE-0.5 | C2-OXY-HE-1 | C2-OXY-HN-0.5 | C2-OXY-HN-1 | C2-OXY-SO-DUP1 | C2-OXY-HS-0.5 | C2-OXY-HS-1 | C2-OXY-HW-0.5 | |
| Sample Date: | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | |
| Parent Sample: | | | | | | | | | C2-OXY-HN-1 | | | | |
| Sample Depth (ft bgs): | 0 - 1 | z | 0 - 0.5 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | |
| Analyte | USEPA RSL | | | | | | | | | | | | |
| Endosulfan II | 37000 * | 4 U | 500 U | b | b | b | b | b | b | b | b | b | |
| Endosulfan sulfate | 37000 * | 4 U | 500 U | b | b | b | b | b | b | b | b | b | |
| Endrin | 1800 * | 4 U | 500 U | b | b | b | b | b | b | b | b | b | |
| Endrin aldehyde | 1800 * | 4 U | 500 U | b | b | b | b | b | b | b | b | b | |
| Endrin ketone | 1800 * | 4 U | 500 U | b | b | b | b | b | b | b | b | b | |
| Gamma-BHC (Lindane) | 520 | 2 U | 250 U | b | b | b | b | b | b | b | b | b | |
| Heptachlor | 110 | 2 U | 250 U | b | b | b | b | b | b | b | b | b | |
| Heptachlor epoxide | 53 | 2 U | 250 U | b | b | b | b | b | b | b | b | b | |
| Methoxychlor | 31000 * | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Toxaphene | 440 | 40 U | 5000 U | b | b | b | b | b | b | b | b | b | |
| trans-Chlordane | 1600 | 2 U | 250 U | b | b | b | b | b | b | b | b | b | |
| PCBs (SW8082) (µg/kg) | | | | | | | | | | | | | |
| Aroclor 1016 | 390 * | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Aroclor 1221 | 140 | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Aroclor 1232 | 140 | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Aroclor 1242 | 220 | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Aroclor 1248 | 220 | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Aroclor 1254 | 110 * | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Aroclor 1260 | 220 | 20 U | 2500 U | b | b | b | b | b | b | b | b | b | |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/k | | | | | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | 500 U | 500 U | 110 J | 140 U | 220 U | 5500 | 1400 U | 190 U | 1300 U | 130 NJ | 1800 | 1900 |
| 1,3-Dinitrobenzene | 610 * | 500 U | 500 U | 390 J | 140 U | 220 U | 170 U | 1400 U | 190 U | 1300 U | 280 U | 810 | 1600 |
| 2,4,6-trinitrotoluene | 3600 * | 500 U | 500 U | 220 U | 140 U | 220 U | 50000 | 9600 | 400 | 8800 | 280 U | 780 NJ | 3000 J |
| 2,4-dinitrotoluene (by 8270) | 1600 | 200 U | 500 U | b | b | b | b | b | b | b | b | b | b |
| 2,4-dinitrotoluene | 1600 | 500 U | 2500 U | 970 | 140 U | 770 | 390 | 5600 | 410 | 2800 | 830 | 960 | 1900 |
| 2,6-dinitrotoluene (by 8270) | 6100 * | 200 U | 500 U | b | b | b | b | b | b | b | b | b | b |
| 2,6-dinitrotoluene | 6100 * | 500 U | 2500 U | 1200 | 140 U | 580 NJ | 330 J | 3300 | 190 U | 2900 NJ | 370 NJ | 2100 | 7200 |
| 2-amino-4,6-dinitrotoluene | 15000 * | 500 U | 500 U | 750 | 140 U | 220 U | 8300 | 98000 | 7000 | 85000 | 280 U | 440 | 5300 |
| 2-nitrotoluene | 2900 | 500 U | 500 U | 220 U | 140 U | 220 U | 170 U | 14000 NJ | 190 U | 1300 U | 280 U | 180 U | 270 NJ |
| 3-nitrotoluene | 610 * | 500 U | 500 U | 220 U | 140 U | 220 U | 170 U | 1400 U | 190 U | 1300 U | 280 U | 180 U | 160 NJ |
| 4-amino-2,6-dinitrotoluene | 15000 * | 500 U | 500 U | 2100 | 140 U | 220 U | 4900 | 130000 | 8400 | 130000 | 280 U | 380 J | 8500 |
| 4-Nitrotoluene | 24000 * | 500 U | 500 U | 220 U | 140 U | 220 U | 170 U | 1400 U | 190 U | 1300 U | 280 U | 180 U | 280 U |
| HMX | 380000 * | 500 U | 500 U | 220 U | 140 U | 56000 J | 67 NJ | 1100 NJ | 120 J | 1300 NJ | 280 U | 440 NJ | 280 U |
| Nitrobenzene (by 8270) | 4800 | 200 U | 500 U | b | b | b | b | b | b | b | b | b | b |
| Nitrobenzene | 4800 | 500 U | 2500 U | 220 U | 140 U | 220 U | 170 U | 1400 U | 190 U | 1300 U | 280 U | 180 U | 280 U |
| RDX | 5600 | 500 U | 500 U | 220 U | 140 U | 220 U | 320 J | 1400 U | 190 U | 1300 NJ | 280 U | 270 NJ | 280 U |
| Tetryl | 24000 * | 500 U | 500 U | 220 U | 140 U | b | 170 U | 1370 U | 187 U | 1310 U | 276 U | 184 U | 280 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) | | | | | | | | | | | | | |
| Aluminum | 7700 * | 11100 J | 1960 J | 6720 | 12000 | 6420 | 10400 | 21900 | 11800 | 17600 | 1310 | 7200 | 5430 |
| Antimony | 3.1 * | 0.52 UJ | 0.62 J | 15 U | 1.2 U | 1 J | 0.93 J | 1.3 J | 3 UJ | 1.6 J | 1.6 J | 4.2 J | 1.9 J |
| Arsenic | 0.39 | 2.2 J | 1.3 J | 15 U | 2.9 | 4.6 J | 16 | 3.3 J | 4.9 J | 3.2 J | 6 | 10.1 | 2.4 J |
| Barium | 1500 * | 88.3 J | 5.4 J | 4840 | 134 | 463 | 1750 | 465 | 293 | 804 | 2890 | 3910 | 1970 |
| Beryllium | 16 * | 0.53 J | 0.47 UJ | 0.75 U | 0.83 | 0.06 J | 0.071 J | 0.069 J | 0.54 | 0.12 J | 0.15 U | 0.13 J | 0.15 U |
| Boron | 1600 * | 26 UJ | 24 UJ | 225 UJ | 18 UJ | 45 U | 45 U | 45 U | 45 U | 45 U | 45 U | 45 U | 45 U |
| Cadmium | 7 * | 0.52 UJ | 0.47 UJ | 0.75 U | 0.11 | 17.4 | 23.6 | 35.9 | 5.6 | 38.3 | 7.7 | 23.3 | 12.2 |
| Calcium | NSA | 3140 J | 4220 J | 12800 J | 5620 J | 6650 | 61900 | 10800 | 5380 | 9740 | 6080 | 6170 | 6480 |
| Chromium ^c | 12,000 * | 19 | 941 | 89.8 | 20.6 | 33.9 J | 146 J | 111 J | 80.4 J | 214 J | 46.8 J | 128 J | 92.2 J |
| Chromium (hexavalent) (by SW7196A) | 0.29 | b | b | 1.3 | 0.24 U | 3.6 UJ | 0.59 J | 22.4 J | 0.65 J | 4.4 J | 11.8 J | 0.71 J | 170 J |
| Cobalt | 2.3 * | 6 | 33.4 | 5.4 | 9.6 | 2.9 | 6 | 6.7 | 9.3 | 11.4 | 5.5 | 6.2 | 2 |
| Copper | 310 * | 22.3 | 3.3 | 239 | 26.6 | 259 | 407 | 1310 | 85.2 | 1170 | 97.9 | 389 | 414 |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-9 | C10-GS2-BP1 | C10-GS2-DET | C10-GS2-DET | C10-GS2-HE | C10-GS2-HE | C10-GS2-HN | C10-GS2-HN | C10-GS2-HN | C10-GS2-HS | C10-GS2-HS | C10-GS2-HW |
|-----------------------------|----------------|----------------|----------------|--------------|---------------|-------------|---------------|-------------|----------------|---------------|-------------|---------------|
| Sample Name: | C10-GS2-SO-9-1 | C10-GS2-SO-BP1 | C2-OXY-DET-0.5 | C2-OXY-DET-1 | C2-OXY-HE-0.5 | C2-OXY-HE-1 | C2-OXY-HN-0.5 | C2-OXY-HN-1 | C2-OXY-SO-DUP1 | C2-OXY-HS-0.5 | C2-OXY-HS-1 | C2-OXY-HW-0.5 |
| Sample Date: | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | | | | | C2-OXY-HN-1 | | | |
| Sample Depth (ft bgs): | 0 - 1 | z | 0 - 0.5 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | | | | |
| Cyanide (by SW9012) | 160 * | 0.3 U | 0.25 U | b | b | b | b | b | b | b | b | b |
| Iron | 5500 * | 15500 | 17400 | 99900 | 22800 | 10900 | 13000 | 14000 | 49700 | 18200 | 51300 | 29300 |
| Lead | 400 | 4.1 J | 4.6 J | 59.3 | 5.3 | 1960 | 1160 | 2110 | 234 | 2750 | 1040 | 1660 |
| Lithium | 16 * | 24 J | 0.47 U | 4.8 J | 18.5 | 1.8 J | 3.6 J | 3.1 J | 19.6 | 3.9 J | 0.53 J | 3.2 J |
| Magnesium | NSA | 2090 J | 97300 J | 32600 J | 5910 J | 3430 | 21800 | 8470 | 7600 | 14600 | 2980 | 29000 |
| Manganese | 180 * | 83.5 J | 262 J | 625 J | 147 J | 225 | 535 | 131 | 287 | 198 | 415 | 352 |
| Mercury (by 7471) | 0.78 * | 0.075 U | 0.06 U | 0.031 B | 0.032 B | 0.1 | 0.042 | 0.13 | 0.13 | 0.12 | 0.1 | 0.058 |
| Nickel | 150 * | 11.3 J | 699 J | 22.2 | 21.6 | 19.1 J | 75.2 J | 40.7 J | 27.5 J | 63.5 J | 25.8 J | 53.6 J |
| Potassium | NSA | 784 J | 150 J | 610 J | 777 J | 287 | 118 | 634 | 1090 | 1790 | 201 | 214 |
| Selenium | 39 * | 0.52 UJ | 0.47 UJ | 3.75 U | 1.7 | 0.65 J | 0.36 J | 1.3 J | 1.6 J | 1.1 J | 0.44 J | 0.34 J |
| Silver | 39 * | 1 U | 0.94 U | 0.6 U | 0.037 J | 0.32 J | 0.27 J | 0.37 J | 0.082 J | 0.39 J | 0.098 J | 0.29 J |
| Sodium | NSA | 52 U | 47 U | 136 J | 41.9 J | 60 U | 134 | 101 J | 38.7 J | 93.9 J | 60 U | 115 J |
| Strontium (by SR-03-RC Mod) | 999999 * | b | b | b | b | b | b | b | b | b | b | b |
| Thallium | 0.078 * | 0.52 UJ | 0.47 UJ | 3.75 U | 0.3 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Vanadium | 39 * | 24.5 J | 220 J | 52.5 U | 30.3 | 5.6 | 6.7 | 13.3 | 21.7 | 18.5 | 10.5 U | 6.7 |
| Zinc | 2300 * | 33.4 J | 0.94 U | 17100 J | 42.4 J | 9450 J | 52300 J | 12900 J | 1220 J | 13700 J | 6930 J | 35900 J |
| | | | | | | | | | | | | 20000 J |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-HW | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 | C10-GS2-P24 | C10-GS2-PE | C10-GS2-PE | C10-GS2-PN | C10-GS2-PN |
|--|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|----------------|
| Sample Name: | C2-OXY-HW-1 | C2-OXY-SO-P21-1 | C2-OXY-SO-P22-2 | C2-OXY-SO-P23-1 | C2-OXY-SO-DUPE1 | C2-OXY-SO-P24-1 | C2-OXY-SO-PE-0.5 | C2-OXY-SO-PE-1 | C2-OXY-SO-PN-0.5 | C2-OXY-SO-PN-1 |
| Sample Date: | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | C2-OXY-SO-P23-1 | | | | | |
| Sample Depth (ft bgs): | 1 - 1.5 | 1 - 1.5 | 1.5 - 2 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 |
| Analyte | USEPA RSL | | | | | | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | b | b | b | b | b | b | b | b | b |
| 1,1,1-trichloroethane | 870000 * | b | b | b | b | b | b | b | b | b |
| 1,1,2,2-tetrachloroethane | 560 | b | b | b | b | b | b | b | b | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | b | b | b | b | b | b | b | b | b |
| 1,1,2-trichloroethane | 160 * | b | b | b | b | b | b | b | b | b |
| 1,1-dichloroethane | 3300 | b | b | b | b | b | b | b | b | b |
| 1,1-dichloroethene | 24000 * | b | b | b | b | b | b | b | b | b |
| 1,2,3-trichlorobenzene | 4900 * | b | b | b | b | b | b | b | b | b |
| 1,2,3-trichloropropane | 5 | b | b | b | b | b | b | b | b | b |
| 1,2,4-trichlorobenzene | 6200 * | b | b | b | b | b | b | b | b | b |
| 1,2,4-trimethylbenzene | 6200 * | b | b | b | b | b | b | b | b | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | b | b | b | b | b | b | b | b | b |
| 1,2-dibromoethane | 34 | b | b | b | b | b | b | b | b | b |
| 1,2-dichlorobenzene | 190000 * | b | b | b | b | b | b | b | b | b |
| 1,2-dichloroethane | 430 | b | b | b | b | b | b | b | b | b |
| 1,2-dichloroethene | 70000 * | b | b | b | b | b | b | b | b | b |
| 1,2-dichloropropane | 940 | b | b | b | b | b | b | b | b | b |
| 1,3,5-trimethylbenzene | 78000 * | b | b | b | b | b | b | b | b | b |
| 1,3-dichlorobenzene | 610 * | b | b | b | b | b | b | b | b | b |
| 1,3-dichloropropane | 160000 * | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b | b |
| 2,2-dichloropropane | NSA | b | b | b | b | b | b | b | b | b |
| 2-butanone | 2800000 * | b | b | b | b | b | b | b | b | b |
| 2-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b | b |
| 2-hexanone | 21000 * | b | b | b | b | b | b | b | b | b |
| 4-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b | b |
| 4-Isopropyltoluene | NSA | b | b | b | b | b | b | b | b | b |
| 4-methyl-2-pentanone | 530000 * | b | b | b | b | b | b | b | b | b |
| Acetone | 6100000 * | b | b | b | b | b | b | b | b | b |
| Benzene | 1100 | b | b | b | b | b | b | b | b | b |
| Bromobenzene | 30000 * | b | b | b | b | b | b | b | b | b |
| Bromochloromethane | 16000 * | b | b | b | b | b | b | b | b | b |
| Bromodichloromethane | 270 | b | b | b | b | b | b | b | b | b |
| Bromoform | 62000 | b | b | b | b | b | b | b | b | b |
| Bromomethane | 730 * | b | b | b | b | b | b | b | b | b |
| Carbon disulfide | 82000 * | b | b | b | b | b | b | b | b | b |
| Carbon tetrachloride | 610 | b | b | b | b | b | b | b | b | b |
| Chlorobenzene | 29000 * | b | b | b | b | b | b | b | b | b |
| Chloroethane | 1500000 * | b | b | b | b | b | b | b | b | b |
| Chloroform | 290 | b | b | b | b | b | b | b | b | b |
| Chloromethane | 12000 * | b | b | b | b | b | b | b | b | b |
| Cis-1,2-dichloroethene | 16000 * | b | b | b | b | b | b | b | b | b |
| Cis-1,3-dichloropropene | 160000 * | b | b | b | b | b | b | b | b | b |
| Cyclohexane | 700000 * | b | b | b | b | b | b | b | b | b |
| Dibromochloromethane | 680 | b | b | b | b | b | b | b | b | b |
| Dibromomethane | 2500 * | b | b | b | b | b | b | b | b | b |
| Dichlorodifluoromethane | 9400 * | b | b | b | b | b | b | b | b | b |
| Ethylbenzene | 5400 | b | b | b | b | b | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-HW | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 | C10-GS2-P24 | C10-GS2-PE | C10-GS2-PE | C10-GS2-PN | C10-GS2-PN |
|---|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|----------------|
| Sample Name: | C2-OXY-HW-1 | C2-OXY-SO-P21-1 | C2-OXY-SO-P22-2 | C2-OXY-SO-P23-1 | C2-OXY-SO-DUPE1 | C2-OXY-SO-P24-1 | C2-OXY-SO-PE-0.5 | C2-OXY-SO-PE-1 | C2-OXY-SO-PN-0.5 | C2-OXY-SO-PN-1 |
| Sample Date: | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | C2-OXY-SO-P23-1 | | | | | |
| Sample Depth (ft bgs): | 1 - 1.5 | 1 - 1.5 | 1.5 - 2 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 |
| Analyte | USEPA RSL | | | | | | | | | |
| Isopropylbenzene | 210000 * | b | b | b | b | b | b | b | b | b |
| m,p-Xylene | 63000 * | b | b | b | b | b | b | b | b | b |
| Methyl acetate | 7800000 * | b | b | b | b | b | b | b | b | b |
| Methyl tert-butyl ether | 43000 | b | b | b | b | b | b | b | b | b |
| Methylcyclohexane | 700000 * | b | b | b | b | b | b | b | b | b |
| Methylene Chloride | 11000 | b | b | b | b | b | b | b | b | b |
| n-Butylbenzene | 390000 * | b | b | b | b | b | b | b | b | b |
| N-propylbenzene | 340000 * | b | b | b | b | b | b | b | b | b |
| o-Xylene | 69000 * | b | b | b | b | b | b | b | b | b |
| Sec-butylbenzene | NSA | b | b | b | b | b | b | b | b | b |
| Styrene | 630000 * | b | b | b | b | b | b | b | b | b |
| Tert-butylbenzene | NSA | b | b | b | b | b | b | b | b | b |
| Tetrachloroethene | 550 | b | b | b | b | b | b | b | b | b |
| Toluene | 500000 * | b | b | b | b | b | b | b | b | b |
| trans-1,2-dichloroethene | 15000 * | b | b | b | b | b | b | b | b | b |
| trans-1,3-dichloropropene | 1700 | b | b | b | b | b | b | b | b | b |
| Trichloroethene | 440 * | b | b | b | b | b | b | b | b | b |
| Trichlorofluoromethane | 79000 * | b | b | b | b | b | b | b | b | b |
| Vinyl chloride | 60 | b | b | b | b | b | b | b | b | b |
| Xylenes, Total | 63000 * | b | b | b | b | b | b | b | b | b |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | | |
| 1,1-biphenyl | 5100 * | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b | b |
| 1-Methylnaphthalene | 22000 | b | b | b | b | b | b | b | b | b |
| 2,2-oxybis(1-chloropropane) | 4600 | b | b | b | b | b | b | b | b | b |
| 2,4,5-trichlorophenol | 610000 * | b | b | b | b | b | b | b | b | b |
| 2,4,6-trichlorophenol | 6100 * | b | b | b | b | b | b | b | b | b |
| 2,4-dichlorophenol | 18000 * | b | b | b | b | b | b | b | b | b |
| 2,4-dimethylphenol | 120000 * | b | b | b | b | b | b | b | b | b |
| 2,4-dinitrophenol | 12000 * | b | b | b | b | b | b | b | b | b |
| 2-chloronaphthalene | 630000 * | b | b | b | b | b | b | b | b | b |
| 2-chlorophenol | 39000 * | b | b | b | b | b | b | b | b | b |
| 2-Methyl-4,6-dinitrophenol | 490 * | b | b | b | b | b | b | b | b | b |
| 2-methylnaphthalene | 31000 * | b | b | b | b | b | b | b | b | b |
| 2-methylphenol | 310000 * | b | b | b | b | b | b | b | b | b |
| 2-nitroaniline | 61000 * | b | b | b | b | b | b | b | b | b |
| 2-nitrophenol | 2900 | b | b | b | b | b | b | b | b | b |
| 3,3-dichlorobenzidine | 1100 | b | b | b | b | b | b | b | b | b |
| 3-nitroaniline | 610 * | b | b | b | b | b | b | b | b | b |
| 4-bromophenyl phenyl ether | NSA | b | b | b | b | b | b | b | b | b |
| 4-chloro-3-methylphenol | 610000 * | b | b | b | b | b | b | b | b | b |
| 4-chloroaniline | 2400 | b | b | b | b | b | b | b | b | b |
| 4-chlorophenyl phenyl ether | NSA | b | b | b | b | b | b | b | b | b |
| 4-methylphenol | 31000 * | b | b | b | b | b | b | b | b | b |
| 4-nitroaniline | 24000 | b | b | b | b | b | b | b | b | b |
| 4-nitrophenol | 24000 * | b | b | b | b | b | b | b | b | b |
| Acenaphthene | 340000 * | b | b | b | b | b | b | b | b | b |
| Acenaphthylene | 3600 | b | b | b | b | b | b | b | b | b |
| Acetophenone | 780000 * | b | b | b | b | b | b | b | b | b |
| Anthracene | 1700000 * | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-HW | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 | C10-GS2-P24 | C10-GS2-PE | C10-GS2-PE | C10-GS2-PN | C10-GS2-PN |
|-------------------------------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|----------------|
| Sample Name: | C2-OXY-HW-1 | C2-OXY-SO-P21-1 | C2-OXY-SO-P22-2 | C2-OXY-SO-P23-1 | C2-OXY-SO-DUPE1 | C2-OXY-SO-P24-1 | C2-OXY-SO-PE-0.5 | C2-OXY-SO-PE-1 | C2-OXY-SO-PN-0.5 | C2-OXY-SO-PN-1 |
| Sample Date: | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | C2-OXY-SO-P23-1 | | | | | |
| Sample Depth (ft bgs): | 1 - 1.5 | 1 - 1.5 | 1.5 - 2 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 |
| Analyte | USEPA RSL | | | | | | | | | |
| Atrazine | 2100 | b | b | b | b | b | b | b | b | b |
| Benzaldehyde | 780000 * | b | b | b | b | b | b | b | b | b |
| Benzo[a]anthracene | 150 | b | b | b | b | b | b | b | b | b |
| Benzo[a]pyrene | 15 | b | b | b | b | b | b | b | b | b |
| Benzo[b]fluoranthene | 150 | b | b | b | b | b | b | b | b | b |
| Benzo[g,h,i]perylene | 170000 * | b | b | b | b | b | b | b | b | b |
| Benzo[k]fluoranthene | 1500 | b | b | b | b | b | b | b | b | b |
| Benzoic acid | 24000000 * | b | b | b | b | b | b | b | b | b |
| Benzyl alcohol | 610000 * | b | b | b | b | b | b | b | b | b |
| Benzyl butyl phthalate | 260000 | b | b | b | b | b | b | b | b | b |
| Bis(2-chloroethoxy) methane | 18000 * | b | b | b | b | b | b | b | b | b |
| Bis(2-chloroethyl) ether | 210 | b | b | b | b | b | b | b | b | b |
| Bis(2-ethylhexyl) phthalate | 35000 | b | b | b | b | b | b | b | b | b |
| Caprolactam | 3100000 * | b | b | b | b | b | b | b | b | b |
| Carbazole | NSA | b | b | b | b | b | b | b | b | b |
| Chrysene | 15000 | b | b | b | b | b | b | b | b | b |
| Cresols | 750000 * | b | b | b | b | b | b | b | b | b |
| Dibenz[a,h]anthracene | 15 | b | b | b | b | b | b | b | b | b |
| Dibenzofuran | 7800 * | b | b | b | b | b | b | b | b | b |
| Diethyl phthalate | 4900000 * | b | b | b | b | b | b | b | b | b |
| Dimethyl phthalate | NSA | b | b | b | b | b | b | b | b | b |
| Di-n-butyl phthalate | 610000 * | b | b | b | b | b | b | b | b | b |
| Di-n-octyl phthalate | 610000 * | b | b | b | b | b | b | b | b | b |
| Fluoranthene | 230000 * | b | b | b | b | b | b | b | b | b |
| Fluorene | 230000 * | b | b | b | b | b | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | b | b | b | b | b | b | b | b | b |
| Hexachlorobenzene | 300 | b | b | b | b | b | b | b | b | b |
| Hexachlorocyclopentadiene | 37000 * | b | b | b | b | b | b | b | b | b |
| Hexachloroethane | 4300 * | b | b | b | b | b | b | b | b | b |
| Indeno[1,2,3-c,d]pyrene | 150 | b | b | b | b | b | b | b | b | b |
| Isophorone | 510000 | b | b | b | b | b | b | b | b | b |
| Naphthalene | 3600 | b | b | b | b | b | b | b | b | b |
| Naphthalene (by 8260B) | 3600 | b | b | b | b | b | b | b | b | b |
| N-nitrosodi-n-propylamine | 69 | b | b | b | b | b | b | b | b | b |
| N-nitrosodiphenylamine | 99000 | b | b | b | b | b | b | b | b | b |
| Pentachlorophenol | 890 | b | b | b | b | b | b | b | b | b |
| Phenanthrene | 1700000 * | b | b | b | b | b | b | b | b | b |
| Phenol | 1800000 * | b | b | b | b | b | b | b | b | b |
| Pyrene | 170000 * | b | b | b | b | b | b | b | b | b |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | | |
| 4,4-DDD | 2000 | b | b | b | b | b | b | b | b | b |
| 4,4-DDE | 1400 | b | b | b | b | b | b | b | b | b |
| 4,4-DDT | 1700 | b | b | b | b | b | b | b | b | b |
| Aldrin | 29 | b | b | b | b | b | b | b | b | b |
| alpha-BHC | 77 | b | b | b | b | b | b | b | b | b |
| alpha-Chlordane | 1600 | b | b | b | b | b | b | b | b | b |
| Beta-BHC | 270 | b | b | b | b | b | b | b | b | b |
| delta-BHC | 77 | b | b | b | b | b | b | b | b | b |
| Dieldrin | 30 | b | b | b | b | b | b | b | b | b |
| Endosulfan I | 37000 * | b | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-HW | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 | C10-GS2-P24 | C10-GS2-PE | C10-GS2-PE | C10-GS2-PN | C10-GS2-PN |
|---|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|----------------|
| Sample Name: | C2-OXY-HW-1 | C2-OXY-SO-P21-1 | C2-OXY-SO-P22-2 | C2-OXY-SO-P23-1 | C2-OXY-SO-DUPE1 | C2-OXY-SO-P24-1 | C2-OXY-SO-PE-0.5 | C2-OXY-SO-PE-1 | C2-OXY-SO-PN-0.5 | C2-OXY-SO-PN-1 |
| Sample Date: | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | C2-OXY-SO-P23-1 | | | | | |
| Sample Depth (ft bgs): | 1 - 1.5 | 1 - 1.5 | 1.5 - 2 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 |
| Analyte | USEPA RSL | | | | | | | | | |
| Endosulfan II | 37000 * | b | b | b | b | b | b | b | b | b |
| Endosulfan sulfate | 37000 * | b | b | b | b | b | b | b | b | b |
| Endrin | 1800 * | b | b | b | b | b | b | b | b | b |
| Endrin aldehyde | 1800 * | b | b | b | b | b | b | b | b | b |
| Endrin ketone | 1800 * | b | b | b | b | b | b | b | b | b |
| Gamma-BHC (Lindane) | 520 | b | b | b | b | b | b | b | b | b |
| Heptachlor | 110 | b | b | b | b | b | b | b | b | b |
| Heptachlor epoxide | 53 | b | b | b | b | b | b | b | b | b |
| Methoxychlor | 31000 * | b | b | b | b | b | b | b | b | b |
| Toxaphene | 440 | b | b | b | b | b | b | b | b | b |
| trans-Chlordane | 1600 | b | b | b | b | b | b | b | b | b |
| PCBs (SW8082) (µg/kg) | | | | | | | | | | |
| Aroclor 1016 | 390 * | b | b | b | b | b | b | b | b | b |
| Aroclor 1221 | 140 | b | b | b | b | b | b | b | b | b |
| Aroclor 1232 | 140 | b | b | b | b | b | b | b | b | b |
| Aroclor 1242 | 220 | b | b | b | b | b | b | b | b | b |
| Aroclor 1248 | 220 | b | b | b | b | b | b | b | b | b |
| Aroclor 1254 | 110 * | b | b | b | b | b | b | b | b | b |
| Aroclor 1260 | 220 | b | b | b | b | b | b | b | b | b |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/kg) | | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | 14000 | 150 J | 45000 J | 160 U | 450 J | 140 U | 2500 | 1100 | 160 U |
| 1,3-Dinitrobenzene | 610 * | 3300 | 170 U | 180 UJ | 160 U | 310 U | 140 U | 780 | 180 J | 160 U |
| 2,4,6-trinitrotoluene | 3600 * | 5200000 | 790 | 19000000 J | 160 U | 1400 | 140 U | 4200 | 760 J | 160 U |
| 2,4-dinitrotoluene (by 8270) | 1600 | b | b | b | b | b | b | b | b | b |
| 2,4-dinitrotoluene | 1600 | 16000 | 270 J | 26000 J | 160 U | 760 | 140 U | 3300 | 280 NJ | 160 U |
| 2,6-dinitrotoluene (by 8270) | 6100 * | b | b | b | b | b | b | b | b | b |
| 2,6-dinitrotoluene | 6100 * | 11000 J | 180 J | 22000 J | 160 U | 310 J | 140 U | 1600 | 950 NJ | 160 U |
| 2-amino-4,6-dinitrotoluene | 15000 * | 54000 | 2300 | 170000 J | 160 U | 3400 | 140 U | 1000 | 190 NJ | 160 U |
| 2-nitrotoluene | 2900 | 230 U | 170 U | 180 UJ | 160 U | 430 J | 140 U | 150 U | 150 U | 160 U |
| 3-nitrotoluene | 610 * | 230 U | 170 U | 180 UJ | 160 U | 310 U | 140 U | 150 U | 150 U | 160 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | 230 U | 2300 | 180 UJ | 160 U | 2200 | 140 U | 150 U | 150 U | 160 U |
| 4-Nitrotoluene | 24000 * | 230 U | 170 U | 180 UJ | 160 U | 310 U | 140 U | 150 U | 150 U | 160 U |
| HMX | 380000 * | 2700 J | 170 U | 180 UJ | 160 U | 310 U | 140 U | 150 U | 150 U | 160 U |
| Nitrobenzene (by 8270) | 4800 | b | b | b | b | b | b | b | b | b |
| Nitrobenzene | 4800 | 230 U | 170 U | 180 UJ | 160 U | 310 U | 140 U | 150 U | 150 U | 160 U |
| RDX | 5600 | 6300 J | 170 U | 180 UJ | 160 U | 310 U | 140 U | 270 J | 150 U | 160 U |
| Tetryl | 24000 * | 8500 J | 170 U | 180 UJ | 160 U | 310 U | 140 U | 150 U | 150 U | 160 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) | | | | | | | | | | |
| Aluminum | 7700 * | 10600 | 21000 | 7850 | 10600 | 9350 | 9870 | 2190 | 1840 | 9550 |
| Antimony | 3.1 * | 2.3 J | 10.1 | 0.36 | 3 U | 6 U | 1.2 U | 0.93 J | 3 UJ | 1.2 J |
| Arsenic | 0.39 | 3.4 J | 18.4 | 1.8 J | 1.1 J | 6 U | 1.4 J | 7.4 | 5.4 | 6.1 |
| Barium | 1500 * | 9710 | 651 J | 559 J | 114 J | 182 | 131 J | 648 | 62.8 | 4860 |
| Beryllium | 16 * | 0.15 U | 0.19 J | 0.25 J | 0.75 J | 0.64 J | 0.79 J | 0.25 J | 0.36 J | 0.69 |
| Boron | 1600 * | 45 U | 90 UJ | 14.1 B | 45 UJ | 90 UJ | 18 UJ | 45 U | 45 U | 45 U |
| Cadmium | 7 * | 5.7 | 15.1 | 0.26 | 0.53 | 0.87 | 0.37 | 1.3 | 0.14 J | 0.82 |
| Calcium | NSA | 10900 | 11500 J | 18200 J | 2130 J | 3380 J | 2900 J | 1500 | 1540 | 4830 |
| Chromium ^c | 12,000 * | 4960 J | 56.5 | 27.2 | 12.8 | 20.2 | 13.5 | 22.9 J | 6.2 J | 92.7 J |
| Chromium (hexavalent) (by SW7196A) | 0.29 | 2.7 J | 1.8 | 0.91 | 0.27 U | 3.3 | 0.42 J | 1.1 J | 0.65 J | 1.9 J |
| Cobalt | 2.3 * | 10.1 | 13.4 | 4.6 | 4.7 | 5.4 | 4.7 | 2.6 | 3.5 | 4.9 |
| Copper | 310 * | 1240 | 4790 | 85 | 33.2 | 46.1 | 27.2 | 60.3 | 19.9 | 167 |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-HW | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 | C10-GS2-P24 | C10-GS2-PE | C10-GS2-PE | C10-GS2-PN | C10-GS2-PN |
|-----------------------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|----------------|
| Sample Name: | C2-OXY-HW-1 | C2-OXY-SO-P21-1 | C2-OXY-SO-P22-2 | C2-OXY-SO-P23-1 | C2-OXY-SO-DUPE1 | C2-OXY-SO-P24-1 | C2-OXY-SO-PE-0.5 | C2-OXY-SO-PE-1 | C2-OXY-SO-PN-0.5 | C2-OXY-SO-PN-1 |
| Sample Date: | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Parent Sample: | | | | | C2-OXY-SO-P23-1 | | | | | |
| Sample Depth (ft bgs): | 1 - 1.5 | 1 - 1.5 | 1.5 - 2 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 |
| Analyte | USEPA RSL | | | | | | | | | |
| Cyanide (by SW9012) | 160 * | b | b | b | b | b | b | b | b | b |
| Iron | 5500 * | 73300 | 153000 | 10500 | 9130 | 11500 | 9430 | 13800 | 11700 | 22200 |
| Lead | 400 | 122 | 2160 | 232 | 6.6 | 19.4 | 43.9 | 292 | 37.7 | 145 |
| Lithium | 16 * | 2.7 J | 5.5 | 7.3 | 16.4 | 18.6 | 17.7 | 2.1 J | 1.6 J | 7 |
| Magnesium | NSA | 22800 | 7320 J | 10400 J | 4180 J | 4410 J | 3500 J | 2940 | 632 | 22000 |
| Manganese | 180 * | 434 | 870 J | 308 J | 78.5 J | 108 J | 78.6 J | 77.6 | 18.5 | 171 |
| Mercury (by 7471) | 0.78 * | 0.15 | 0.17 | 0.04 B | 0.055 B | 0.062 B | 0.049 B | 0.093 | 0.024 J | 0.03 J |
| Nickel | 150 * | 198 J | 87.7 | 29.9 | 15.6 | 20.7 | 14.5 | 9.3 J | 6.8 J | 21.8 J |
| Potassium | NSA | 292 | 270 J | 4540 J | 757 J | 729 J | 640 J | 276 | 421 | 392 |
| Selenium | 39 * | 0.38 J | 0.77 J | 0.49 J | 2 J | 1.9 J | 2.1 J | 0.66 J | 0.6 J | 0.72 J |
| Silver | 39 * | 0.14 J | 0.81 J | 1.6 | 0.041 J | 0.24 U | 0.047 J | 0.078 J | 0.12 U | 0.13 J |
| Sodium | NSA | 42.3 J | 110 J | 647 | 22.5 J | 46.4 J | 57.6 J | 42.4 J | 46 J | 49.2 J |
| Strontium (by SR-03-RC Mod) | 99999 * | b | b | b | b | b | b | b | b | b |
| Thallium | 0.078 * | 0.75 U | 1.8 J | 0.3 U | 0.75 U | 1.5 U | 0.3 U | 0.75 U | 0.75 U | 0.75 U |
| Vanadium | 39 * | 11.7 | 10.1 | 11.8 | 14.6 | 11.2 | 14.8 | 7.1 | 8.7 | 11.9 |
| Zinc | 2300 * | 17400 J | 8570 J | 508 J | 3510 J | 8310 J | 222 J | 2340 J | 103 J | 39200 J |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-PS | C10-GS2-PS | C10-GS2-PW | C10-GS2-PW | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE | C10-GS2-Y20 |
|--|------------------|----------------|------------------|----------------|-----------------|-----------------|-----------------|-----------------|---------------|
| Sample Name: | C2-OXY-SO-PS-0.5 | C2-OXY-SO-PS-1 | C2-OXY-SO-PW-0.5 | C2-OXY-SO-PW-1 | C2-OXY-SO-SIN-1 | C2-OXY-SO-SIS-1 | C2-OXY-SO-SIW-1 | C2-OXY-SO-SOE-1 | C2-OXY-SO-Y20 |
| Sample Date: | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | |
| Sample Depth (ft bgs): | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | b | b | b | b | b | b | b | b |
| 1,1,1-trichloroethane | 870000 * | b | b | b | b | b | b | b | b |
| 1,1,2,2-tetrachloroethane | 560 | b | b | b | b | b | b | b | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | b | b | b | b | b | b | b | b |
| 1,1,2-trichloroethane | 160 * | b | b | b | b | b | b | b | b |
| 1,1-dichloroethane | 3300 | b | b | b | b | b | b | b | b |
| 1,1-dichloroethene | 24000 * | b | b | b | b | b | b | b | b |
| 1,2,3-trichlorobenzene | 4900 * | b | b | b | b | b | b | b | b |
| 1,2,3-trichloropropane | 5 | b | b | b | b | b | b | b | b |
| 1,2,4-trichlorobenzene | 6200 * | b | b | b | b | b | b | b | b |
| 1,2,4-trimethylbenzene | 6200 * | b | b | b | b | b | b | b | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | b | b | b | b | b | b | b | b |
| 1,2-dibromoethane | 34 | b | b | b | b | b | b | b | b |
| 1,2-dichlorobenzene | 190000 * | b | b | b | b | b | b | b | b |
| 1,2-dichloroethane | 430 | b | b | b | b | b | b | b | b |
| 1,2-dichloroethene | 70000 * | b | b | b | b | b | b | b | b |
| 1,2-dichloropropane | 940 | b | b | b | b | b | b | b | b |
| 1,3,5-trimethylbenzene | 78000 * | b | b | b | b | b | b | b | b |
| 1,3-dichlorobenzene | 610 * | b | b | b | b | b | b | b | b |
| 1,3-dichloropropane | 160000 * | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b |
| 2,2-dichloropropane | NSA | b | b | b | b | b | b | b | b |
| 2-butanone | 2800000 * | b | b | b | b | b | b | b | b |
| 2-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b |
| 2-hexanone | 21000 * | b | b | b | b | b | b | b | b |
| 4-chlorotoluene | 160000 * | b | b | b | b | b | b | b | b |
| 4-Isopropyltoluene | NSA | b | b | b | b | b | b | b | b |
| 4-methyl-2-pentanone | 530000 * | b | b | b | b | b | b | b | b |
| Acetone | 6100000 * | b | b | b | b | b | b | b | b |
| Benzene | 1100 | b | b | b | b | b | b | b | b |
| Bromobenzene | 30000 * | b | b | b | b | b | b | b | b |
| Bromochloromethane | 16000 * | b | b | b | b | b | b | b | b |
| Bromodichloromethane | 270 | b | b | b | b | b | b | b | b |
| Bromoform | 62000 | b | b | b | b | b | b | b | b |
| Bromomethane | 730 * | b | b | b | b | b | b | b | b |
| Carbon disulfide | 82000 * | b | b | b | b | b | b | b | b |
| Carbon tetrachloride | 610 | b | b | b | b | b | b | b | b |
| Chlorobenzene | 29000 * | b | b | b | b | b | b | b | b |
| Chloroethane | 1500000 * | b | b | b | b | b | b | b | b |
| Chloroform | 290 | b | b | b | b | b | b | b | b |
| Chloromethane | 12000 * | b | b | b | b | b | b | b | b |
| Cis-1,2-dichloroethene | 16000 * | b | b | b | b | b | b | b | b |
| Cis-1,3-dichloropropene | 160000 * | b | b | b | b | b | b | b | b |
| Cyclohexane | 700000 * | b | b | b | b | b | b | b | b |
| Dibromochloromethane | 680 | b | b | b | b | b | b | b | b |
| Dibromomethane | 2500 * | b | b | b | b | b | b | b | b |
| Dichlorodifluoromethane | 9400 * | b | b | b | b | b | b | b | b |
| Ethylbenzene | 5400 | b | b | b | b | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-PS | C10-GS2-PS | C10-GS2-PW | C10-GS2-PW | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE | C10-GS2-Y20 |
|---|------------------|----------------|------------------|----------------|-----------------|-----------------|-----------------|-----------------|---------------|
| Sample Name: | C2-OXY-SO-PS-0.5 | C2-OXY-SO-PS-1 | C2-OXY-SO-PW-0.5 | C2-OXY-SO-PW-1 | C2-OXY-SO-SIN-1 | C2-OXY-SO-SIS-1 | C2-OXY-SO-SIW-1 | C2-OXY-SO-SOE-1 | C2-OXY-SO-Y20 |
| Sample Date: | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | |
| Sample Depth (ft bgs): | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Isopropylbenzene | 210000 * | b | b | b | b | b | b | b | b |
| m,p-Xylene | 63000 * | b | b | b | b | b | b | b | b |
| Methyl acetate | 7800000 * | b | b | b | b | b | b | b | b |
| Methyl tert-butyl ether | 43000 | b | b | b | b | b | b | b | b |
| Methylcyclohexane | 700000 * | b | b | b | b | b | b | b | b |
| Methylene Chloride | 11000 | b | b | b | b | b | b | b | b |
| n-Butylbenzene | 390000 * | b | b | b | b | b | b | b | b |
| N-propylbenzene | 340000 * | b | b | b | b | b | b | b | b |
| o-Xylene | 69000 * | b | b | b | b | b | b | b | b |
| Sec-butylbenzene | NSA | b | b | b | b | b | b | b | b |
| Styrene | 630000 * | b | b | b | b | b | b | b | b |
| Tert-butylbenzene | NSA | b | b | b | b | b | b | b | b |
| Tetrachloroethene | 550 | b | b | b | b | b | b | b | b |
| Toluene | 500000 * | b | b | b | b | b | b | b | b |
| trans-1,2-dichloroethene | 15000 * | b | b | b | b | b | b | b | b |
| trans-1,3-dichloropropene | 1700 | b | b | b | b | b | b | b | b |
| Trichloroethene | 440 * | b | b | b | b | b | b | b | b |
| Trichlorofluoromethane | 79000 * | b | b | b | b | b | b | b | b |
| Vinyl chloride | 60 | b | b | b | b | b | b | b | b |
| Xylenes, Total | 63000 * | b | b | b | b | b | b | b | b |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | |
| 1,1-biphenyl | 5100 * | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | b | b | b | b | b | b | b | b |
| 1-Methylnaphthalene | 22000 | b | b | b | b | b | b | b | b |
| 2,2-oxybis(1-chloropropane) | 4600 | b | b | b | b | b | b | b | b |
| 2,4,5-trichlorophenol | 610000 * | b | b | b | b | b | b | b | b |
| 2,4,6-trichlorophenol | 6100 * | b | b | b | b | b | b | b | b |
| 2,4-dichlorophenol | 18000 * | b | b | b | b | b | b | b | b |
| 2,4-dimethylphenol | 120000 * | b | b | b | b | b | b | b | b |
| 2,4-dinitrophenol | 12000 * | b | b | b | b | b | b | b | b |
| 2-chloronaphthalene | 630000 * | b | b | b | b | b | b | b | b |
| 2-chlorophenol | 39000 * | b | b | b | b | b | b | b | b |
| 2-Methyl-4,6-dinitrophenol | 490 * | b | b | b | b | b | b | b | b |
| 2-methylnaphthalene | 31000 * | b | b | b | b | b | b | b | b |
| 2-methylphenol | 310000 * | b | b | b | b | b | b | b | b |
| 2-nitroaniline | 61000 * | b | b | b | b | b | b | b | b |
| 2-nitrophenol | 2900 | b | b | b | b | b | b | b | b |
| 3,3-dichlorobenzidine | 1100 | b | b | b | b | b | b | b | b |
| 3-nitroaniline | 610 * | b | b | b | b | b | b | b | b |
| 4-bromophenyl phenyl ether | NSA | b | b | b | b | b | b | b | b |
| 4-chloro-3-methylphenol | 610000 * | b | b | b | b | b | b | b | b |
| 4-chloroaniline | 2400 | b | b | b | b | b | b | b | b |
| 4-chlorophenyl phenyl ether | NSA | b | b | b | b | b | b | b | b |
| 4-methylphenol | 31000 * | b | b | b | b | b | b | b | b |
| 4-nitroaniline | 24000 | b | b | b | b | b | b | b | b |
| 4-nitrophenol | 24000 * | b | b | b | b | b | b | b | b |
| Acenaphthene | 340000 * | b | b | b | b | b | b | b | b |
| Acenaphthylene | 3600 | b | b | b | b | b | b | b | b |
| Acetophenone | 780000 * | b | b | b | b | b | b | b | b |
| Anthracene | 1700000 * | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-PS | C10-GS2-PS | C10-GS2-PW | C10-GS2-PW | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE | C10-GS2-Y20 |
|-------------------------------------|------------------|----------------|------------------|----------------|-----------------|-----------------|-----------------|-----------------|---------------|
| Sample Name: | C2-OXY-SO-PS-0.5 | C2-OXY-SO-PS-1 | C2-OXY-SO-PW-0.5 | C2-OXY-SO-PW-1 | C2-OXY-SO-SIN-1 | C2-OXY-SO-SIS-1 | C2-OXY-SO-SIW-1 | C2-OXY-SO-SOE-1 | C2-OXY-SO-Y20 |
| Sample Date: | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | |
| Sample Depth (ft bgs): | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Atrazine | 2100 | b | b | b | b | b | b | b | b |
| Benzaldehyde | 780000 * | b | b | b | b | b | b | b | b |
| Benzo[a]anthracene | 150 | b | b | b | b | b | b | b | b |
| Benzo[a]pyrene | 15 | b | b | b | b | b | b | b | b |
| Benzo[b]fluoranthene | 150 | b | b | b | b | b | b | b | b |
| Benzo[g,h,i]perylene | 170000 * | b | b | b | b | b | b | b | b |
| Benzo[k]fluoranthene | 1500 | b | b | b | b | b | b | b | b |
| Benzoic acid | 24000000 * | b | b | b | b | b | b | b | b |
| Benzyl alcohol | 610000 * | b | b | b | b | b | b | b | b |
| Benzyl butyl phthalate | 260000 | b | b | b | b | b | b | b | b |
| Bis(2-chloroethoxy) methane | 18000 * | b | b | b | b | b | b | b | b |
| Bis(2-chloroethyl) ether | 210 | b | b | b | b | b | b | b | b |
| Bis(2-ethylhexyl) phthalate | 35000 | b | b | b | b | b | b | b | b |
| Caprolactam | 3100000 * | b | b | b | b | b | b | b | b |
| Carbazole | NSA | b | b | b | b | b | b | b | b |
| Chrysene | 15000 | b | b | b | b | b | b | b | b |
| Cresols | 750000 * | b | b | b | b | b | b | b | b |
| Dibenz[a,h]anthracene | 15 | b | b | b | b | b | b | b | b |
| Dibenzofuran | 7800 * | b | b | b | b | b | b | b | b |
| Diethyl phthalate | 4900000 * | b | b | b | b | b | b | b | b |
| Dimethyl phthalate | NSA | b | b | b | b | b | b | b | b |
| Di-n-butyl phthalate | 610000 * | b | b | b | b | b | b | b | b |
| Di-n-octyl phthalate | 610000 * | b | b | b | b | b | b | b | b |
| Fluoranthene | 230000 * | b | b | b | b | b | b | b | b |
| Fluorene | 230000 * | b | b | b | b | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | b | b | b | b | b | b | b | b |
| Hexachlorobenzene | 300 | b | b | b | b | b | b | b | b |
| Hexachlorocyclopentadiene | 37000 * | b | b | b | b | b | b | b | b |
| Hexachloroethane | 4300 * | b | b | b | b | b | b | b | b |
| Indeno[1,2,3-c,d]pyrene | 150 | b | b | b | b | b | b | b | b |
| Isophorone | 510000 | b | b | b | b | b | b | b | b |
| Naphthalene | 3600 | b | b | b | b | b | b | b | b |
| Naphthalene (by 8260B) | 3600 | b | b | b | b | b | b | b | b |
| N-nitrosodi-n-propylamine | 69 | b | b | b | b | b | b | b | b |
| N-nitrosodiphenylamine | 99000 | b | b | b | b | b | b | b | b |
| Pentachlorophenol | 890 | b | b | b | b | b | b | b | b |
| Phenanthrene | 1700000 * | b | b | b | b | b | b | b | b |
| Phenol | 1800000 * | b | b | b | b | b | b | b | b |
| Pyrene | 170000 * | b | b | b | b | b | b | b | b |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | |
| 4,4-DDD | 2000 | b | b | b | b | b | b | b | b |
| 4,4-DDE | 1400 | b | b | b | b | b | b | b | b |
| 4,4-DDT | 1700 | b | b | b | b | b | b | b | b |
| Aldrin | 29 | b | b | b | b | b | b | b | b |
| alpha-BHC | 77 | b | b | b | b | b | b | b | b |
| alpha-Chlordane | 1600 | b | b | b | b | b | b | b | b |
| Beta-BHC | 270 | b | b | b | b | b | b | b | b |
| delta-BHC | 77 | b | b | b | b | b | b | b | b |
| Dieldrin | 30 | b | b | b | b | b | b | b | b |
| Endosulfan I | 37000 * | b | b | b | b | b | b | b | b |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-PS | C10-GS2-PS | C10-GS2-PW | C10-GS2-PW | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE | C10-GS2-Y20 |
|---|------------------|----------------|------------------|----------------|-----------------|-----------------|-----------------|-----------------|---------------|
| Sample Name: | C2-OXY-SO-PS-0.5 | C2-OXY-SO-PS-1 | C2-OXY-SO-PW-0.5 | C2-OXY-SO-PW-1 | C2-OXY-SO-SIN-1 | C2-OXY-SO-SIS-1 | C2-OXY-SO-SIW-1 | C2-OXY-SO-SOE-1 | C2-OXY-SO-Y20 |
| Sample Date: | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | |
| Sample Depth (ft bgs): | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Endosulfan II | 37000 * | b | b | b | b | b | b | b | b |
| Endosulfan sulfate | 37000 * | b | b | b | b | b | b | b | b |
| Endrin | 1800 * | b | b | b | b | b | b | b | b |
| Endrin aldehyde | 1800 * | b | b | b | b | b | b | b | b |
| Endrin ketone | 1800 * | b | b | b | b | b | b | b | b |
| Gamma-BHC (Lindane) | 520 | b | b | b | b | b | b | b | b |
| Heptachlor | 110 | b | b | b | b | b | b | b | b |
| Heptachlor epoxide | 53 | b | b | b | b | b | b | b | b |
| Methoxychlor | 31000 * | b | b | b | b | b | b | b | b |
| Toxaphene | 440 | b | b | b | b | b | b | b | b |
| trans-Chlordane | 1600 | b | b | b | b | b | b | b | b |
| PCBs (SW8082) ($\mu\text{g}/\text{kg}$) | | | | | | | | | |
| Aroclor 1016 | 390 * | b | b | b | b | b | b | b | b |
| Aroclor 1221 | 140 | b | b | b | b | b | b | b | b |
| Aroclor 1232 | 140 | b | b | b | b | b | b | b | b |
| Aroclor 1242 | 220 | b | b | b | b | b | b | b | b |
| Aroclor 1248 | 220 | b | b | b | b | b | b | b | b |
| Aroclor 1254 | 110 * | b | b | b | b | b | b | b | b |
| Aroclor 1260 | 220 | b | b | b | b | b | b | b | b |
| Explosives (SW8321, SW8330 unless otherwise noted) ($\mu\text{g}/\text{k}$) | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | 190 J | 170 U | 170 U | 170 U | 190 U | 150 U | 160 U | 350 |
| 1,3-Dinitrobenzene | 610 * | 200 U | 170 U | 170 U | 170 U | 190 U | 150 U | 160 U | 130 J |
| 2,4,6-trinitrotoluene | 3600 * | 200 U | 170 U | 170 U | 170 U | 330 J | 150 U | 250 J | 1000 |
| 2,4-dinitrotoluene (by 8270) | 1600 | b | b | b | b | b | b | b | b |
| 2,4-dinitrotoluene | 1600 | 220 NJ | 170 U | 170 U | 170 U | 320 J | 3400 | 160 U | 1100 |
| 2,6-dinitrotoluene (by 8270) | 6100 * | b | b | b | b | b | b | b | b |
| 2,6-dinitrotoluene | 6100 * | 200 U | 170 U | 170 U | 170 U | 150 J | 670 | 160 U | 390 J |
| 2-amino-4,6-dinitrotoluene | 15000 * | 300 J | 68 NJ | 170 U | 170 U | 120 J | 150 U | 160 U | 260 J |
| 2-nitrotoluene | 2900 | 200 U | 170 U | 170 U | 170 U | 190 U | 100 J | 160 U | 150 U |
| 3-nitrotoluene | 610 * | 200 U | 170 U | 170 U | 170 U | 190 U | 150 U | 160 U | 150 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | 410 J | 200 NJ | 170 U | 170 U | 190 U | 150 U | 200 J | 150 U |
| 4-Nitrotoluene | 24000 * | 200 U | 170 U | 170 U | 170 U | 190 U | 110 J | 160 U | 150 U |
| HMX | 380000 * | 200 U | 79 J | 170 U | 170 U | 170 U | 190 U | 150 U | 160 U |
| Nitrobenzene (by 8270) | 4800 | b | b | b | b | b | b | b | b |
| Nitrobenzene | 4800 | 200 U | 170 U | 170 U | 170 U | 190 U | 150 U | 160 U | 150 U |
| RDX | 5600 | 200 U | 170 U | 170 U | 170 U | 190 U | 150 U | 160 U | 150 U |
| Tetryl | 24000 * | 204 U | 167 U | 170 U | 170 U | 190 U | 150 U | 160 U | 150 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) | | | | | | | | | |
| Aluminum | 7700 * | 8570 | 9400 | 6850 | 6760 | 6170 | 11500 | 5960 | 3550 |
| Antimony | 3.1 * | 1.2 J | 3 UJ | 3 UJ | 3 UJ | 6 U | 15 U | 0.6 U | 6 U |
| Arsenic | 0.39 | 2.6 J | 1.5 J | 1.7 J | 1.7 J | 3.7 J | 8.8 J | 2.8 | 18.7 |
| Barium | 1500 * | 3920 | 414 | 98.3 | 99.6 | 3850 | 858 | 88.8 | 369 |
| Beryllium | 16 * | 0.35 J | 0.58 | 0.68 | 0.5 J | 0.32 J | 0.75 U | 0.44 | 0.35 J |
| Boron | 1600 * | 45 U | 45 U | 45 U | 45 U | 57.2 J | 225 UJ | 4.1 B | 90 UJ |
| Cadmium | 7 * | 0.52 | 0.31 | 0.43 | 0.28 J | 5.7 | 49.2 | 0.29 | 0.85 |
| Calcium | NSA | 2970 | 1920 | 3190 | 3230 | 20500 J | 3960 J | 3410 J | 17300 J |
| Chromium ^c | 12,000 * | 307 J | 92 J | 9.6 J | 9.6 J | 145 | 39.1 | 17 | 15.8 |
| Chromium (hexavalent) (by SW7196A) | 0.29 | 12.7 J | 12.4 J | 0.29 UJ | 0.67 J | 5.8 | 0.43 J | 0.27 U | 0.26 U |
| Cobalt | 2.3 * | 4.3 | 4.9 | 2.9 | 2.8 | 18.1 | 6 | 2.5 | 5.2 |
| Copper | 310 * | 188 | 38.3 | 20.4 | 20.6 | 164 | 1600 | 19.2 | 52.6 |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

| Sample Location: | C10-GS2-PS | C10-GS2-PS | C10-GS2-PW | C10-GS2-PW | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE | C10-GS2-Y20 |
|-----------------------------|------------------|----------------|------------------|----------------|-----------------|-----------------|-----------------|-----------------|---------------|
| Sample Name: | C2-OXY-SO-PS-0.5 | C2-OXY-SO-PS-1 | C2-OXY-SO-PW-0.5 | C2-OXY-SO-PW-1 | C2-OXY-SO-SIN-1 | C2-OXY-SO-SIS-1 | C2-OXY-SO-SIW-1 | C2-OXY-SO-SOE-1 | C2-OXY-SO-Y20 |
| Sample Date: | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | |
| Sample Depth (ft bgs): | 0 - 0.5 | 1 - 1.5 | 0 - 0.5 | 1 - 1.5 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0.5 - 1 | 0 - 0.5 |
| Analyte | USEPA RSL | | | | | | | | |
| Cyanide (by SW9012) | 160 * | b | b | b | b | b | b | b | b |
| Iron | 5500 * | 21000 | 9760 | 5960 | 6280 | 21600 | 21100 | 6970 | 26600 |
| Lead | 400 | 76.7 | 10.8 | 8.6 | 8.6 | 673 | 1460 | 21.5 | 365 |
| Lithium | 16 * | 11.2 | 17.3 | 10.1 | 9.8 | 4.7 J | 3.8 J | 9.6 | 6.1 J |
| Magnesium | NSA | 9150 | 4340 | 1670 | 1680 | 46100 J | 5210 J | 1710 J | 2220 J |
| Manganese | 180 * | 167 | 85.1 | 56.5 | 59.3 | 395 J | 183 J | 72.7 J | 320 J |
| Mercury (by 7471) | 0.78 * | 0.042 | 0.046 | 0.062 | 0.05 | 0.62 B | 0.064 B | 0.07 B | 0.32 |
| Nickel | 150 * | 23.2 J | 14 J | 9 J | 9.1 J | 306 | 111 | 9 | 18 |
| Potassium | NSA | 615 | 844 | 362 | 343 | 398 J | 322 J | 413 J | 443 J |
| Selenium | 39 * | 0.93 J | 1.5 J | 2.3 J | 1.7 J | 1.5 U | 3.75 U | 1.4 | 4.9 J |
| Silver | 39 * | 0.15 J | 0.058 J | 0.063 J | 0.045 J | 0.15 J | 0.55 J | 0.044 J | 0.24 U |
| Sodium | NSA | 29.3 J | 28.6 J | 29.6 J | 27 J | 182 J | 104 J | 34.4 J | 77 J |
| Strontium (by SR-03-RC Mod) | 999999 * | b | b | b | b | b | b | b | 0.08 U |
| Thallium | 0.078 * | 0.75 U | 0.75 U | 1 J | 0.31 J | 1.5 U | 3.75 U | 0.063 B | 1.5 U |
| Vanadium | 39 * | 8.6 | 12.3 | 10.6 | 11 | 14.9 | 52.5 U | 11.2 | 11.4 |
| Zinc | 2300 * | 3780 J | 324 J | 33.4 J | 34 J | 5510 J | 14000 J | 41.9 J | 689 J |

Table F-1. Surface Soil Results and Comparison to Screening Criteria

ft bgs = feet below ground surface

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

EPA RSL = USEPA Residential Soil Regional Screening Level, November 2011, unless otherwise noted.

* = A noncarcinogen; the screening level has been divided by 10 to achieve a hazard index of 0.1.

NSA = No screening level available.

a = Result was rejected for use by the data validator.

b = Analyte was not analyzed for.

c = USEPA RSL for trivalent chromium.

z = considered as potential source material

B = Blank contamination

J = Estimated value

N = Tentatively identified compound

U (2011 data) = Either a) the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection, or b) blank contamination existed and the value presented is the reported concentration (see Data Usability Summary Reports for explanation).

U (2010 data) = the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection.

U (2001 data) = the analyte was analyzed for but was not detected above the method detection limit. The value presented is the sample quantitation limit.

Gray shading = detected concentration is > the EPA RSL.

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-GS2-1 | C10-GS2-2 | C10-GS2-2 | |
|--|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|-----------------|---------|
| Sample Name: | | C10-AA03-SO-01-4.0 | C10-AA03-SO-02-4.0 | C10-AA04-SO-01-4.0 | C10-AA04-SO-02-4.0 | C10-AA04-SO-03-4.0 | C10-AA07-SO-01-4.0 | C10-AA07-SO-02-4.0 | C10-GS2-SO-1-7 | C10-GS2-SO-2-7 | C2-OXY-SO-S02-7 | |
| Sample Date: | | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 5/9/2001 | 5/9/2001 | 8/25/2010 | |
| Parent Sample: | | | | | | | | | | | | |
| Sample Depth (ft bgs): | | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 6 - 7 | 6 - 7 | 6.5 - 7 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | NSA | 1.1 U | b | b | b | |
| 1,1,1-trichloroethane | 870000 * | 4630 | 1.1 U | 5.3 U | 6 U | b | |
| 1,1,2,2-tetrachloroethane | 560 | 2500 | 1.1 U | 5.3 U | 6 U | b | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | NSA | 2.2 U | 2.2 U | 2.2 U | 2.3 U | 2.3 U | 2.3 U | 2.1 U | b | b | |
| 1,1,2-trichloroethane | 160 * | 485 | 1.1 U | 5.3 U | 6 U | b | |
| 1,1-dichloroethane | 3300 | 2050 | 1.1 U | 5.3 U | 6 U | b | |
| 1,1-dichloroethene | 24000 * | 3130 | 5.4 U | 5.4 U | 5.5 U | 5.7 U | 5.6 U | 5.7 U | 5.4 U | 5.3 U | 6 U | |
| 1,2,3-trichlorobenzene | 4900 * | NSA | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b | |
| 1,2,3-trichloropropane | 5 | NSA | 1.1 U | 1.1 U | b | b | |
| 1,2,4-trichlorobenzene | 6200 * | 18300 | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | 190 U | 180 U | |
| 1,2,4-trimethylbenzene | 6200 * | 16000 | 1.1 U | 1.1 U | b | b | |
| 1,2-Dibromo-3-chloropropane | 5.4 | NSA | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b | |
| 1,2-dibromoethane | 34 | NSA | 1.1 U | 1.1 U | b | b | |
| 1,2-dichlorobenzene | 190000 * | 6900 | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | 190 U | 180 U | |
| 1,2-dichloroethane | 430 | 180 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| 1,2-dichloroethene | 70000 * | NSA | 2.2 U | 2.2 U | 2.2 U | 2.3 U | 2.3 U | 2.3 U | 2.1 U | b | b | |
| 1,2-dichloropropane | 940 | NSA | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| 1,3,5-trimethylbenzene | 78000 * | NSA | 1.1 U | 1.1 U | b | b | |
| 1,3-dichlorobenzene | 610 * | 6800 | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | 190 U | 180 U | |
| 1,3-dichloropropane | 160000 * | NSA | 1.1 U | 1.1 U | b | b | |
| 1,4-dichlorobenzene | 2400 | 6800 | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b | |
| 2,2-dichloropropane | NSA | NSA | 1.1 U | 1.1 U | b | b | |
| 2-butanone | 2800000 * | 6480 | a | a | 5.5 U | 5.7 U | a | 5.7 U | 5.4 U | 11 U | 12 U | |
| 2-chlorotoluene | 160000 * | NSA | 1.1 U | 1.1 U | b | b | |
| 2-hexanone | 21000 * | NSA | 5.4 U | 5.4 U | 5.5 U | 5.7 U | 5.6 U | 5.7 U | 5.4 U | 11 U | 12 U | |
| 4-chlorotoluene | 160000 * | NSA | 1.1 U | 1.1 U | b | b | |
| 4-Isopropyltoluene | NSA | NSA | 1.1 U | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b | |
| 4-methyl-2-pentanone | 530000 * | 1500000 | 5.4 U | 5.4 U | 5.5 U | 5.7 U | 5.6 U | 5.7 U | 5.4 U | 11 U | 12 U | |
| Acetone | 6100000 * | 5510 | 52 | 120 J | 74 U | 78 U | 60 | 50 U | 96 U | 77.5 | 67.4 | |
| Benzene | 1100 | 460 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Bromobenzene | 30000 * | NSA | 1.1 U | 1.1 U | b | b | |
| Bromochloromethane | 16000 * | NSA | 1.1 U | 1.1 U | b | b | |
| Bromodichloromethane | 270 | NSA | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Bromoform | 62000 | NSA | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Bromomethane | 730 * | NSA | 5.4 U | 5.4 U | 5.5 U | 5.7 U | 5.6 U | 5.7 U | 5.4 U | 5.3 U | 6 U | |
| Carbon disulfide | 82000 * | 33000 | 1.1 U | 1.1 U | 11 U | 12 U | |
| Carbon tetrachloride | 610 | 5300 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Chlorobenzene | 29000 * | 7280 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Chloroethane | 1500000 * | NSA | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Chloroform | 290 | 2800 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Chloromethane | 12000 * | 2300 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Cis-1,2-dichloroethene | 16000 * | 1580 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Cis-1,3-dichloropropene | 160000 * | NSA | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Cyclohexane | 700000 * | 25000000 | 5.4 U | 5.4 U | 5.5 U | 5.7 U | 5.6 U | 5.7 U | 5.4 U | b | b | |
| Dibromochloromethane | 680 | NSA | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Dibromomethane | 2500 * | NSA | 1.1 U | 1.1 U | b | b | |
| Dichlorodifluoromethane | 9400 * | NSA | 5.4 U | 5.4 U | 5.5 U | 5.7 U | 5.6 U | 5.7 U | 5.4 U | b | b | |
| Ethylbenzene | 5400 | 5800 | 1.1 U | 1.1 U | 5.3 U | 6 U | |
| Hexachloro-1,3-butadiene | 6100 * | 133000 | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b | |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-GS2-1 | C10-GS2-2 | C10-GS2-2 |
|---|-----------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|-----------------|
| Sample Name: | | | C10-AA03-SO-01-4.0 | C10-AA03-SO-02-4.0 | C10-AA04-SO-01-4.0 | C10-AA04-SO-02-4.0 | C10-AA04-SO-03-4.0 | C10-AA07-SO-01-4.0 | C10-AA07-SO-02-4.0 | C10-GS2-SO-1-7 | C10-GS2-SO-2-7 | C2-OXY-SO-S02-7 |
| Sample Date: | | | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 5/9/2001 | 5/9/2001 | 8/25/2010 |
| Parent Sample: | | | | | | | | | | | | |
| Sample Depth (ft bgs): | | | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 6 - 7 | 6 - 7 | 6.5 - 7 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | |
| Isopropylbenzene | 210000 * | 21000 | | 1.1 U | b | b | b |
| m,p-Xylene | 63000 * | NSA | | 1.1 U | b | b | b |
| Methyl tert-butyl ether | 43000 | NSA | | 1.1 U | b | b | b |
| Methylcyclohexane | 700000 * | NSA | | 1.1 U | b | b | b |
| Methylene Chloride | 11000 | 860 | | 3.9 J | 3.1 J | 5.5 U | 5.7 U | 3.2 J | 5.7 U | 5.4 U | 11 U | 12 U |
| n-Butylbenzene | 390000 * | NSA | | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b |
| N-propylbenzene | 340000 * | NSA | | 1.1 U | b | b | b |
| o-Xylene | 69000 * | NSA | | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 0.38 J | 1.1 U | 1.1 U | b | b |
| Sec-butylbenzene | NSA | 34000 | | 1.1 U | b | b | b |
| Styrene | 630000 * | 13000 | | 1.1 U | 1.1 U | 5.3 U | 6 U |
| Tert-butylbenzene | NSA | 1100 | | 1.1 U | b | b | b |
| Tetrachloroethene | 550 | 7900 | | 1.1 U | 5.3 U | 6 U | b |
| Toluene | 500000 * | 4200 | | 1.1 U | 5.3 U | 6 U | b |
| trans-1,2-dichloroethene | 15000 * | 1800 | | 1.1 U | 5.3 U | 6 U | b |
| trans-1,3-dichloropropene | 1700 | NSA | | 1.1 U | 5.3 U | 6 U | b |
| Trichloroethene | 440 * | 3200 | | 1.1 U | 5.3 U | 6 U | b |
| Trichlorofluoromethane | 79000 * | NSA | | 1.1 U | b | b | b |
| Vinyl chloride | 60 | 795 | | 1.1 U | 5.3 U | 6 U | b |
| Xylenes, Total | 63000 * | 5750 | | 3.2 U | 3.3 U | 3.3 U | 3.4 U | 1 J | 3.4 U | 3.2 U | 16 U | 18 U |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | | | | |
| 1,1-biphenyl | 5100 * | NSA | | 3.6 U | 3.6 U | 3.6 U | 3.8 U | 3.7 U | 3.9 U | 3.6 U | b | b |
| 1,4-dichlorobenzene | 2400 | 6800 | | b | b | b | b | b | b | 190 U | 180 U | b |
| 1-Methylnaphthalene | 22000 | 246 | | b | b | b | b | b | b | 380 U | 1800 U | b |
| 2,2-oxybis(1-chloropropane) | 4600 | NSA | | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 2 U | 1.8 U | 190 U | 180 U |
| 2,4,5-trichlorophenol | 610000 * | NSA | | 11 U | 12 U | 11 U | 190 U | 180 U |
| 2,4,6-trichlorophenol | 6100 * | NSA | | 14 U | 15 U | 14 U | 15 U | 15 U | 16 U | 14 U | 190 U | 180 U |
| 2,4-dichlorophenol | 18000 * | NSA | | 2.2 U | 2.2 U | 2.1 U | 2.3 U | 2.2 U | 2.3 U | 2.2 U | 190 U | 180 U |
| 2,4-dimethylphenol | 120000 * | 2700000 | | 9 U | 9.1 U | 8.9 U | 9.4 U | 9.3 U | 9.7 U | 9 U | 190 U | 180 U |
| 2,4-dinitrophenol | 12000 * | NSA | | 54 U | 55 U | 54 U | 57 U | 56 U | 58 U | 54 U | 940 U | 890 U |
| 2-chloronaphthalene | 630000 * | NSA | | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 190 U | 180 U |
| 2-chlorophenol | 39000 * | 414000 | | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U |
| 2-Methyl-4,6-dinitrophenol | 490 * | NSA | | 22 U | 22 U | 21 U | 23 U | 22 U | 23 U | 22 U | 380 U | 360 U |
| 2-methylnaphthalene | 31000 * | 148000 | | 1.1 U | 1.2 U | 1.1 U | 380 U | 1800 U |
| 2-methylphenol | 310000 * | 4100000 | | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U |
| 2-nitroaniline | 61000 * | NSA | | 36 U | 36 U | 36 U | 38 U | 37 U | 39 U | 36 U | 940 U | 890 U |
| 2-nitrophenol | 2900 | NSA | | 11 U | 12 U | 11 U | 190 U | 180 U |
| 3,3-dichlorobenzidine | 1100 | NSA | | 11 U | 12 U | 11 U | 380 U | 360 U |
| 3-nitroaniline | 610 * | NSA | | 27 U | 27 U | 27 U | 28 U | 28 U | 29 U | 27 U | 940 U | 890 U |
| 4-bromophenyl phenyl ether | NSA | NSA | | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U |
| 4-chloro-3-methylphenol | 610000 * | NSA | | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U |
| 4-chloraniline | 2400 | NSA | | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U |
| 4-chlorophenyl phenyl ether | NSA | NSA | | 5.4 U | 5.5 U | 5.4 U | 5.7 U | 5.6 U | 5.8 U | 5.4 U | 190 U | 180 U |
| 4-methylphenol | 31000 * | 91000 | | 9 U | 9.1 U | 8.9 U | 9.4 U | 9.3 U | 9.7 U | 9 U | b | b |
| 4-nitroaniline | 24000 | NSA | | 18 U | 18 U | 18 U | 19 U | 19 U | 20 U | 18 U | 940 U | 890 U |
| 4-nitrophenol | 24000 * | NSA | | 36 U | 36 U | 36 U | 38 U | 37 U | 39 U | 36 U | 940 U | 890 U |
| Acenaphthene | 340000 * | 487000 | | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 750 U | 3600 U |
| Acenaphthylene | 3600 | 200000 | | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 750 U | 3600 U |
| Acetophenone | 780000 * | NSA | | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | b | b |
| Anthracene | 1700000 * | 5945000 | | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 0.94 J | 1.4 U | 380 U | 1800 U |
| Atrazine | 2100 | NSA | | 9 U | 9.1 U | 8.9 U | 9.4 U | 9.3 U | 9.7 U | 9 U | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-GS2-1 | C10-GS2-2 | C10-GS2-2 |
|------------------------------|------------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|-----------------|
| Sample Name: | | | C10-AA03-SO-01-4.0 | C10-AA03-SO-02-4.0 | C10-AA04-SO-01-4.0 | C10-AA04-SO-02-4.0 | C10-AA04-SO-03-4.0 | C10-AA07-SO-01-4.0 | C10-AA07-SO-02-4.0 | C10-GS2-SO-1-7 | C10-GS2-SO-2-7 | C2-OXY-SO-S02-7 |
| Sample Date: | | | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 5/9/2001 | 5/9/2001 | 8/25/2010 |
| Parent Sample: | | | | | | | | | | | | |
| Sample Depth (ft bgs): | | | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 6 - 7 | 6 - 7 | 6.5 - 7 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | |
| Benzaldehyde | 780000 * | NSA | 16 U | 16 U | 16 U | 17 U | 17 U | 18 U | 16 U | b | b | b |
| Benzo[a]anthracene | 150 | 3940 | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 5.1 J | 1.4 U | 380 U | 1800 U | b |
| Benzo[a]pyrene | 15 | NSA | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 5.3 J | 1.4 U | 75 U | 360 U | b |
| Benzo[b]fluoranthene | 150 | 12200 | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 6.2 J | 1.4 U | 75 U | 360 U | b |
| Benzo[g,h,i]perylene | 170000 * | NSA | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 4.6 J | 1.4 U | 75 U | 360 U | b |
| Benzo[k]fluoranthene | 1500 | 12200 | 3.6 U | 3.6 U | 3.6 U | 3.8 U | 3.7 U | 4.7 J | 3.6 U | 75 U | 360 U | b |
| Benzoic acid | 24000000 * | NSA | b | b | b | b | b | b | b | 940 U | 890 U | b |
| Benzyl alcohol | 610000 * | NSA | b | b | b | b | b | b | b | 190 U | 180 U | b |
| Benzyl butyl phthalate | 260000 | 14200000 | 11 U | 11 U | 11 U | 11 U | 19 J | 12 U | 11 U | 190 U | 180 U | b |
| Bis(2-chloroethoxy) methane | 18000 * | NSA | 5.4 U | 5.5 U | 5.4 U | 5.7 U | 5.6 U | 5.8 U | 5.4 U | 190 U | 180 U | b |
| Bis(2-chloroethyl) ether | 210 | NSA | 2.7 U | 2.7 U | 2.7 U | 2.8 U | 2.8 U | 2.9 U | 2.7 U | 190 U | 180 U | b |
| Bis(2-ethylhexyl) phthalate | 35000 | 374000000 | 13 J | 18 U | 74 J | 12 J | 13 J | 31 J | 18 U | 190 U | 180 U | b |
| Caprolactam | 3100000 * | NSA | 72 U | 73 U | 71 U | 75 U | 74 U | 78 U | 72 U | b | b | b |
| Carbazole | NSA | NSA | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 190 U | 180 U | b |
| Chrysene | 15000 | 3960 | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 7.7 J | 1.4 U | 380 U | 1800 U | b |
| Cresols | 750000 * | NSA | b | b | b | b | b | b | b | 190 U | 180 U | b |
| Dibenz[a,h]anthracene | 15 | 55000 | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 75 U | 360 U | b |
| Dibenzo furan | 7800 * | 1400000 | 5.4 U | 5.5 U | 5.4 U | 5.7 U | 5.6 U | 5.8 U | 5.4 U | 190 U | 180 U | b |
| Diethyl phthalate | 4900000 * | 18200000 | 11 U | 11 U | 11 U | 11 U | 15 J | 12 U | 11 U | 190 U | 180 U | b |
| Dimethyl phthalate | NSA | NSA | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U | b |
| Di-n-butyl phthalate | 610000 * | 8400000 | 11 U | 12 U | 11 U | 190 U | 180 U | b |
| Di-n-octyl phthalate | 610000 * | 596000 | 11 U | 12 U | 11 U | 190 U | 180 U | b |
| Fluoranthene | 230000 * | 26500000 | 1.4 U | 1.5 U | 0.79 J | 1.5 U | 1.5 U | 14 | 1.4 U | 380 U | 1800 U | b |
| Fluorene | 230000 * | 1960000 | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 2 U | 1.8 U | 380 U | 1800 U | b |
| Hexachloro-1,3-butadiene | 6100 * | 133000 | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 190 U | 180 U | b |
| Hexachlorobenzene | 300 | 11000 | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 2 U | 1.8 U | 190 U | 180 U | b |
| Hexachlorocyclopentadiene | 37000 * | 42800 | 5.4 U | 5.5 U | 5.4 U | 5.7 U | 5.6 U | 5.8 U | 5.4 U | 190 U | 180 U | b |
| Hexachloroethane | 4300 * | 45000 | 5.4 U | 5.5 U | 5.4 U | 5.7 U | 5.6 U | 5.8 U | 5.4 U | 190 U | 180 U | b |
| Indeno[1,2,3-c,d]pyrene | 150 | 34000 | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 3.6 J | 1.8 U | 75 U | 360 U | b |
| Isophorone | 510000 | 28000 | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 UJ | b |
| Naphthalene | 3600 | NSA | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 1.6 U | 1.4 U | 380 U | 1800 U | b |
| Naphthalene (by 8260) | 3600 | NSA | 1.1 U | 1.1 U | 1.1 U | 1.1 UJ | 1.1 UJ | 1.1 U | 1.1 U | b | b | b |
| N-nitrosodi-n-propylamine | 69 | NSA | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 2 U | 1.8 U | 190 U | 180 U | b |
| N-nitrosodiphenylamine | 99000 | NSA | 9 U | 9.1 U | 8.9 U | 9.4 U | 9.3 U | 9.7 U | 9 U | 190 U | 180 U | b |
| Pentachlorophenol | 890 | NSA | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 940 UJ | 890 UJ | b |
| Phenanthrene | 1700000 * | 1200000 | 2.7 U | 2.7 U | 2.7 U | 2.8 U | 2.8 U | 4.7 J | 2.7 U | 380 U | 1800 U | b |
| Phenol | 1800000 * | 250 | 2.2 U | 2.2 U | 2.1 U | 2.3 U | 2.2 U | 2.3 U | 2.2 U | 190 U | 180 U | b |
| Pyrene | 170000 * | 1680000 | 1.4 U | 1.5 U | 1.4 U | 1.5 U | 1.5 U | 12 | 1.4 U | 380 U | 1800 U | b |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | | | | |
| 4,4-DDD | 2000 | 6600000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| 4,4-DDE | 1400 | 2600000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| 4,4-DDT | 1700 | 86 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Aldrin | 29 | 48500 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| alpha-BHC | 77 | 62 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| alpha-Chlordane | 1600 | 29700 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| Beta-BHC | 270 | 250 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| delta-BHC | 77 | 2330 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| Dieldrin | 30 | 420 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Endosulfan I | 37000 * | 2350000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Endosulfan II | 37000 * | 2350000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-GS2-1 | C10-GS2-2 | C10-GS2-2 |
|--|-----------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|-----------------|
| Sample Name: | | | C10-AA03-SO-01-4.0 | C10-AA03-SO-02-4.0 | C10-AA04-SO-01-4.0 | C10-AA04-SO-02-4.0 | C10-AA04-SO-03-4.0 | C10-AA07-SO-01-4.0 | C10-AA07-SO-02-4.0 | C10-GS2-SO-1-7 | C10-GS2-SO-2-7 | C2-OXY-SO-S02-7 |
| Sample Date: | | | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 5/9/2001 | 5/9/2001 | 8/25/2010 |
| Parent Sample: | | | | | | | | | | | | |
| Sample Depth (ft bgs): | | | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 6 - 7 | 6 - 7 | 6.5 - 7 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | |
| Endosulfan sulfate | 37000 * | 2350000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Endrin | 1800 * | 671000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Endrin aldehyde | 1800 * | 305000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Endrin ketone | 1800 * | 305000 | b | b | b | b | b | b | b | 3.7 U | 3.5 U | b |
| Gamma-BHC (Lindane) | 520 | 270 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| Heptachlor | 110 | 279000 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| Heptachlor epoxide | 53 | 12400 | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| Methoxychlor | 31000 * | 16900000 | b | b | b | b | b | b | b | 18 U | 18 U | b |
| Toxaphene | 440 | NSA | b | b | b | b | b | b | b | 37 U | 35 U | b |
| trans-Chlordane | 1600 | NSA | b | b | b | b | b | b | b | 1.8 U | 1.8 U | b |
| PCBs (SW8082) (µg/kg) | | | | | | | | | | | | |
| Aroclor 1016 | 390 * | NSA | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U | 18 U | 18 U | b |
| Aroclor 1221 | 140 | NSA | 3.3 U | 3.3 U | 3.2 U | 3.4 U | 3.4 U | 3.5 U | 3.2 U | 18 U | 18 U | b |
| Aroclor 1232 | 140 | 46000 | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U | 18 U | 18 U | b |
| Aroclor 1242 | 220 | 200000 | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U | 18 U | 18 U | b |
| Aroclor 1248 | 220 | 196000 | 4.3 U | 4.4 U | 4.3 U | 4.5 U | 4.5 U | 4.7 U | 4.3 U | 18 U | 18 U | b |
| Aroclor 1254 | 110 * | 337000 | 3.3 U | 3.3 U | 3.2 U | 3.4 U | 3.4 U | 3.5 U | 3.2 U | 18 U | 18 U | b |
| Aroclor 1260 | 220 | 922000 | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U | 18 U | 18 U | b |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/kg) | | | | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | NSA | 32 U | 33 U | 33 U | 34 U | 34 U | 34 U | 32 U | 500 U | 500 U | b |
| 1,3-Dinitrobenzene | 610 * | NSA | 32 U | 33 U | 33 U | 34 U | 34 U | 34 U | 32 U | 500 U | 500 U | b |
| 2,4,6-trinitrotoluene | 3600 * | 45900 | 32 U | 33 U | 33 U | 34 U | 34 U | 34 U | 32 U | 500 U | 500 U | b |
| 2,4-dinitrotoluene | 1600 | 9500 | 32 U | 33 U | 33 U | 34 U | 34 U | 34 U | 32 U | 500 U | 500 U | b |
| 2,4-dinitrotoluene (by 8270) | 1600 | 9500 | 5.4 U | 5.5 U | 5.4 U | 5.7 U | 5.6 U | 5.8 U | 5.4 U | 190 U | 180 U | b |
| 2,6-dinitrotoluene | 6100 * | NSA | 32 U | 33 U | 33 U | 34 U | 34 U | 34 U | 32 U | 500 U | 500 U | b |
| 2,6-dinitrotoluene (by 8270) | 6100 * | NSA | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U | b |
| 2-amino-4,6-dinitrotoluene | 15000 * | 44000 | 54 U | 54 U | 55 U | 57 U | 56 U | 57 U | 54 U | 500 U | 500 U | b |
| 2-nitrotoluene | 2900 | NSA | 110 U | 500 U | 500 U | b |
| 3-nitrotoluene | 610 * | NSA | 220 U | 220 U | 220 U | 230 U | 230 U | 230 U | 210 U | 500 U | 500 U | b |
| 4-amino-2,6-dinitrotoluene | 15000 * | 31300 | 54 U | 54 U | 55 U | 57 U | 56 U | 57 U | 54 U | 500 U | 500 U | b |
| 4-Nitrotoluene | 24000 * | 8200 | 220 U | 220 U | 220 U | 230 U | 230 U | 230 U | 210 U | 500 U | 500 U | b |
| HMX | 380000 * | 16700000 | 110 U | 500 U | 500 U | b |
| Nitrobenzene | 4800 | 420 | 110 U | 500 U | 500 U | b |
| Nitrobenzene (by 8270) | 4800 | 420 | 7.2 U | 7.3 U | 7.1 U | 7.5 U | 7.4 U | 7.8 U | 7.2 U | 190 U | 180 U | b |
| RDX | 5600 | NSA | 110 U | 500 U | 500 U | b |
| Tetryl | 24000 * | NSA | 32 U | 33 U | 33 U | 34 U | 34 U | 34 U | 32 U | 500 U | 500 U | b |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) (mg/kg) | | | | | | | | | | | | |
| Aluminum | 7700 * | 55500000 | 8990 J | 6730 J | 12100 J | 11500 J | 11400 J | 4250 J | 6610 J | 15900 | 16500 | 7800 |
| Antimony | 3.1 * | 135 | 0.6 UJ | 0.53 UJ | 0.52 UJ | 0.6 UJ |
| Arsenic | 0.39 | 5000 | 3.7 | 3.3 | 2.4 | 8 | 5.6 | 3.3 | 3.5 | 4.4 J | 3.8 J | 3.1 |
| Barium | 1500 * | 41100 | 91.1 | 88.4 | 104 | 96.2 | 93.1 | 37.2 | 61.8 | 71.4 J | 60.8 J | 136 |
| Beryllium | 16 * | 2370 | 0.56 | 0.43 | 0.81 | 0.82 | 0.81 | 0.23 | 0.4 | 2.7 U | 2.6 U | 0.48 |
| Boron | 1600 * | 3100 | 8.4 U | 7 U | 13 U | 13.7 U | 9 U | 9 U | 9 U | 27 U | 26 U | 3.6 B |
| Cadmium | 7 * | 376 | 0.071 | 0.091 | 0.039 J | 0.069 | 0.089 | 0.06 J | 0.098 J | 0.53 U | 0.52 U | 0.053 J |
| Calcium | NSA | NSA | 46700 | 16600 | 4130 | 55100 | 55400 | 45500 | 2890 J | 52700 | 46700 | 48000 |
| Chromium ^c | 12,000 * | 90000000 | 15.2 | 11.2 | 17.1 | 19.2 | 19.9 | 7.3 | 10.2 | 319 | 299 | 14.1 |
| Chromium (hexavalent) (by SW7196A) | 0.29 | NSA | 0.14 J | 0.19 J | b | b | 0.25 J | b | b | b | b | 0.23 UJ |
| Cobalt | 2.3 * | 496 | 7.6 | 6.3 | 7.5 | 17.7 | 10.1 | 5.2 | 7 | 10.8 | 9.6 | 8.5 |
| Copper | 310 * | 85600 | 26.6 | 18.2 | 45 | 31.5 | 29.1 | 24.8 | 28.3 | 38.5 | 27.6 | 25.4 |
| Cyanide (by SW9012) | 160 * | 2000 | b | b | b | b | b | b | b | 0.3 U | 0.3 U | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-AA03-BP01 | C10-AA03-BP02 | C10-AA04-BP01 | C10-AA04-BP02 | C10-AA04-BP03 | C10-AA07-BP01 | C10-AA07-BP02 | C10-GS2-1 | C10-GS2-2 | C10-GS2-2 |
|------------------------|-----------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|-----------------|
| Sample Name: | | | C10-AA03-SO-01-4.0 | C10-AA03-SO-02-4.0 | C10-AA04-SO-01-4.0 | C10-AA04-SO-02-4.0 | C10-AA04-SO-03-4.0 | C10-AA07-SO-01-4.0 | C10-AA07-SO-02-4.0 | C10-GS2-SO-1-7 | C10-GS2-SO-2-7 | C2-OXY-SO-S02-7 |
| Sample Date: | | | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 10/12/2011 | 5/9/2001 | 5/9/2001 | 8/25/2010 |
| Parent Sample: | | | | | | | | | | | | |
| Sample Depth (ft bgs): | | | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 3.5 - 4 | 6 - 7 | 6 - 7 | 6.5 - 7 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | |
| Iron | 5500 * | 7500 | 19100 | 15400 | 16200 | 30900 | 30600 | 13000 | 16300 | 27000 | 26200 | 19800 |
| Lead | 400 | 22500 | 5.6 | 4 | 7.1 | 7.7 | 7 | 3.4 | 4.9 J | 4.4 J | 4.3 J | 5.7 |
| Lithium | 16 * | NSA | 17.9 | 15.8 | 24.6 | 25.1 | 23.6 | 8.7 | 10.2 | 21.4 J | 22.6 J | 19.1 |
| Magnesium | NSA | NSA | 7050 J | 6840 J | 5050 J | 9290 J | 7680 J | 5730 J | 2010 J | 10400 | 10400 | 11400 J |
| Manganese | 180 * | 19500 | 823 J | 727 J | 156 J | 942 J | 793 J | 816 J | 700 J | 870 | 712 | 992 J |
| Mercury (by 7471) | 0.78 * | 36.5 | 0.017 U | 0.017 U | 0.025 U | 0.015 U | 0.014 U | 0.017 U | 0.03 U | 0.069 U | 0.065 U | 0.0081 B |
| Nickel | 150 * | 605 | 17.3 | 14.1 | 20.3 | 24.3 | 23.2 | 10.1 | 12.3 | 18.1 J | 18 J | 17.7 |
| Potassium | NSA | NSA | 1270 | 1000 | 668 | 1770 | 1520 | 453 | 429 J | 3760 J | 4240 J | 1260 J |
| Selenium | 39 * | 3000 | 1.3 | 0.77 | 1.2 | 0.65 | 1 | 1.3 | 1.4 | 0.53 UJ | 0.52 UJ | 1.2 |
| Silver | 39 * | 420 | 0.024 U | 0.024 U | 0.047 J | 0.021 J | 0.032 J | 0.024 U | 0.029 J | 1.1 U | 1 U | 0.043 J |
| Sodium | NSA | NSA | 105 U | 95.2 U | 137 U | 142 U | 112 U | 126 U | 64.2 U | 730 J | 684 J | 112 |
| Thallium | 0.078 * | 750 | 0.11 J | 0.15 U | 0.19 J | 0.16 J | 0.11 J | 0.15 U | 0.15 U | 0.59 | 0.67 | 0.11 B |
| Vanadium | 39 * | 180000 | 21.5 | 16.4 | 23.9 | 30 | 29 | 13 | 19.2 | 34.9 | 34.7 | 20.6 |
| Zinc | 2300 * | 124000 | 38 J | 31.9 J | 41.4 J | 47 J | 45.4 J | 25.2 J | 28.8 J | 44.7 J | 43 J | 37.6 J |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | C10-GS2-9 | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 |
|--|-----------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|---------------------|
| Sample Name: | | C10-GS2-SO-3-5 | C10-GS2-SO-4-5 | C10-GS2-SO-5-7 | C10-GS2-SO-6-25 | C10-GS2-SO-7-13 | C10-GS2-SO-8-12 | C10-GS2-SO-9-6 | C2-OXY-SO-P21-3 | C2-OXY-SO-P22-3 | C2-OXY-SO-P23-3 | C2-OXY-SO-P2-03 DUP |
| Sample Date: | | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | | | | C2-OXY-SO-P23-3 |
| Sample Depth (ft bgs): | | 4 - 5 | 4 - 5 | 6 - 7 | 24 - 25 | 12 - 13 | 11 - 12 | 5 - 6 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,1,1-trichloroethane | 870000 * | 4630 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,1,2,2-tetrachloroethane | 560 | 2500 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,1,2-trichloroethane | 160 * | 485 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,1-dichloroethane | 3300 | 2050 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,1-dichloroethene | 24000 * | 3130 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,2,3-trichlorobenzene | 4900 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,2,3-trichloropropane | 5 | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,2,4-trichlorobenzene | 6200 * | 18300 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b |
| 1,2,4-trimethylbenzene | 6200 * | 16000 | b | b | b | b | b | b | b | b | b | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,2-dibromoethane | 34 | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,2-dichlorobenzene | 190000 * | 6900 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b |
| 1,2-dichloroethane | 430 | 180 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,2-dichloroethene | 70000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,2-dichloropropane | 940 | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| 1,3,5-trimethylbenzene | 78000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,3-dichlorobenzene | 610 * | 6800 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b |
| 1,3-dichloropropane | 160000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | 6800 | b | b | b | b | b | b | b | b | b | b |
| 2,2-dichloropropane | NSA | NSA | b | b | b | b | b | b | b | b | b | b |
| 2-butanone | 2800000 * | 6480 | 9.2 U | 9.8 U | 11 U | 9.4 UJ | 9.3 UJ | 9.3 UJ | 11 U | b | b | b |
| 2-chlorotoluene | 160000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 2-hexanone | 21000 * | NSA | 9.2 U | 9.8 U | 11 U | 9.4 UJ | 9.3 UJ | 9.3 UJ | 11 U | b | b | b |
| 4-chlorotoluene | 160000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| 4-Isopropyltoluene | NSA | NSA | b | b | b | b | b | b | b | b | b | b |
| 4-methyl-2-pentanone | 530000 * | 1500000 | 9.2 U | 9.8 U | 11 U | 9.4 UJ | 9.3 UJ | 9.3 UJ | 11 U | b | b | b |
| Acetone | 6100000 * | 5510 | 100 | 64.9 | 122 | 1500 J | 1620 J | 1560 J | 75.5 | b | b | b |
| Benzene | 1100 | 460 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Bromobenzene | 30000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| Bromochloromethane | 16000 * | NSA | b | b | b | b | b | b | b | b | b | b |
| Bromodichloromethane | 270 | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Bromoform | 62000 | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Bromomethane | 730 * | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Carbon disulfide | 82000 * | 33000 | 9.2 U | 9.8 U | 11 U | 9.4 UJ | 9.3 UJ | 9.3 UJ | 11 U | b | b | b |
| Carbon tetrachloride | 610 | 5300 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Chlorobenzene | 29000 * | 7280 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Chloroethane | 1500000 * | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Chloroform | 290 | 2800 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Chloromethane | 12000 * | 2300 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Cis-1,2-dichloroethene | 16000 * | 1580 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Cis-1,3-dichloropropene | 160000 * | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Cyclohexane | 700000 * | 25000000 | b | b | b | b | b | b | b | b | b | b |
| Dibromochloromethane | 680 | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Dibromomethane | 2500 * | NSA | b | b | b | b | b | b | b | b | b | b |
| Dichlorodifluoromethane | 9400 * | NSA | b | b | b | b | b | b | b | b | b | b |
| Ethylbenzene | 5400 | 5800 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | 133000 | b | b | b | b | b | b | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | C10-GS2-9 | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 |
|--|-----------|-----------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|---------------------|
| Sample Name: | | | C10-GS2-SO-3-5 | C10-GS2-SO-4-5 | C10-GS2-SO-5-7 | C10-GS2-SO-6-25 | C10-GS2-SO-7-13 | C10-GS2-SO-8-12 | C10-GS2-SO-9-6 | C2-OXY-SO-P21-3 | C2-OXY-SO-P22-3 | C2-OXY-SO-P23-3 | C2-OXY-SO-P2-03 DUP |
| Sample Date: | | | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | | | | | C2-OXY-SO-P23-3 |
| Sample Depth (ft bgs): | | | 4 - 5 | 4 - 5 | 6 - 7 | 24 - 25 | 12 - 13 | 11 - 12 | 5 - 6 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | | |
| Isopropylbenzene | 210000 * | 21000 | b | b | b | b | b | b | b | b | b | b | b |
| m,p-Xylene | 63000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Methyl tert-butyl ether | 43000 | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Methylcyclohexane | 700000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Methylene Chloride | 11000 | 860 | 9.2 U | 9.8 U | 11 U | 9.4 UJ | 9.3 UJ | 9.3 UJ | 11 U | b | b | b | b |
| n-Butylbenzene | 390000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| N-propylbenzene | 340000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| o-Xylene | 69000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Sec-butylbenzene | NSA | 34000 | b | b | b | b | b | b | b | b | b | b | b |
| Styrene | 630000 * | 13000 | 4.6 U | 4.9 U | 5.6 U | 6.2 J | 4.6 J | 4.6 UJ | 5.6 U | b | b | b | b |
| Tert-butylbenzene | NSA | 1100 | b | b | b | b | b | b | b | b | b | b | b |
| Tetrachloroethene | 550 | 7900 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b | b |
| Toluene | 500000 * | 4200 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b | b |
| trans-1,2-dichloroethene | 15000 * | 1800 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b | b |
| trans-1,3-dichloropropene | 1700 | NSA | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b | b |
| Trichloroethene | 440 * | 3200 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b | b |
| Trichlorofluoromethane | 79000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Vinyl chloride | 60 | 795 | 4.6 U | 4.9 U | 5.6 U | 4.7 UJ | 4.6 UJ | 4.6 UJ | 5.6 U | b | b | b | b |
| Xylenes, Total | 63000 * | 5750 | 14 U | 15 U | 17 U | 14 UJ | 14 UJ | 14 UJ | 17 U | b | b | b | b |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | | | | | | | | |
| 1,1-biphenyl | 5100 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | 6800 | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b | b |
| 1-Methylnaphthalene | 22000 | 246 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| 2,2-oxybis(1-chloropropane) | 4600 | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2,4,5-trichlorophenol | 610000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2,4,6-trichlorophenol | 6100 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2,4-dichlorophenol | 18000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2,4-dimethylphenol | 120000 * | 2700000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2,4-dinitrophenol | 12000 * | NSA | 970 UJ | 970 U | 960 UJ | 970 UJ | 990 UJ | 960 UJ | 960 UJ | b | b | b | b |
| 2-chloronaphthalene | 630000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2-chlorophenol | 39000 * | 414000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2-Methyl-4,6-dinitrophenol | 490 * | NSA | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| 2-methylnaphthalene | 31000 * | 148000 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| 2-methylphenol | 310000 * | 4100000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 2-nitroaniline | 61000 * | NSA | 970 U | 970 U | 960 U | 970 U | 990 U | 960 U | 960 U | b | b | b | b |
| 2-nitrophenol | 2900 | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 3,3-dichlorobenzidine | 1100 | NSA | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| 3-nitroaniline | 610 * | NSA | 970 U | 970 U | 960 U | 970 U | 990 U | 960 U | 960 U | b | b | b | b |
| 4-bromophenyl phenyl ether | NSA | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 4-chloro-3-methylphenol | 610000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 4-chloraniline | 2400 | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 4-chlorophenyl phenyl ether | NSA | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| 4-methylphenol | 31000 * | 91000 | b | b | b | b | b | b | b | b | b | b | b |
| 4-nitroaniline | 24000 | NSA | 970 U | 970 U | 960 U | 970 U | 990 U | 960 U | 960 U | b | b | b | b |
| 4-nitrophenol | 24000 * | NSA | 970 U | 970 U | 960 U | 970 U | 990 U | 960 U | 960 U | b | b | b | b |
| Acenaphthene | 340000 * | 487000 | 780 U | 780 U | 770 U | 780 U | 790 U | 760 U | 770 U | b | b | b | b |
| Acenaphthylene | 3600 | 200000 | 780 U | 780 U | 770 U | 780 U | 790 U | 760 U | 770 U | b | b | b | b |
| Acetophenone | 780000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Anthracene | 1700000 * | 5945000 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Atrazine | 2100 | NSA | b | b | b | b | b | b | b | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | C10-GS2-9 | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 |
|------------------------------|------------|-----------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|---------------------|
| Sample Name: | | | C10-GS2-SO-3-5 | C10-GS2-SO-4-5 | C10-GS2-SO-5-7 | C10-GS2-SO-6-25 | C10-GS2-SO-7-13 | C10-GS2-SO-8-12 | C10-GS2-SO-9-6 | C2-OXY-SO-P21-3 | C2-OXY-SO-P22-3 | C2-OXY-SO-P23-3 | C2-OXY-SO-P2-03 DUP |
| Sample Date: | | | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | | | | | C2-OXY-SO-P23-3 |
| Sample Depth (ft bgs): | | | 4 - 5 | 4 - 5 | 6 - 7 | 24 - 25 | 12 - 13 | 11 - 12 | 5 - 6 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | | |
| Benzaldehyde | 780000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Benzo[a]anthracene | 150 | 3940 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Benzo[a]pyrene | 15 | NSA | 78 U | 78 U | 77 U | 78 U | 79 U | 76 U | 77 U | b | b | b | b |
| Benzo[b]fluoranthene | 150 | 12200 | 78 U | 78 U | 77 U | 78 U | 79 U | 76 U | 77 U | b | b | b | b |
| Benzo[g,h,i]perylene | 170000 * | NSA | 78 U | 78 U | 77 U | 78 U | 79 U | 76 U | 77 U | b | b | b | b |
| Benzo[k]fluoranthene | 1500 | 12200 | 78 U | 78 U | 77 U | 78 U | 79 U | 76 U | 77 U | b | b | b | b |
| Benzoic acid | 24000000 * | NSA | a | 970 U | a | a | a | a | a | b | b | b | b |
| Benzyl alcohol | 610000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Benzyl butyl phthalate | 260000 | 14200000 | 507 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 127 J | b | b | b |
| Bis(2-chloroethoxy) methane | 18000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Bis(2-chloroethyl) ether | 210 | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Bis(2-ethylhexyl) phthalate | 35000 | 374000000 | 1250 | 190 U | 190 U | 210 | 1600 | 163 J | 190 U | b | b | b | b |
| Caprolactam | 3100000 * | NSA | b | b | b | b | b | b | b | b | b | b | b |
| Carbazole | NSA | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Chrysene | 15000 | 3960 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Cresols | 750000 * | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Dibenz[a,h]anthracene | 15 | 55000 | 78 U | 78 U | 77 U | 78 U | 79 U | 76 U | 77 U | b | b | b | b |
| Dibenzofuran | 7800 * | 1400000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Diethyl phthalate | 4900000 * | 18200000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Dimethyl phthalate | NSA | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Di-n-butyl phthalate | 610000 * | 8400000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Di-n-octyl phthalate | 610000 * | 596000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Fluoranthene | 230000 * | 26500000 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Fluorene | 230000 * | 1960000 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | 133000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Hexachlorobenzene | 300 | 11000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Hexachlorocyclopentadiene | 37000 * | 42800 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Hexachloroethane | 4300 * | 45000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Indeno[1,2,3-c,d]pyrene | 150 | 34000 | 78 U | 78 U | 77 U | 78 U | 79 U | 76 U | 77 U | b | b | b | b |
| Isophorone | 510000 | 28000 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Naphthalene | 3600 | NSA | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Naphthalene (by 8260) | 3600 | NSA | b | b | b | b | b | b | b | b | b | b | b |
| N-nitrosodi-n-propylamine | 69 | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| N-nitrosodiphenylamine | 99000 | NSA | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Pentachlorophenol | 890 | NSA | 970 UJ | 970 UJ | 960 UJ | 970 UJ | 990 UJ | 960 UJ | 960 UJ | b | b | b | b |
| Phenanthrene | 1700000 * | 1200000 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Phenol | 1800000 * | 250 | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | 190 U | b | b | b | b |
| Pyrene | 170000 * | 16800000 | 390 U | 390 U | 380 U | 390 U | 400 U | 380 U | 380 U | b | b | b | b |
| Pesticides (SW8081A) (µg/kg) | | | | | | | | | | | | | |
| 4,4-DDD | 2000 | 6600000 | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| 4,4-DDE | 1400 | 2600000 | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| 4,4-DDT | 1700 | 86 | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Aldrin | 29 | 48500 | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b | b |
| alpha-BHC | 77 | 62 | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b | b |
| alpha-Chlordane | 1600 | 29700 | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b | b |
| Beta-BHC | 270 | 250 | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b | b |
| delta-BHC | 77 | 2330 | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b | b |
| Dieldrin | 30 | 420 | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Endosulfan I | 37000 * | 2350000 | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Endosulfan II | 37000 * | 2350000 | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | C10-GS2-9 | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 |
|---|------------------|------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|---------------------|
| Sample Name: | | | C10-GS2-SO-3-5 | C10-GS2-SO-4-5 | C10-GS2-SO-5-7 | C10-GS2-SO-6-25 | C10-GS2-SO-7-13 | C10-GS2-SO-8-12 | C10-GS2-SO-9-6 | C2-OXY-SO-P21-3 | C2-OXY-SO-P22-3 | C2-OXY-SO-P23-3 | C2-OXY-SO-P2-03 DUP |
| Sample Date: | | | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | | | | | C2-OXY-SO-P23-3 |
| Sample Depth (ft bgs): | | | 4 - 5 | 4 - 5 | 6 - 7 | 24 - 25 | 12 - 13 | 11 - 12 | 5 - 6 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | | |
| Endosulfan sulfate | 37000 * | 2350000 | | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Endrin | 1800 * | 671000 | | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Endrin aldehyde | 1800 * | 305000 | | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Endrin ketone | 1800 * | 305000 | | 3.9 U | 4.3 U | 3.8 U | 3.9 U | 3.8 U | 3.9 U | b | b | b | b |
| Gamma-BHC (Lindane) | 520 | 270 | | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b |
| Heptachlor | 110 | 279000 | | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b |
| Heptachlor epoxide | 53 | 12400 | | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b |
| Methoxychlor | 31000 * | 16900000 | | 20 U | 22 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Toxaphene | 440 | NSA | | 39 U | 43 U | 38 U | 39 U | 39 U | 38 U | 39 U | b | b | b |
| trans-Chlordane | 1600 | NSA | | 2 U | 2.2 U | 1.9 U | 2 U | 2 U | 1.9 U | 2 U | b | b | b |
| PCBs (SW8082) (µg/kg) | | | | | | | | | | | | | |
| Aroclor 1016 | 390 * | NSA | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Aroclor 1221 | 140 | NSA | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Aroclor 1232 | 140 | 46000 | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Aroclor 1242 | 220 | 200000 | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Aroclor 1248 | 220 | 196000 | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Aroclor 1254 | 110 * | 337000 | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Aroclor 1260 | 220 | 922000 | | 20 U | 20 U | 19 U | 20 U | 20 U | 19 U | 20 U | b | b | b |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/kg) | | | | | | | | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | NSA | | 500 U | 185 J | 500 U | 500 U | 500 U | 500 U | 140 U | 230 J | 140 U | 130 J |
| 1,3-Dinitrobenzene | 610 * | NSA | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 55 J | 140 U | 140 U |
| 2,4,6-trinitrotoluene | 3600 * | 45900 | | 500 U | 124 J | 500 U | 500 U | 500 U | 500 U | 140 U | 23000 | 140 U | 240 J |
| 2,4-dinitrotoluene | 1600 | 9500 | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 840 |
| 2,4-dinitrotoluene (by 8270) | 1600 | 9500 | | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | b | b | b | b |
| 2,6-dinitrotoluene | 6100 * | NSA | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 370 |
| 2,6-dinitrotoluene (by 8270) | 6100 * | NSA | | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | b | b | b | b |
| 2-amino-4,6-dinitrotoluene | 15000 * | 44000 | | 500 U | 357 J | 500 U | 500 U | 500 U | 500 U | 140 U | 3100 | 140 U | 1700 |
| 2-nitrotoluene | 2900 | NSA | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| 3-nitrotoluene | 610 * | NSA | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | 31300 | | 500 U | 271 J | 500 U | 500 U | 500 U | 500 U | 140 U | 2100 | 140 U | 810 |
| 4-Nitrotoluene | 24000 * | 8200 | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| HMX | 380000 * | 16700000 | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| Nitrobenzene | 4800 | 420 | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| Nitrobenzene (by 8270) | 4800 | 420 | | 190 U | 190 U | 190 U | 190 U | 200 U | 190 U | b | b | b | b |
| RDX | 5600 | NSA | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| Tetryl | 24000 * | NSA | | 500 U | 500 U | 500 U | 500 U | 500 U | 500 U | 140 U | 140 U | 140 U | 140 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) (mg/kg) | | | | | | | | | | | | | |
| Aluminum | 7700 * | 55500000 | | 12200 J | 17700 | 12700 J | 6000 J | 10800 J | 11700 J | 13000 J | 9800 | 8010 | 10600 |
| Antimony | 3.1 * | 135 | | 0.53 UJ | 0.51 UJ | 0.5 UJ | 0.5 UJ | 0.51 UJ | 0.53 UJ | 0.48 UJ | 0.6 U | 0.6 U | 1.2 U |
| Arsenic | 0.39 | 5000 | | 3.5 J | 3.9 J | 4.2 J | 2.3 J | 3.4 J | 3.9 J | 3.4 J | 1.8 | 1 | 5.6 |
| Barium | 1500 * | 41100 | | 63.4 J | 123 J | 95.9 J | 80.6 J | 69.7 J | 81.7 J | 123 J | 102 J | 109 J | 118 J |
| Beryllium | 16 * | 2370 | | 0.54 J | 2.6 U | 0.55 J | 0.5 UJ | 0.51 UJ | 0.53 UJ | 0.57 J | 0.6 J | 0.73 J | 0.78 J |
| Boron | 1600 * | 3100 | | 26 UJ | 26 U | 25 UJ | 25 UJ | 26 UJ | 26 UJ | 24 UJ | 3.4 B | 9 UJ | 18 UJ |
| Cadmium | 7 * | 376 | | 0.53 UJ | 0.51 U | 0.5 UJ | 0.5 UJ | 0.51 UJ | 0.53 UJ | 0.48 UJ | 0.065 | 0.11 | 0.11 |
| Calcium | NSA | NSA | | 86500 J | 50200 | 47400 J | 44300 J | 50600 J | 51200 J | 54700 J | 1970 J | 1930 J | 42300 J |
| Chromium ^c | 12,000 * | 90000000 | | 23.6 | 27.2 | 25.1 | 15 U | 21.7 | 23.3 | 26.2 | 12.8 | 11.1 | 15.4 |
| Chromium (hexavalent) (by SW7196A) | 0.29 | NSA | | b | b | b | b | b | b | 0.23 U | 0.17 J | 0.23 U | 0.24 U |
| Cobalt | 2.3 * | 496 | | 8.7 | 11.2 | 12.9 | 6 | 8.4 | 9.9 | 11.8 | 7.9 | 4.5 | 10.3 |
| Copper | 310 * | 85600 | | 26.5 | 31.4 | 28.2 | 24.9 | 29.8 | 27.6 | 31.8 | 24.6 | 15.9 | 37.1 |
| Cyanide (by SW9012) | 160 * | 2000 | | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | | C10-GS2-3 | C10-GS2-4 | C10-GS2-5 | C10-GS2-6 | C10-GS2-7 | C10-GS2-8 | C10-GS2-9 | C10-GS2-P21 | C10-GS2-P22 | C10-GS2-P23 | C10-GS2-P23 |
|------------------------|-----------|-----------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|---------------------|
| Sample Name: | | | C10-GS2-SO-3-5 | C10-GS2-SO-4-5 | C10-GS2-SO-5-7 | C10-GS2-SO-6-25 | C10-GS2-SO-7-13 | C10-GS2-SO-8-12 | C10-GS2-SO-9-6 | C2-OXY-SO-P21-3 | C2-OXY-SO-P22-3 | C2-OXY-SO-P23-3 | C2-OXY-SO-P2-03 DUP |
| Sample Date: | | | 5/10/2001 | 5/9/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | | | | | | | | C2-OXY-SO-P23-3 |
| Sample Depth (ft bgs): | | | 4 - 5 | 4 - 5 | 6 - 7 | 24 - 25 | 12 - 13 | 11 - 12 | 5 - 6 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | | | | | | | | |
| Iron | 5500 * | 7500 | 27700 | 26100 | 29500 | 16600 | 24800 | 26700 | 29700 | 14900 | 7830 | 25500 | 23400 |
| Lead | 400 | 22500 | 4.5 J | 5.9 J | 4.8 J | 3 J | 4.1 J | 4.1 J | 4.8 J | 4.4 | 6.1 | 5.9 | 5.3 |
| Lithium | 16 * | NSA | 18.7 J | 23.3 J | 22.6 J | 12.4 J | 19.8 J | 20.3 J | 22.7 J | 22.2 | 15.1 | 17.9 | 16.9 |
| Magnesium | NSA | NSA | 8040 J | 11300 | 8080 J | 6810 J | 8370 J | 9500 J | 8600 J | 4470 J | 2290 J | 7920 J | 7120 J |
| Manganese | 180 * | 19500 | 877 J | 844 | 871 J | 821 J | 858 J | 924 J | 820 J | 215 J | 74 J | 874 J | 527 J |
| Mercury (by 7471) | 0.78 * | 36.5 | 0.074 U | 0.076 U | 0.076 U | 0.075 U | 0.074 U | 0.068 U | 0.068 U | 0.033 B | 0.035 B | 0.026 B | 0.025 B |
| Nickel | 150 * | 605 | 15.4 J | 21.8 J | 21.6 J | 9.8 J | 15.7 J | 16.4 J | 18.8 J | 17.6 | 12 | 21.6 | 19.8 |
| Potassium | NSA | NSA | 2980 J | 4110 J | 3070 J | 1730 J | 3050 J | 3260 J | 3290 J | 551 J | 722 J | 1140 J | 980 J |
| Selenium | 39 * | 3000 | 0.53 UJ | 0.51 UJ | 0.5 UJ | 0.5 UJ | 0.51 UJ | 0.53 UJ | 0.48 UJ | 1.3 J | 1.3 J | 1.5 J | 1.1 |
| Silver | 39 * | 420 | 1.1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.96 U | 0.035 J | 0.053 J | 0.025 J | 0.029 J |
| Sodium | NSA | NSA | 220 J | 515 J | 237 J | 191 J | 240 J | 221 J | 235 J | 59.3 | 38.2 J | 72.6 | 70.1 |
| Thallium | 0.078 * | 750 | 0.53 UJ | 0.61 | 0.5 UJ | 0.5 UJ | 0.51 UJ | 0.53 UJ | 0.48 UJ | 0.12 B | 0.064 B | 0.3 U | 0.3 U |
| Vanadium | 39 * | 180000 | 25.7 J | 35.1 | 25.9 J | 14.9 J | 23.3 J | 24.6 J | 26.5 J | 14.7 | 11.6 | 24.1 | 25.1 |
| Zinc | 2300 * | 124000 | 76.1 J | 354 J | 45.4 J | 26.9 J | 39.4 J | 46.4 J | 44.5 J | 45.4 J | 55.7 J | 62.1 J | 57.6 J |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-GS2-P24 | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE |
|--|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Sample Name: | | C2-OXY-SO-P24-3 | C2-OXY-SO-SIN-3 | C2-OXY-SO-SIS-3 | C2-OXY-SO-SIW-3 | C2-OXY-SO-SOE-3 |
| Sample Date: | | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | |
| Sample Depth (ft bgs): | | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | NSA | b | b | b | b |
| 1,1,1-trichloroethane | 870000 * | 4630 | b | b | b | b |
| 1,1,2,2-tetrachloroethane | 560 | 2500 | b | b | b | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | NSA | b | b | b | b |
| 1,1,2-trichloroethane | 160 * | 485 | b | b | b | b |
| 1,1-dichloroethane | 3300 | 2050 | b | b | b | b |
| 1,1-dichloroethene | 24000 * | 3130 | b | b | b | b |
| 1,2,3-trichlorobenzene | 4900 * | NSA | b | b | b | b |
| 1,2,3-trichloroproppane | 5 | NSA | b | b | b | b |
| 1,2,4-trichlorobenzene | 6200 * | 18300 | b | b | b | b |
| 1,2,4-trimethylbenzene | 6200 * | 16000 | b | b | b | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | NSA | b | b | b | b |
| 1,2-dibromoethane | 34 | NSA | b | b | b | b |
| 1,2-dichlorobenzene | 190000 * | 6900 | b | b | b | b |
| 1,2-dichloroethane | 430 | 180 | b | b | b | b |
| 1,2-dichloroethene | 70000 * | NSA | b | b | b | b |
| 1,2-dichloropropane | 940 | NSA | b | b | b | b |
| 1,3,5-trimethylbenzene | 78000 * | NSA | b | b | b | b |
| 1,3-dichlorobenzene | 610 * | 6800 | b | b | b | b |
| 1,3-dichloropropane | 160000 * | NSA | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | 6800 | b | b | b | b |
| 2,2-dichloroproppane | NSA | NSA | b | b | b | b |
| 2-butanone | 2800000 * | 6480 | b | b | b | b |
| 2-chlorotoluene | 160000 * | NSA | b | b | b | b |
| 2-hexanone | 21000 * | NSA | b | b | b | b |
| 4-chlorotoluene | 160000 * | NSA | b | b | b | b |
| 4-Isopropyltoluene | NSA | NSA | b | b | b | b |
| 4-methyl-2-pentanone | 530000 * | 1500000 | b | b | b | b |
| Acetone | 6100000 * | 5510 | b | b | b | b |
| Benzene | 1100 | 460 | b | b | b | b |
| Bromobenzene | 30000 * | NSA | b | b | b | b |
| Bromochloromethane | 16000 * | NSA | b | b | b | b |
| Bromodichloromethane | 270 | NSA | b | b | b | b |
| Bromoform | 62000 | NSA | b | b | b | b |
| Bromomethane | 730 * | NSA | b | b | b | b |
| Carbon disulfide | 82000 * | 33000 | b | b | b | b |
| Carbon tetrachloride | 610 | 5300 | b | b | b | b |
| Chlorobenzene | 29000 * | 7280 | b | b | b | b |
| Chloroethane | 1500000 * | NSA | b | b | b | b |
| Chloroform | 290 | 2800 | b | b | b | b |
| Chloromethane | 12000 * | 2300 | b | b | b | b |
| Cis-1,2-dichloroethene | 16000 * | 1580 | b | b | b | b |
| Cis-1,3-dichloropropene | 160000 * | NSA | b | b | b | b |
| Cyclohexane | 700000 * | 25000000 | b | b | b | b |
| Dibromochloromethane | 680 | NSA | b | b | b | b |
| Dibromomethane | 2500 * | NSA | b | b | b | b |
| Dichlorodifluoromethane | 9400 * | NSA | b | b | b | b |
| Ethylbenzene | 5400 | 5800 | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | 133000 | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-GS2-P24 | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE |
|--|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Sample Name: | | C2-OXY-SO-P24-3 | C2-OXY-SO-SIN-3 | C2-OXY-SO-SIS-3 | C2-OXY-SO-SIW-3 | C2-OXY-SO-SOE-3 |
| Sample Date: | | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | |
| Sample Depth (ft bgs): | | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | |
| Isopropylbenzene | 210000 * | 21000 | b | b | b | b |
| m,p-Xylene | 63000 * | NSA | b | b | b | b |
| Methyl tert-butyl ether | 43000 | NSA | b | b | b | b |
| Methylcyclohexane | 700000 * | NSA | b | b | b | b |
| Methylene Chloride | 11000 | 860 | b | b | b | b |
| n-Butylbenzene | 390000 * | NSA | b | b | b | b |
| N-propylbenzene | 340000 * | NSA | b | b | b | b |
| o-Xylene | 69000 * | NSA | b | b | b | b |
| Sec-butylbenzene | NSA | 34000 | b | b | b | b |
| Styrene | 630000 * | 13000 | b | b | b | b |
| Tert-butylbenzene | NSA | 1100 | b | b | b | b |
| Tetrachloroethene | 550 | 7900 | b | b | b | b |
| Toluene | 500000 * | 4200 | b | b | b | b |
| trans-1,2-dichloroethene | 15000 * | 1800 | b | b | b | b |
| trans-1,3-dichloropropene | 1700 | NSA | b | b | b | b |
| Trichloroethene | 440 * | 3200 | b | b | b | b |
| Trichlorofluoromethane | 79000 * | NSA | b | b | b | b |
| Vinyl chloride | 60 | 795 | b | b | b | b |
| Xylenes, Total | 63000 * | 5750 | b | b | b | b |
| SVOCs (SW8270, 2001 PAHs by SW8310) (µg/kg) | | | | | | |
| 1,1-biphenyl | 5100 * | NSA | b | b | b | b |
| 1,4-dichlorobenzene | 2400 | 6800 | b | b | b | b |
| 1-Methylnaphthalene | 22000 | 246 | b | b | b | b |
| 2,2-oxybis(1-chloropropane) | 4600 | NSA | b | b | b | b |
| 2,4,5-trichlorophenol | 610000 * | NSA | b | b | b | b |
| 2,4,6-trichlorophenol | 6100 * | NSA | b | b | b | b |
| 2,4-dichlorophenol | 18000 * | NSA | b | b | b | b |
| 2,4-dimethylphenol | 120000 * | 2700000 | b | b | b | b |
| 2,4-dinitrophenol | 12000 * | NSA | b | b | b | b |
| 2-chloronaphthalene | 630000 * | NSA | b | b | b | b |
| 2-chlorophenol | 39000 * | 414000 | b | b | b | b |
| 2-Methyl-4,6-dinitrophenol | 490 * | NSA | b | b | b | b |
| 2-methylnaphthalene | 31000 * | 148000 | b | b | b | b |
| 2-methylphenol | 310000 * | 4100000 | b | b | b | b |
| 2-nitroaniline | 61000 * | NSA | b | b | b | b |
| 2-nitrophenol | 2900 | NSA | b | b | b | b |
| 3,3-dichlorobenzidine | 1100 | NSA | b | b | b | b |
| 3-nitroaniline | 610 * | NSA | b | b | b | b |
| 4-bromophenyl phenyl ether | NSA | NSA | b | b | b | b |
| 4-chloro-3-methylphenol | 610000 * | NSA | b | b | b | b |
| 4-chloroaniline | 2400 | NSA | b | b | b | b |
| 4-chlorophenyl phenyl ether | NSA | NSA | b | b | b | b |
| 4-methylphenol | 31000 * | 91000 | b | b | b | b |
| 4-nitroaniline | 24000 | NSA | b | b | b | b |
| 4-nitrophenol | 24000 * | NSA | b | b | b | b |
| Acenaphthene | 340000 * | 487000 | b | b | b | b |
| Acenaphthylene | 3600 | 200000 | b | b | b | b |
| Acetophenone | 780000 * | NSA | b | b | b | b |
| Anthracene | 1700000 * | 5945000 | b | b | b | b |
| Atrazine | 2100 | NSA | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-GS2-P24 | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE |
|------------------------------|------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Sample Name: | | C2-OXY-SO-P24-3 | C2-OXY-SO-SIN-3 | C2-OXY-SO-SIS-3 | C2-OXY-SO-SIW-3 | C2-OXY-SO-SOE-3 |
| Sample Date: | | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | |
| Sample Depth (ft bgs): | | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | |
| Benzaldehyde | 780000 * | NSA | b | b | b | b |
| Benzo[a]anthracene | 150 | 3940 | b | b | b | b |
| Benzo[a]pyrene | 15 | NSA | b | b | b | b |
| Benzo[b]fluoranthene | 150 | 12200 | b | b | b | b |
| Benzo[g,h,i]perylene | 170000 * | NSA | b | b | b | b |
| Benzo[k]fluoranthene | 1500 | 12200 | b | b | b | b |
| Benzoic acid | 24000000 * | NSA | b | b | b | b |
| Benzyl alcohol | 610000 * | NSA | b | b | b | b |
| Benzyl butyl phthalate | 260000 | 14200000 | b | b | b | b |
| Bis(2-chloroethoxy) methane | 18000 * | NSA | b | b | b | b |
| Bis(2-chloroethyl) ether | 210 | NSA | b | b | b | b |
| Bis(2-ethylhexyl) phthalate | 35000 | 374000000 | b | b | b | b |
| Caprolactam | 3100000 * | NSA | b | b | b | b |
| Carbazole | NSA | NSA | b | b | b | b |
| Chrysene | 15000 | 3960 | b | b | b | b |
| Cresols | 750000 * | NSA | b | b | b | b |
| Dibenz[a,h]anthracene | 15 | 55000 | b | b | b | b |
| Dibenzofuran | 7800 * | 1400000 | b | b | b | b |
| Diethyl phthalate | 4900000 * | 18200000 | b | b | b | b |
| Dimethyl phthalate | NSA | NSA | b | b | b | b |
| Di-n-butyl phthalate | 610000 * | 8400000 | b | b | b | b |
| Di-n-octyl phthalate | 610000 * | 596000 | b | b | b | b |
| Fluoranthene | 230000 * | 26500000 | b | b | b | b |
| Fluorene | 230000 * | 1960000 | b | b | b | b |
| Hexachloro-1,3-butadiene | 6100 * | 133000 | b | b | b | b |
| Hexachlorobenzene | 300 | 11000 | b | b | b | b |
| Hexachlorocyclopentadiene | 37000 * | 42800 | b | b | b | b |
| Hexachloroethane | 4300 * | 45000 | b | b | b | b |
| Indeno[1,2,3-c,d]pyrene | 150 | 34000 | b | b | b | b |
| Isophorone | 510000 | 28000 | b | b | b | b |
| Naphthalene | 3600 | NSA | b | b | b | b |
| Naphthalene (by 8260) | 3600 | NSA | b | b | b | b |
| N-nitrosodi-n-propylamine | 69 | NSA | b | b | b | b |
| N-nitrosodiphenylamine | 99000 | NSA | b | b | b | b |
| Pentachlorophenol | 890 | NSA | b | b | b | b |
| Phenanthrene | 1700000 * | 1200000 | b | b | b | b |
| Phenol | 1800000 * | 250 | b | b | b | b |
| Pyrene | 170000 * | 16800000 | b | b | b | b |
| Pesticides (SW8081A) (µg/kg) | | | | | | |
| 4,4-DDD | 2000 | 6600000 | b | b | b | b |
| 4,4-DDE | 1400 | 2600000 | b | b | b | b |
| 4,4-DDT | 1700 | 86 | b | b | b | b |
| Aldrin | 29 | 48500 | b | b | b | b |
| alpha-BHC | 77 | 62 | b | b | b | b |
| alpha-Chlordane | 1600 | 29700 | b | b | b | b |
| Beta-BHC | 270 | 250 | b | b | b | b |
| delta-BHC | 77 | 2330 | b | b | b | b |
| Dieldrin | 30 | 420 | b | b | b | b |
| Endosulfan I | 37000 * | 2350000 | b | b | b | b |
| Endosulfan II | 37000 * | 2350000 | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-GS2-P24 | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE |
|---|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Sample Name: | | C2-OXY-SO-P24-3 | C2-OXY-SO-SIN-3 | C2-OXY-SO-SIS-3 | C2-OXY-SO-SIW-3 | C2-OXY-SO-SOE-3 |
| Sample Date: | | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | |
| Sample Depth (ft bgs): | | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | |
| Endosulfan sulfate | 37000 * | 2350000 | b | b | b | b |
| Endrin | 1800 * | 671000 | b | b | b | b |
| Endrin aldehyde | 1800 * | 305000 | b | b | b | b |
| Endrin ketone | 1800 * | 305000 | b | b | b | b |
| Gamma-BHC (Lindane) | 520 | 270 | b | b | b | b |
| Heptachlor | 110 | 279000 | b | b | b | b |
| Heptachlor epoxide | 53 | 12400 | b | b | b | b |
| Methoxychlor | 31000 * | 16900000 | b | b | b | b |
| Toxaphene | 440 | NSA | b | b | b | b |
| trans-Chlordane | 1600 | NSA | b | b | b | b |
| PCBs (SW8082) (µg/kg) | | | | | | |
| Aroclor 1016 | 390 * | NSA | b | b | b | b |
| Aroclor 1221 | 140 | NSA | b | b | b | b |
| Aroclor 1232 | 140 | 46000 | b | b | b | b |
| Aroclor 1242 | 220 | 200000 | b | b | b | b |
| Aroclor 1248 | 220 | 196000 | b | b | b | b |
| Aroclor 1254 | 110 * | 337000 | b | b | b | b |
| Aroclor 1260 | 220 | 922000 | b | b | b | b |
| Explosives (SW8321, SW8330 unless otherwise noted) (µg/kg) | | | | | | |
| 1,3,5-Trinitrobenzene | 220000 * | NSA | 140 U | 140 U | 410 | 150 U |
| 1,3-Dinitrobenzene | 610 * | NSA | 140 U | 140 U | 150 J | 150 U |
| 2,4,6-trinitrotoluene | 3600 * | 45900 | 140 U | 70 J | 4500 | 150 U |
| 2,4-dinitrotoluene | 1600 | 9500 | 140 U | 140 U | 700 | 150 U |
| 2,4-dinitrotoluene (by 8270) | 1600 | 9500 | b | b | b | b |
| 2,6-dinitrotoluene | 6100 * | NSA | 140 U | 140 U | 290 J | 150 U |
| 2,6-dinitrotoluene (by 8270) | 6100 * | NSA | b | b | b | b |
| 2-amino-4,6-dinitrotoluene | 15000 * | 44000 | 140 U | 140 U | 980 J | 150 U |
| 2-nitrotoluene | 2900 | NSA | 140 U | 140 U | 140 U | 150 U |
| 3-nitrotoluene | 610 * | NSA | 140 U | 140 U | 140 U | 150 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | 31300 | 140 U | 140 U | 460 | 150 U |
| 4-Nitrotoluene | 24000 * | 8200 | 140 U | 140 U | 140 U | 150 U |
| HMX | 380000 * | 16700000 | 140 U | 140 U | 140 U | 150 U |
| Nitrobenzene | 4800 | 420 | 140 U | 140 U | 140 U | 150 U |
| Nitrobenzene (by 8270) | 4800 | 420 | b | b | b | b |
| RDX | 5600 | NSA | 140 U | 140 U | 140 U | 150 U |
| Tetryl | 24000 * | NSA | 140 U | 140 U | 140 U | 150 U |
| Inorganics (SW6020 or SW6010B, unless otherwise noted) (mg/kg) | | | | | | |
| Aluminum | 7700 * | 55500000 | 10800 | 11500 | 11200 | 5160 |
| Antimony | 3.1 * | 135 | 1.2 U | 1.2 U | 1.2 U | 3 U |
| Arsenic | 0.39 | 5000 | 5.2 | 2.9 | 4.5 | 3.8 J |
| Barium | 1500 * | 41100 | 130 | 132 | 118 | 168 |
| Beryllium | 16 * | 2370 | 0.68 | 0.65 | 0.72 | 0.26 J |
| Boron | 1600 * | 3100 | 19.2 B | 7.6 B | 18 UJ | 45 UJ |
| Cadmium | 7 * | 376 | 0.088 J | 0.1 | 0.14 | 0.073 J |
| Calcium | NSA | NSA | 68000 J | 2730 J | 3680 J | 3390 J |
| Chromium ^c | 12,000 * | 90000000 | 18.3 | 18.4 | 18.2 | 8.7 |
| Chromium (hexavalent) (by SW7196A) | 0.29 | NSA | 0.23 U | 0.24 U | 0.25 U | 0.25 U |
| Cobalt | 2.3 * | 496 | 9.9 | 12.3 | 10.2 | 6.5 |
| Copper | 310 * | 85600 | 28 | 28.8 | 30.5 | 23.8 |
| Cyanide (by SW9012) | 160 * | 2000 | b | b | b | b |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

| Sample Location: | | C10-GS2-P24 | C10-GS2-SIN | C10-GS2-SIS | C10-GS2-SIW | C10-GS2-SOE |
|-------------------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|
| Sample Name: | | C2-OXY-SO-P24-3 | C2-OXY-SO-SIN-3 | C2-OXY-SO-SIS-3 | C2-OXY-SO-SIW-3 | C2-OXY-SO-SOE-3 |
| Sample Date: | | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Parent Sample: | | | | | | |
| Sample Depth (ft bgs): | | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 | 2.5 - 3 |
| Analyte | USEPA RSL | USEPA SSL | | | | |
| Iron | 5500 * | 7500 | 25000 | 22600 | 25900 | 14600 |
| Lead | 400 | 22500 | 7.4 | 6 | 7.9 | 3.3 |
| Lithium | 16 * | NSA | 18.6 | 18.5 | 17.6 | 10.5 |
| Magnesium | NSA | NSA | 7830 J | 5190 J | 4900 J | 5810 J |
| Manganese | 180 * | 19500 | 1150 J | 263 J | 198 J | 1790 J |
| Mercury (by 7471) | 0.78 * | 36.5 | 0.023 B | 0.033 B | 0.026 B | 0.024 B |
| Nickel | 150 * | 605 | 21.1 | 23.4 | 21.2 | 12.6 |
| Potassium | NSA | NSA | 1170 J | 718 J | 645 J | 480 J |
| Selenium | 39 * | 3000 | 1.5 | 1.4 | 1.5 | 0.9 J |
| Silver | 39 * | 420 | 0.036 J | 0.032 J | 0.041 J | 0.12 U |
| Sodium | NSA | NSA | 112 | 87.4 | 67.4 | 74 J |
| Thallium | 0.078 * | 750 | 0.39 B | 0.3 U | 0.3 U | 0.75 U |
| Vanadium | 39 * | 180000 | 27.7 | 29.3 | 26.5 | 13.2 |
| Zinc | 2300 * | 124000 | 55.9 J | 49.9 J | 54.4 J | 29 J |
| | | | | | | 115 J |

Table F-2. Subsurface Soil Results and Comparison to Screening Criteria

ft bgs = feet below ground surface

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

USEPA RSL = USEPA Residential Soil Regional Screening Level, November 2011.

USEPA SSL = USEPA Protection of Groundwater Soil Screening Level, November 2011.

* = A noncarcinogen; the screening level has been divided by 10 to achieve a hazard index of 0.1.

NSA = No screening level available.

a = Result was rejected for use by the data validator.

b = Analyte was not analyzed for.

c = USEPA RSL for trivalent chromium.

B = Blank contamination

J = Estimated value

U (2011 data) = Either a) the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection, or b) blank contamination existed and the value presented is the reported concentration (see Data Usability Summary Reports for explanation).

U (2010 data) = the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection.

U (2001 data) = the analyte was analyzed for but was not detected above the method detection limit. The value presented is the sample quantitation limit.

Gray shading = detected concentration is > the EPA RSL.

Bolt font = detected concentration is > the SSL

Table F-3. Surface Water Results and Comparison to Screening Criteria

| Sample Location: | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|---------------------------------------|----------------|-----------|-------------|--------------------|--------------------|---------------|
| Sample Name: | | | | C10-AA02-SW-01-0.0 | C10-AA02-SW-DUP1 | C10-POND-SW-1 |
| Sample Date: | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| Parent Sample: | | | | | C10-AA02-SW-01-0.0 | |
| Analyte | NFSS SW BTW | USEPA RSL | NFSS SW Eco | | | |
| VOCs (SW8260B) (µg/L) | | | | | | |
| 1,1,1,2-tetrachloroethane | NSA | 0.5 | NSA | 0.5 U | 0.5 U | b |
| 1,1,1-trichloroethane | NSA | 750 * | 11 | 0.5 U | 0.5 U | b |
| 1,1,2,2-tetrachloroethane | NSA | 0.066 | NSA | 0.5 U | 0.5 U | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | NSA | 5300 * | NSA | 0.5 U | 0.5 U | b |
| 1,1,2-trichloroethane | NSA | 0.041 * | NSA | 0.5 U | 0.5 U | b |
| 1,1-dichloroethane | NSA | 2.4 | NSA | 0.5 U | 0.5 U | b |
| 1,1-dichloroethene | NSA | 26 * | 303 | 0.5 U | 0.5 U | b |
| 1,1-dichloropropene | NSA | NSA | NSA | 0.5 U | 0.5 U | b |
| 1,2,3-trichlorobenzene | NSA | 0.52 * | NSA | 0.5 U | 0.5 U | b |
| 1,2,3-trichloropropane | NSA | 0.00065 | NSA | 0.5 U | 0.5 U | b |
| 1,2,4-trichlorobenzene | NSA | 0.39 * | NSA | 0.5 U | 0.5 U | b |
| 1,2,4-trimethylbenzene | NSA | 1.5 * | NSA | 0.5 U | 0.5 U | b |
| 1,2-Dibromo-3-chloropropane | NSA | 0.00032 | NSA | 0.5 U | 0.5 U | b |
| 1,2-dibromoethane | NSA | 0.0065 | NSA | 0.5 U | 0.5 U | b |
| 1,2-dichlorobenzene | NSA | 28 * | NSA | 0.5 U | 0.5 U | b |
| 1,2-dichloroethane | NSA | 0.15 | 910 | 0.5 U | 0.5 U | b |
| 1,2-dichloroethene | NSA | 13 * | NSA | 1 U | 1 U | b |
| 1,2-dichloropropene | 1.72 | 0.38 | NSA | 0.5 U | 0.5 U | b |
| 1,3,5-trimethylbenzene | NSA | 8.7 * | NSA | 0.5 U | 0.5 U | b |
| 1,3-dichlorobenzene | NSA | 0.42 | NSA | 0.5 U | 0.5 U | b |
| 1,3-dichloropropene | NSA | 29 * | NSA | 0.5 U | 0.5 U | b |
| 1,4-dichlorobenzene | NSA | 0.42 | 11.2 | 0.5 U | 0.5 U | b |
| 2,2-dichloropropene | NSA | NSA | NSA | 0.5 U | 0.5 U | b |
| 2-butanone | 15.8 | 490 * | 14000 | 0.67 J | 0.89 J | b |
| 2-chlorotoluene | NSA | 18 * | NSA | 0.5 U | 0.5 U | b |
| 2-hexanone | NSA | 3.4 * | 990 | 0.5 U | 0.5 U | b |
| 4-chlorotoluene | NSA | 19 * | NSA | 0.5 U | 0.5 U | b |
| 4-Isopropyltoluene | NSA | NSA | NSA | 0.5 U | 0.5 U | b |
| 4-methyl-2-pentanone | NSA | 100 * | 170 | 0.5 U | 0.5 U | b |
| Acetone | 16.4 | 1200 * | 1500 | 0.5 U | 0.5 U | b |
| Benzene | NSA | 0.39 | 210 | 0.5 U | 0.5 U | b |
| Bromobenzene | NSA | 5.4 * | NSA | 0.5 U | 0.5 U | b |
| Bromochloromethane | NSA | 8.3 * | NSA | 0.5 U | 0.5 U | b |
| Bromodichloromethane | 3.25 | 0.12 | NSA | 0.5 U | 0.5 U | b |
| Bromoform | NSA | 7.9 | NSA | 0.5 U | 0.5 U | b |
| Bromomethane | NSA | 0.7 * | NSA | 0.5 U | 0.5 U | b |
| Carbon disulfide | NSA | 72 * | 0.92 | 0.12 J | 0.17 J | b |
| Carbon tetrachloride | NSA | 0.39 | NSA | 0.5 U | 0.5 U | b |
| Chlorobenzene | NSA | 7.2 * | NSA | 0.5 U | 0.5 U | b |
| Chloroethane | NSA | 2100 * | NSA | 0.5 U | 0.5 U | b |
| Chloroform | 5.3 | 0.19 | 28 | 0.5 U | 0.5 U | b |
| Chloromethane | NSA | 19 * | NSA | 0.5 U | 4.3 | b |
| Cis-1,2-dichloroethene | NSA | 2.8 * | NSA | 0.5 U | 0.5 U | b |
| Cis-1,3-dichloropropene | NSA | 0.41 | NSA | 0.5 U | 0.5 U | b |
| Cyclohexane | NSA | 1300 * | NSA | 0.5 U | 0.5 U | b |
| Dibromochloromethane | 1.59 | 0.15 | NSA | 0.5 U | 0.5 U | b |
| Dibromomethane | NSA | 0.79 * | NSA | 0.5 U | 0.5 U | b |
| Dichlorodifluoromethane | NSA | 19 * | NSA | 0.5 U | 0.5 U | b |
| Ethylbenzene | NSA | 1.3 | 17 | 0.5 U | 0.5 U | b |
| Hexachloro-1,3-butadiene | NSA | 0.26 | NSA | 0.5 U | 0.5 U | b |
| Isopropylbenzene | NSA | 39 * | NSA | 0.5 U | 0.5 U | b |
| m,p-Xylene | NSA | 190 * | NSA | 1 U | 1 U | b |
| Methyl tert-butyl ether | NSA | 12 | NSA | 0.5 U | 0.5 U | b |
| Methylcyclohexane | NSA | 1300 * | NSA | 0.5 U | 0.5 U | b |
| Methylene Chloride | NSA | 4.7 | 1930 | 0.5 U | 0.5 U | b |
| n-Butylbenzene | NSA | 78 * | NSA | 0.5 U | 0.5 U | b |
| N-propylbenzene | NSA | 53 * | NSA | 0.5 U | 0.5 U | b |
| o-Xylene | NSA | 19 * | NSA | 0.5 U | 0.5 U | b |

Table F-3. Surface Water Results and Comparison to Screening Criteria

| Sample Location: | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|------------------------------|-------------|-----------|-------------|--------------------|--------------------|---------------|
| Sample Name: | | | | C10-AA02-SW-01-0.0 | C10-AA02-SW-DUP1 | C10-POND-SW-1 |
| Sample Date: | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| Parent Sample: | | | | | C10-AA02-SW-01-0.0 | |
| Analyte | NFSS SW BTW | USEPA RSL | NFSS SW Eco | | | |
| Sec-butylbenzene | NSA | NSA | NSA | 0.5 U | 0.5 U | b |
| Styrene | NSA | 110 * | NSA | 0.5 U | 0.5 U | b |
| Tert-butylbenzene | NSA | NSA | NSA | 0.5 U | 0.5 U | b |
| Tetrachloroethene | 0.554 | 0.072 | 84 | 0.5 U | 0.5 U | b |
| Toluene | NSA | 86 * | 100 | 3.6 | 3.7 | b |
| trans-1,2-dichloroethene | NSA | 8.6 * | 1350 | 0.5 U | 0.5 U | b |
| trans-1,3-dichloropropene | NSA | 0.41 | NSA | 0.5 U | 0.5 U | b |
| Trichloroethene | NSA | 0.26 * | 47 | 0.5 U | 0.5 U | b |
| Trichlorofluoromethane | NSA | 110 * | NSA | 0.5 U | 0.5 U | b |
| Vinyl chloride | NSA | 0.015 | 3880 | 0.5 U | 0.5 U | b |
| Xylenes, Total | NSA | 19 * | 65 | 1.5 U | 1.5 U | b |
| SVOCs (SW8270) (µg/L) | | | | | | |
| 1,1-biphenyl | NSA | 0.083 * | NSA | 0.099 U | 0.97 UJ | b |
| 2,2-oxybis(1-chloropropane) | NSA | 0.31 | NSA | 0.05 U | 0.49 UJ | b |
| 2,4,5-trichlorophenol | NSA | 89 * | NSA | 0.3 U | 2.9 U | b |
| 2,4,6-trichlorophenol | NSA | 0.9 * | NSA | 0.4 U | 3.9 U | b |
| 2,4-dichlorophenol | NSA | 3.5 * | NSA | 0.059 U | 0.58 U | b |
| 2,4-dimethylphenol | NSA | 27 * | NSA | 0.25 U | 2.4 U | b |
| 2,4-dinitrophenol | NSA | 3 * | NSA | 1.5 U | 15 U | b |
| 2-chloronaphthalene | NSA | 55 * | NSA | 0.04 U | 0.39 UJ | b |
| 2-chlorophenol | NSA | 7.1 * | 43.8 | 0.2 U | 1.9 U | b |
| 2-Methyl-4,6-dinitrophenol | NSA | 0.12 * | NSA | 0.59 U | 5.8 U | b |
| 2-methylnaphthalene | NSA | 2.7 * | 4.7 | 0.03 U | 0.29 UJ | b |
| 2-methylphenol | NSA | 72 * | 13 | 0.2 U | 3.2 J | b |
| 2-nitroaniline | NSA | 15 * | NSA | 0.99 U | 9.7 UJ | b |
| 2-nitrophenol | NSA | 0.27 | NSA | 0.3 U | 2.9 U | b |
| 3,3-dichlorobenzidine | NSA | 0.11 | NSA | 0.3 UJ | 2.9 UJ | b |
| 3-nitroaniline | NSA | 0.13 * | NSA | 0.74 U | 7.3 UJ | b |
| 4-bromophenyl phenyl ether | NSA | NSA | NSA | 0.2 U | 1.9 UJ | b |
| 4-chloro-3-methylphenol | NSA | 110 * | NSA | 0.2 U | 1.9 U | b |
| 4-chloroaniline | NSA | 0.32 | NSA | 0.2 U | 1.9 UJ | b |
| 4-chlorophenyl phenyl ether | NSA | NSA | NSA | 0.15 U | 1.5 UJ | b |
| 4-methylphenol | NSA | 7.2 * | NSA | 0.62 J | 12 J | b |
| 4-nitroaniline | NSA | 3.3 | NSA | 0.5 U | 4.9 UJ | b |
| 4-nitrophenol | NSA | 3.7 | NSA | 0.99 U | 9.7 U | b |
| Acenaphthene | NSA | 40 * | 17 | 0.04 U | 0.39 UJ | b |
| Acenaphthylene | NSA | 0.14 | 5.3 | 0.04 U | 0.39 UJ | b |
| Acetophenone | NSA | 150 * | NSA | 0.2 U | 1.9 UJ | b |
| Anthracene | NSA | 130 * | 3.8 | 0.04 U | 0.39 UJ | b |
| Atrazine | NSA | 0.26 | NSA | 0.25 U | 2.4 UJ | b |
| Benzaldehyde | NSA | 150 * | NSA | 0.15 U | 1.5 UJ | b |
| Benzo[a]anthracene | 0.108 | 0.029 | 0.03 | 0.04 UJ | 0.39 UJ | b |
| Benzo[a]pyrene | NSA | 0.0029 | 0.014 | 0.04 UJ | 0.39 UJ | b |
| Benzo[b]fluoranthene | NSA | 0.029 | 0.027 | 0.04 U | 0.39 UJ | b |
| Benzo[g,h,i]perylene | NSA | 8.7 * | NSA | 0.04 U | 0.39 UJ | b |
| Benzo[k]fluoranthene | NSA | 0.29 | 0.027 | 0.099 UJ | 0.97 UJ | b |
| Benzyl butyl phthalate | NSA | 14 | 3 | 0.3 U | 2.9 UJ | b |
| Bis(2-chloroethoxy) methane | NSA | 4.7 * | NSA | 0.15 U | 1.5 UJ | b |
| Bis(2-chloroethyl) ether | NSA | 0.012 | NSA | 0.074 U | 0.73 UJ | b |
| Bis(2-ethylhexyl) phthalate | NSA | 0.071 | 0.6 | 2 U | 19 UJ | b |
| Caprolactam | NSA | 770 * | NSA | 2 U | 19 UJ | b |
| Carbazole | NSA | NSA | NSA | 0.04 U | 0.39 UJ | b |
| Chrysene | 0.151 | 2.9 | 0.027 | 0.04 UJ | 0.39 UJ | b |
| Dibenz[a,h]anthracene | NSA | 0.0029 | 0.027 | 0.04 U | 0.39 UJ | b |
| Dibenzofuran | NSA | 0.58 * | 3.7 | 0.15 U | 1.5 UJ | b |
| Diethyl phthalate | NSA | 1100 * | 210 | 0.3 U | 4.1 J | b |
| Dimethyl phthalate | NSA | NSA | NSA | 0.2 U | 1.9 UJ | b |
| Di-n-butyl phthalate | NSA | 67 * | 3 | 0.3 UJ | 2.9 UJ | b |
| Di-n-octyl phthalate | NSA | 67 * | 3 | 0.3 U | 2.9 UJ | b |

Table F-3. Surface Water Results and Comparison to Screening Criteria

| Sample Location: | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|---|----------------|-----------|-------------|--------------------|--------------------|---------------|
| Sample Name: | | | | C10-AA02-SW-01-0.0 | C10-AA02-SW-DUP1 | C10-POND-SW-1 |
| Sample Date: | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| Parent Sample: | | | | | C10-AA02-SW-01-0.0 | |
| Analyte | NFSS SW BTv | USEPA RSL | NFSS SW Eco | | | |
| Fluoranthene | 0.522 | 63 * | 6.16 | 0.04 UJ | 0.39 UJ | b |
| Fluorene | NSA | 22 * | 0.54 | 0.05 U | 0.49 UJ | b |
| Hexachloro-1,3-butadiene | NSA | 0.26 | NSA | 0.04 U | 0.39 UJ | b |
| Hexachlorobenzene | NSA | 0.042 | NSA | 0.05 U | 0.49 UJ | b |
| Hexachlorocyclopentadiene | NSA | 2.2 * | NSA | 0.15 U | 1.5 UJ | b |
| Hexachloroethane | NSA | 0.51 * | NSA | 0.15 U | 1.5 UJ | b |
| Indeno[1,2,3-c,d]pyrene | NSA | 0.029 | 0.027 | 0.05 U | 0.49 UJ | b |
| Isophorone | NSA | 67 | 1170 | 0.2 U | 1.9 UJ | b |
| Naphthalene | NSA | 0.14 | 13 | 0.04 U | 0.39 UJ | b |
| Naphthalene (by 8260) | NSA | 0.14 | 13 | 0.5 U | 0.5 U | b |
| N-nitrosodi-n-propylamine | NSA | 0.0093 | NSA | 0.05 U | 0.49 UJ | b |
| N-nitrosodiphenylamine | NSA | 10 | NSA | 0.25 U | 2.4 UJ | b |
| Pentachlorophenol | NSA | 0.17 | 0.4 | 0.2 U | 1.9 U | b |
| Phenanthrone | 0.223 | 130 * | 5 | 0.074 U | 0.73 UJ | b |
| Phenol | NSA | 450 * | 5 | 0.059 U | 1.3 J | b |
| Pyrene | 0.302 | 8.7 * | 4.6 | 0.04 U | 0.39 UJ | b |
| PCBs (SW8082) (µg/L) | | | | | | |
| Aroclor 1016 | NSA | 0.11 * | NSA | 0.024 U | 0.024 U | b |
| Aroclor 1221 | NSA | 0.0043 | NSA | 0.038 U | 0.038 U | b |
| Aroclor 1232 | NSA | 0.0043 | NSA | 0.024 U | 0.024 U | b |
| Aroclor 1242 | NSA | 0.034 | NSA | 0.024 U | 0.024 U | b |
| Aroclor 1248 | NSA | 0.034 | NSA | 0.024 U | 0.024 U | b |
| Aroclor 1254 | NSA | 0.031 * | 0.014 | 0.038 U | 0.038 U | b |
| Aroclor 1260 | NSA | 0.034 | 0.014 | 0.024 U | 0.024 U | b |
| Explosives (SW8330, CHPPM_AMINO3.1, CHPPM_MUS3.1) (µg/L) | | | | | | |
| 1,3,5-Trinitrobenzene | 0.0249 | 46 * | NSA | 0.2 U | 0.2 U | 0.02 UJ |
| 1,3-Dinitrobenzene | 0.033 | 0.15 * | NSA | 0.2 U | 0.2 U | 0.04 UJ |
| 2,4,6-trinitrotoluene | 0.0779 | 0.76 * | NSA | 0.2 U | 0.2 U | 0.01 UJ |
| 2,4-dinitrotoluene | 0.0349 | 0.2 | 23 | 0.2 U | 0.2 U | 0.02 UJ |
| 2,4-dinitrotoluene (by 8270) | 0.0349 | 0.2 | 23 | 0.15 U | 1.5 UJ | b |
| 2,6-dinitrotoluene | 0.0501 | 1.5 * | 60 | 0.2 U | 0.2 U | 0.01 UJ |
| 2,6-dinitrotoluene (by 8270) | 0.0501 | 1.5 * | 60 | 0.2 U | 1.9 UJ | b |
| 2-amino-4,6-dinitrotoluene | 0.0779 | 3 * | NSA | 0.2 U | 0.2 U | 0.10 UJ |
| 2-nitrotoluene | 0.064 | 0.27 | NSA | 0.2 U | 0.2 U | 0.25 UJ |
| 3-nitrotoluene | 0.064 | 0.13 * | NSA | 0.2 U | 2.8 J | a |
| 4-amino-2,6-dinitrotoluene | 0.0409 | 3 * | NSA | 0.2 U | 0.2 U | 0.10 UJ |
| 4-Nitrotoluene | 0.064 | 3.7 | NSA | 0.2 U | 0.2 U | 0.25 UJ |
| HMX | 0.0779 | 78 * | NSA | 0.2 U | 0.2 U | 0.10 UJ |
| Nitrobenzene | 0.0131 | 0.12 | NSA | 0.2 U | 0.2 U | 0.25 UJ |
| Nitrobenzene (by 8270) | 0.0131 | 0.12 | NSA | 0.2 U | 1.9 UJ | b |
| RDX | 0.053 | 0.61 | NSA | 1.9 J | 1.2 J | 0.10 UJ |
| Tetryl | 0.032 | 6.3 * | NSA | 0.2 U | 0.2 U | 0.10 UJ |

Table F-3. Surface Water Results and Comparison to Screening Criteria

| Sample Location: | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|--|-------------|-----------|-------------|--------------------|-----------------------|-----------------------|
| Sample Name: | | | | C10-AA02-SW-01-0.0 | C10-AA02-SW-DUP1 | C10-POND-SW-1 |
| Sample Date: | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| Parent Sample: | | | | | C10-AA02-SW-01-0.0 | |
| Analyte | NFSS SW BTV | USEPA RSL | NFSS SW Eco | | | |
| Total Metals (SW6020A, SW7470) (µg/L) | | | | | | |
| Aluminum | 5030 | 1600 | * | 100 | <u>21400 J</u> | <u>17600 J</u> |
| Antimony | 2.33 | 0.6 | * | 30 | 6 U | 6 U |
| Arsenic | 6.33 | 0.045 | | 150 | <u>11.7 J</u> | <u>11.4 J</u> |
| Barium | 117 | 290 | * | 4 | <u>224</u> | <u>203</u> |
| Beryllium | 0.253 | 1.6 | * | 1100 | <u>1.1</u> | <u>1.2</u> |
| Boron | 244 | 310 | * | 10000 | 210 U | 302 U |
| Cadmium | NSA | 0.69 | * | 2.09 | 1.3 | 1.1 |
| Calcium | 141000 | NSA | | 116400 | 38700 | 41000 |
| Chromium ^c | 7.52 | 1,600 | * | 74.11 | <u>23.8</u> | <u>21.1</u> |
| Cobalt | 1.08 | 0.47 | * | 5 | <u>11.3</u> | <u>10.2</u> |
| Copper | 15 | 62 | * | 8.96 | <u>56.1</u> | <u>51</u> |
| Iron | 4740 | 1100 | * | 300 | <u>25500</u> | <u>23000</u> |
| Lead | 11.1 | 15 | | 3.78 | <u>41.4</u> | <u>44.1</u> |
| Lithium | 13.2 | 3.1 | * | 14 | <u>24.2</u> | <u>20.3</u> |
| Magnesium | 30200 | NSA | | 82000 | 9790 | 9440 |
| Manganese | 951 | 32 | * | 120 | <u>612</u> | <u>689</u> |
| Mercury | NSA | 0.16 | * | 1.3 | 0.25 U | 0.22 U |
| Nickel | 7.74 | 30 | * | 52 | <u>28.2</u> | <u>25.4</u> |
| Potassium | 9540 | NSA | | 53000 | <u>10500 J</u> | <u>11800 J</u> |
| Selenium | 4.24 | 7.8 | * | 4.6 | 1.8 U | 1.8 U |
| Silver | 0.03 | 7.1 | * | 0.1 | <u>0.13 J</u> | <u>0.13 J</u> |
| Sodium | 179000 | NSA | | 680000 | 1660 U | 1630 U |
| Thallium | 0.026 | 0.016 | * | 8 | 3 U | 3 U |
| Vanadium | 8.52 | 7.8 | * | 14 | <u>34.4</u> | <u>29.4</u> |
| Zinc | 70.5 | 470 | * | 58.91 | <u>161</u> | <u>146</u> |

µg/L = micrograms per liter

NFSS SW BTV = Surface water background threshold values from the NFSS RI: Science Applications International Corporation. 2007. *Remedial Investigation Report for the NFSS*. December.

USEPA RSL = USEPA Tapwater Regional Screening Level, November 2011.

NFSS SW Eco = Surface water values from the NFSS Baseline Risk Assessment: *Science Applications International Corporation. 2007. Baseline Risk Assessment Report for the NFSS*. December.

* = A noncarcinogen; the screening level has been divided by 10 to achieve a hazard index of 0.1.

+ = Value is a maximum contaminant level

NSA = No screening level available.

a = Result was rejected for use by the data validator.

b = Analyte was not analyzed for.

c = USEPA RSL for trivalent chromium.

J = Estimated value

U (2011 data) = Either a) the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection, or b) blank contamination existed and the value presented is the reported concentration (see Data Usability Summary Reports for explanation).

U (2001 data) = the analyte was analyzed for but was not detected above the method detection limit. The value presented is the sample quantitation limit.

Gray shading = detected concentration is greater than the EPA RSL

Bold font = detected concentration is greater than the NFSS SW Eco

Underlined font = detected concentration is greater than the NFSS SW BTV

Table F-4. Sediment Results and Comparison to Screening Criteria

| | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|--|-----------|--------------|-------------|--------------------|--------------------|----------------|
| | | | | C10-AA02-SD-01-0.5 | C10-AA02-SD-DUP1 | C10-POND-SED-1 |
| | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| | | | | 0.5 | 0.5 | |
| | | | | Parent Sample: | C10-AA02-SD-01-0.5 | |
| Analyte | USEPA RSL | USEPA SD TEC | NFSS SD BTV | | | |
| VOCs (SW8260B) ($\mu\text{g}/\text{kg}$) | | | | | | |
| 1,1,1,2-tetrachloroethane | 1900 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,1,1-trichloroethane | 870000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,1,2,2-tetrachloroethane | 560 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4300000 * | NSA | NSA | 3.5 U | 8 U | b |
| 1,1,2-trichloroethane | 160 * | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,1-dichloroethane | 3300 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,1-dichloroethene | 24000 * | NSA | 3.46 | 8.6 U | 20 U | b |
| 1,2,3-trichlorobenzene | 4900 * | NSA | NSA | a | 4.8 U | b |
| 1,2,3-trichloropropane | 5 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,2,4-trichlorobenzene | 6200 * | NSA | NSA | a | 5.4 J | b |
| 1,2,4-trimethylbenzene | 6200 * | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,2-Dibromo-3-chloropropane | 5.4 | NSA | NSA | a | 4 U | b |
| 1,2-dibromoethane | 34 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,2-dichlorobenzene | 190000 * | NSA | NSA | a | 4 U | b |
| 1,2-dichloroethane | 430 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,2-dichloroethene | 70000 * | NSA | NSA | 3.5 U | 8 U | b |
| 1,2-dichloropropane | 940 | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,3,5-trimethylbenzene | 78000 * | NSA | NSA | 3.8 J | 22 J | b |
| 1,3-dichlorobenzene | 610 * | NSA | NSA | a | 2 | b |
| 1,3-dichloropropane | 160000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| 1,4-dichlorobenzene | 2400 | NSA | NSA | a | 3 J | b |
| 2,2-dichloropropane | NSA | NSA | NSA | 1.7 UJ | 4 U | b |
| 2-butanone | 2800000 * | NSA | 49.3 | 11 J | 160 J | b |
| 2-chlorotoluene | 160000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| 2-hexanone | 21000 * | NSA | NSA | 8.6 UJ | 20 U | b |
| 4-chlorotoluene | 160000 * | NSA | NSA | 1.7 UJ | 1.7 J | b |
| 4-Isopropyltoluene | NSA | NSA | NSA | a | 4 U | b |
| 4-methyl-2-pentanone | 530000 * | NSA | NSA | 8.6 UJ | 20 U | b |
| Acetone | 6100000 * | NSA | 206 | a | 1900 J | b |
| Benzene | 1100 | NSA | NSA | 1.7 UJ | 4 U | b |
| Bromobenzene | 30000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Bromochloromethane | 16000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Bromodichloromethane | 270 | NSA | NSA | 1.7 UJ | 4 U | b |
| Bromoform | 62000 | NSA | NSA | 1.7 UJ | 4 U | b |
| Bromomethane | 730 * | NSA | NSA | 8.6 U | 20 U | b |
| Carbon disulfide | 82000 * | NSA | NSA | 1.7 UJ | 8.1 J | b |
| Carbon tetrachloride | 610 | NSA | NSA | 1.7 UJ | 4 U | b |
| Chlorobenzene | 29000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Chloroethane | 1500000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Chloroform | 290 | NSA | NSA | 1.7 UJ | 4 U | b |
| Chloromethane | 12000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Cis-1,2-dichloroethene | 16000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Cis-1,3-dichloropropene | 160000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Cyclohexane | 700000 * | NSA | NSA | 8.6 U | 20 U | b |
| Dibromochloromethane | 680 | NSA | NSA | 1.7 UJ | 4 U | b |
| Dibromomethane | 2500 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Dichlorodifluoromethane | 9400 * | NSA | NSA | 8.6 U | 20 U | b |
| Ethylbenzene | 5400 | NSA | NSA | 1.7 UJ | 4 U | b |
| Hexachloro-1,3-butadiene | 6100 * | NSA | NSA | a | 4 U | b |
| Isopropylbenzene | 210000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| m,p-Xylene | 63000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Methyl tert-butyl ether | 43000 | NSA | NSA | 1.7 UJ | 4 U | b |
| Methylcyclohexane | 700000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Methylene Chloride | 11000 | NSA | NSA | 8.6 U | 20 U | b |
| n-Butylbenzene | 390000 * | NSA | NSA | a | 4 U | b |
| N-propylbenzene | 340000 * | NSA | NSA | 1.7 UJ | 3.9 J | b |
| o-Xylene | 69000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Sec-butylbenzene | NSA | NSA | NSA | 1.7 UJ | 4 U | b |

Table F-4. Sediment Results and Comparison to Screening Criteria

| | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|-------------------------------|-----------|--------------|-------------|--------------------|------------------|----------------|
| | | | | C10-AA02-SD-01-0.5 | C10-AA02-SD-DUP1 | C10-POND-SED-1 |
| | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| | | | | 0.5 | 0.5 | |
| Sample Location: | | | | C10-AA02-SD-01-0.5 | | |
| Sample Name: | | | | | | |
| Sample Date: | | | | | | |
| Sample Depth (ft bgs): | | | | | | |
| Parent Sample: | | | | | | |
| Analyte | USEPA RSL | USEPA SD TEC | NFSS SD BTV | | | |
| Styrene | 630000 * | NSA | NSA | 1.7 UJ | 4 U | b |
| Tert-butylbenzene | NSA | NSA | NSA | 1.7 UJ | 4 U | b |
| Tetrachloroethene | 550 | NSA | NSA | 1.7 UJ | 4 U | b |
| Toluene | 500000 * | NSA | 8.89 | 1.7 UJ | 4 U | b |
| trans-1,2-dichloroethene | 15000 * | NSA | NSA | 1.7 U | 4 U | b |
| trans-1,3-dichloropropene | 1700 | NSA | NSA | 1.7 UJ | 4 U | b |
| Trichloroethene | 440 * | NSA | NSA | 1.7 U | 4 U | b |
| Trichlorofluoromethane | 79000 * | NSA | NSA | 1.7 U | 4 U | b |
| Vinyl chloride | 60 | NSA | NSA | 1.7 U | 4 U | b |
| Xylenes, Total | 63000 * | NSA | NSA | 5.2 UJ | 12 U | b |
| SVOCs (SW8270) (µg/kg) | | | | | | |
| 1,1-biphenyl | 5100 * | NSA | NSA | 66 U | 210 U | b |
| 2,2-oxybis(1-chloropropane) | 4600 | NSA | NSA | 33 U | 100 U | b |
| 2,4,5-trichlorophenol | 610000 * | NSA | NSA | 200 U | 620 U | b |
| 2,4,6-trichlorophenol | 6100 * | NSA | NSA | 260 U | 830 U | b |
| 2,4-dichlorophenol | 18000 * | NSA | NSA | 39 U | 120 U | b |
| 2,4-dimethylphenol | 120000 * | NSA | NSA | 160 U | 520 U | b |
| 2,4-dinitrophenol | 12000 * | NSA | NSA | 990 U | 3100 U | b |
| 2-chloronaphthalene | 630000 * | NSA | NSA | 26 U | 83 U | b |
| 2-chlorophenol | 39000 * | NSA | NSA | 130 U | 420 U | b |
| 2-Methyl-4,6-dinitrophenol | 490 * | NSA | NSA | 390 U | 1200 U | b |
| 2-methylnaphthalene | 31000 * | NSA | NSA | 20 U | 62 U | b |
| 2-methylphenol | 310000 * | NSA | NSA | 130 U | 420 U | b |
| 2-nitroaniline | 61000 * | NSA | NSA | 660 U | 2100 U | b |
| 2-nitrophenol | 2900 | NSA | NSA | 200 U | 620 U | b |
| 3,3-dichlorobenzidine | 1100 | NSA | NSA | 200 U | 620 U | b |
| 3-nitroaniline | 610 * | NSA | NSA | 490 U | 1600 U | b |
| 4-bromophenyl phenyl ether | NSA | NSA | NSA | 130 U | 420 U | b |
| 4-chloro-3-methylphenol | 610000 * | NSA | NSA | 130 U | 420 U | b |
| 4-chloroaniline | 2400 | NSA | NSA | 130 U | 420 U | b |
| 4-chlorophenyl phenyl ether | NSA | NSA | NSA | 99 U | 310 U | b |
| 4-methylphenol | 31000 * | NSA | NSA | 160 U | 520 U | b |
| 4-nitroaniline | 24000 | NSA | NSA | 330 U | 1000 U | b |
| 4-nitrophenol | 24000 * | NSA | NSA | 660 U | 2100 U | b |
| Acenaphthene | 340000 * | NSA | NSA | 26 U | 83 U | b |
| Acenaphthylene | 3600 | NSA | 134 | 26 U | 83 U | b |
| Acetophenone | 780000 * | NSA | NSA | 130 U | 420 U | b |
| Anthracene | 1700000 * | 57.2 | NSA | 26 U | 83 U | b |
| Atrazine | 2100 | NSA | NSA | 160 U | 520 U | b |
| Benzaldehyde | 780000 * | NSA | NSA | 300 U | 930 U | b |
| Benzo[a]anthracene | 150 | 108 | 399 | 26 U | 83 U | b |
| Benzo[a]pyrene | 15 | 150 | 618 | 26 U | 83 U | b |
| Benzo[b]fluoranthene | 150 | NSA | 1090 | 26 U | 83 U | b |
| Benzo[g,h,i]perylene | 170000 * | NSA | 179 | 26 U | 83 U | b |
| Benzo[k]fluoranthene | 1500 | NSA | 381 | 66 U | 210 U | b |
| Benzyl butyl phthalate | 260000 | NSA | NSA | 200 U | 620 U | b |
| Bis(2-chloroethoxy) methane | 18000 * | NSA | NSA | 99 U | 310 U | b |
| Bis(2-chloroethyl) ether | 210 | NSA | NSA | 49 U | 160 U | b |
| Bis(2-ethylhexyl) phthalate | 35000 | NSA | 31300 | 330 U | 1000 U | b |
| Caprolactam | 3100000 * | NSA | NSA | 1300 U | 4200 U | b |
| Carbazole | NSA | NSA | NSA | 26 U | 83 U | b |
| Chrysene | 15000 | 166 | 470 | 26 U | 83 U | b |
| Dibenz[a,h]anthracene | 15 | 33 | NSA | 26 U | 83 U | b |
| Dibenzofuran | 7800 * | NSA | NSA | 99 U | 310 U | b |
| Diethyl phthalate | 4900000 * | NSA | NSA | 200 U | 620 U | b |
| Dimethyl phthalate | NSA | NSA | NSA | 130 U | 420 U | b |
| Di-n-butyl phthalate | 610000 * | NSA | NSA | 200 U | 620 U | b |
| Di-n-octyl phthalate | 610000 * | NSA | NSA | 200 U | 620 U | b |
| Fluoranthene | 230000 * | 423 | 696 | 42 J | 83 U | b |

Table F-4. Sediment Results and Comparison to Screening Criteria

| | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|--|-----------|--------------|-------------|--------------------|------------------|----------------|
| | | | | C10-AA02-SD-01-0.5 | C10-AA02-SD-DUP1 | C10-POND-SED-1 |
| | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| | | | | 0.5 | 0.5 | |
| Sample Location: Sample Name: Sample Date: Sample Depth (ft bgs): Parent Sample: | | | | C10-AA02-SD-01-0.5 | | |
| Analyte | USEPA RSL | USEPA SD TEC | NFSS SD BTV | | | |
| Fluorene | 230000 * | 77.4 | NSA | 33 U | 100 U | b |
| Hexachloro-1,3-butadiene | 6100 * | NSA | NSA | 26 U | 83 U | b |
| Hexachlorobenzene | 300 | NSA | NSA | 33 U | 100 U | b |
| Hexachlorocyclopentadiene | 37000 * | NSA | NSA | 99 U | 310 U | b |
| Hexachloroethane | 4300 * | NSA | NSA | 99 U | 310 U | b |
| Indeno[1,2,3-c,d]pyrene | 150 | NSA | 265 | 33 U | 100 U | b |
| Isophorone | 510000 | NSA | NSA | 130 U | 420 U | b |
| Naphthalene | 3600 | 176 | NSA | 26 U | 83 U | b |
| Naphthalene (by 8260) | 3600 | 176 | NSA | 1.7 U | 7.2 J | b |
| N-nitrosodi-n-propylamine | 69 | NSA | NSA | 33 U | 100 U | b |
| N-nitrosodiphenylamine | 99000 | NSA | NSA | 160 U | 520 U | b |
| Pentachlorophenol | 890 | NSA | NSA | 130 U | 410 U | b |
| Phenanthrene | 1700000 * | 204 | 169 | 49 U | 160 U | b |
| Phenol | 1800000 * | NSA | NSA | 39 U | 120 U | b |
| Pyrene | 170000 * | 195 | 1000 | 26 U | 83 U | b |
| PCBs (SW8082) (µg/kg) | | | | | | |
| Aroclor 1016 | 390 * | 59.8 | NSA | 3.3 U | 6.8 U | b |
| Aroclor 1221 | 140 | 59.8 | NSA | 6 U | 12 U | b |
| Aroclor 1232 | 140 | 59.8 | NSA | 3.3 U | 6.8 U | b |
| Aroclor 1242 | 220 | 59.8 | 66.3 | 3.3 U | 6.8 U | b |
| Aroclor 1248 | 220 | 59.8 | NSA | 7.9 U | 16 U | b |
| Aroclor 1254 | 110 * | 59.8 | 58.3 | 6 U | 12 U | b |
| Aroclor 1260 | 220 | 59.8 | 21.7 | 3.3 U | 6.8 U | b |
| Explosives (SW8330A, SW 8321A) (µg/kg) | | | | | | |
| 1,3,5-Trinitrotoluene | 220000 * | NSA | NSA | 52 U | 1200 U | 500 U |
| 1,3-Dinitrotoluene | 610 * | NSA | NSA | 52 U | 1200 U | 500 U |
| 2,4,6-trinitrotoluene | 3600 * | NSA | NSA | 52 U | 1200 U | 500 U |
| 2,4-dinitrotoluene | 1600 | NSA | NSA | 52 U | 1200 U | 500 U |
| 2,4-dinitrotoluene (by 8270) | 1600 | NSA | NSA | 99 U | 310 U | b |
| 2,6-dinitrotoluene | 6100 * | NSA | NSA | 52 U | 1200 U | 500 U |
| 2,6-dinitrotoluene (by 8270) | 6100 * | NSA | NSA | 130 U | 420 U | b |
| 2-amino-4,6-dinitrotoluene | 15000 * | NSA | NSA | 86 U | 2000 U | 500 U |
| 2-nitrotoluene | 2900 | NSA | NSA | 170 U | 4000 U | 500 U |
| 3-nitrotoluene | 610 * | NSA | NSA | 350 U | 8000 U | 500 U |
| 4-amino-2,6-dinitrotoluene | 15000 * | NSA | NSA | 86 U | 2000 U | 500 U |
| 4-Nitrotoluene | 24000 * | NSA | NSA | 350 U | 8000 U | 500 U |
| HMX | 380000 * | NSA | 99.6 | 170 U | 4000 U | 500 U |
| Nitrobenzene | 4800 | NSA | NSA | 170 U | 4000 U | 500 U |
| Nitrobenzene (by 8270) | 4800 | NSA | NSA | 130 U | 420 U | b |
| RDX | 5600 | NSA | NSA | 170 U | 4000 U | 500 U |
| Tetryl | 24000 * | NSA | NSA | 52 U | 1200 U | 500 U |

Table F-4. Sediment Results and Comparison to Screening Criteria

| | | | | C10-AA02-BP01 | C10-AA02-BP01 | C10-POND-SD |
|--|-----------|--------------|-------------|--------------------|------------------|----------------|
| | | | | C10-AA02-SD-01-0.5 | C10-AA02-SD-DUP1 | C10-POND-SED-1 |
| | | | | 10/11/2011 | 10/11/2011 | 5/11/2001 |
| | | | | 0.5 | 0.5 | |
| Sample Location: Sample Name: Sample Date: Sample Depth (ft bgs): Parent Sample: | | | | C10-AA02-SD-01-0.5 | | |
| Analyte | USEPA RSL | USEPA SD TEC | NFSS SD BTV | | | |
| Metals (SW6020A, SW7471) (mg/kg) | | | | | | |
| Aluminum | 7700 * | NSA | 30400 | 9730 J | 17100 J | b |
| Antimony | 3.1 * | NSA | 5.03 | 0.6 UJ | 0.6 UJ | b |
| Arsenic | 0.39 | 9.79 | 7.14 | 4.9 | <u>9.1</u> | b |
| Barium | 1500 * | NSA | 246 | 84.4 | 163 | b |
| Beryllium | 16 * | NSA | 1.44 | 0.64 | 1 | b |
| Boron | 1600 * | NSA | 31.4 | 9 U | 9 U | b |
| Cadmium | 7 * | 0.99 | 1.89 | 0.24 J | 0.91 | b |
| Calcium | NSA | NSA | 59400 | 15100 | 6470 | b |
| Chromium ^c | 12,000 * | 43.4 | 472 | 14.5 | 26.8 | b |
| Cobalt | 2.3 * | NSA | 21.3 | 8 | 11 | b |
| Copper | 310 * | 31.6 | 184 | 24.5 | 43 | b |
| Iron | 5500 * | NSA | 37800 | 17800 | 25000 | b |
| Lead | 400 * | 35.8 | 121 | 16.1 J | 49.5 J | b |
| Lithium | 16 * | NSA | 47 | 14.6 | 24.2 | b |
| Magnesium | NSA | NSA | 27300 | 4180 J | 5090 J | b |
| Manganese | 180 * | NSA | 814 | 260 J | 211 J | b |
| Mercury | 0.78 * | 0.18 | 0.47 | 0.043 U | 0.15 U | b |
| Nickel | 150 * | 22.7 | 51.9 | 18.2 | 28.2 | b |
| Potassium | NSA | NSA | 5070 | 1010 | 2080 | b |
| Selenium | 39 * | NSA | 1.87 | 1.1 | <u>2.9</u> | b |
| Silver | 39 * | NSA | 0.742 | 0.039 J | 0.13 J | b |
| Sodium | NSA | NSA | 679 | 75.4 U | 69.3 U | b |
| Thallium | 0.078 * | NSA | 0.356 | <u>0.42 J</u> | 0.15 U | b |
| Vanadium | 39 * | NSA | 60.6 | 23.4 | 41.1 | b |
| Zinc | 2300 * | 121 | 405 | 48 J | 144 J | b |

ft bgs = feet below ground surface

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

USEPA RSL = USEPA Residential Soil Regional Screening Level, November 2011.

USEPA SD TEC = Consensus-based threshold effect concentrations from the 2002 USEPA *Guidance Manual to Support the Assessment of Contaminated Sediments in Freshwater Ecosystems Volume III - Interpretation of the Results of Sediment Quality Investigations*. EPA-905-B02-001-C United States Great Lakes National Program Office.NFSS SD BTV = Sediment background threshold values from the NFSS RI: Science Applications International Corporation. 2007. *Remedial Investigation Report for the NFSS*. December.

* = A noncarcinogen; the screening level has been divided by 10 to achieve a hazard index of 0.1.

NSA = No screening level available.

a = Result was rejected for use by the data validator.

b = Analyte was not analyzed for.

c = USEPA RSL for trivalent chromium.

J = Estimated value

U (2011 data) = Either a) the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection, or b) blank contamination existed and the value presented is the reported concentration (see Data Usability Summary Reports for explanation).

U (2001 data) = the analyte was analyzed for but was not detected above the method detection limit. The value presented is the sample quantitation limit.

Gray shading = detected concentration is > the EPA RSL.

Bold font = detected concentration is greater than the NFSS SD TEC

Underlined font = detected concentration is greater than the NFSS SD BTV

Table F-5. Radionuclide Results

| | | |
|---|---------------|----------|
| Sample Location: | C10-GS2-Y20 | |
| Sample Name: | C2-OXY-SO-Y20 | |
| Sample Date: | 8/27/2010 | |
| Sample Depth (ft bgs): | 0 - 0.5 | |
| Analyte | NFSS | |
| | BTV | |
| Radionuclides (SW9310, A-01-R-MOD) (pCi/g) | | |
| Alpha | 15.1 | 32.8 |
| Beta | 28.9 | 27.2 |
| Plutonium-238 | 2.5 | -0.003 U |
| Plutonium-239/240 | 2.3 | 0.037 |
| Plutonium-242 | NSA | 0.002 U |
| Plutonium-244 | NSA | 0.0029 U |
| Radium-226 | 3.5 | 2.06 |
| Thorium-231 | NSA | 0.055 J |
| Thorium-234 | NSA | 1.28 |
| Uranium-234 | 13 | 1.4 |
| Uranium-235 | 8 | 0.055 J |
| Uranium-238 | 14 | 1.28 |

ft bgs = feet below ground surface

pCi/g = picoCuries per gram

NFSS BTV = Screening values for gross alpha and gross beta are background threshold values developed for the NFSS RI (USACE, 2007). Other screening values were developed by the Nuclear Regulatory Commission for decommissioning licensed sites.

NSA = No screening level available.

J = Estimated value

U (2010 data) = the analyte was analyzed for but was not detected above the method detection limit and the value presented is the limit of detection.

Gray shading = detected concentration is > the EPA RSL.