Chicago Area Waterway System

Dredged Material Management Plan & Integrated Environmental Assessment

APPENDIX C: ENVIRONMENTAL ENGINEERING

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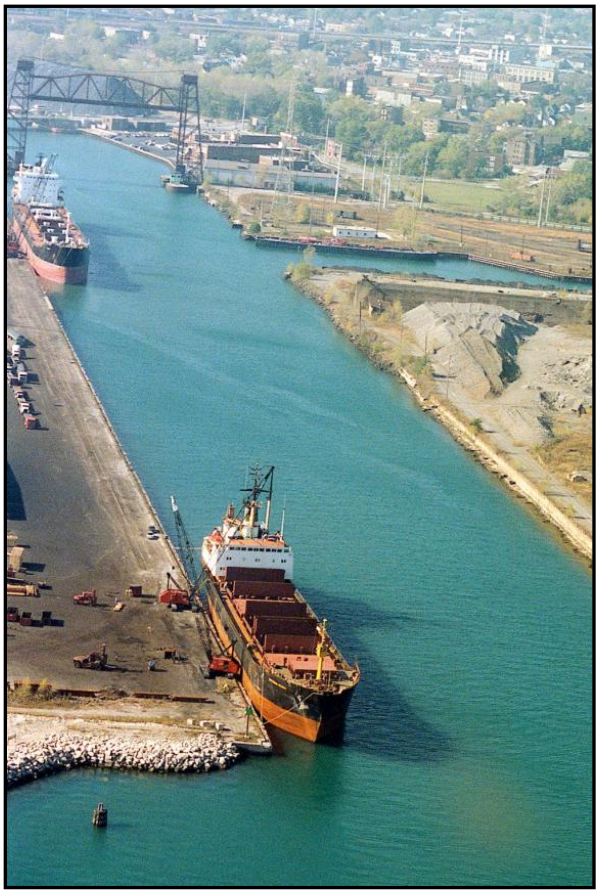

Prepared By:

Chicago District and Rock Island District

US Army Corps of Engineers®

June 2015

Chicago Area Waterway System (CAWS)
Dredged Material Management Plan (DMMP)

Appendix C: Environmental Engineering

This appendix includes the following documents:

A. Sediment Sampling and Analysis

1. Tier 1 evaluation for the Calumet Harbor and River sediment, dated November 2010.

2. Final sediment sampling and analysis report, dated December 2011, for sediment samples collected from Calumet Harbor.

3. Calumet Harbor Dredged Material Human Health Risk-Based Screening for Upland Beneficial Use Determination, dated January 2014.

4. Calumet-Sag sediment sampling and analysis summary, 22 January 2015.

B. Environmental Site Assessments for Dredged Material Disposal Facility site alternatives

1. Phase I Environmental Site Assessment (ESA), dated January 2014, for a proposed new Dredged Material Disposal Facility (DMDF) at Site 313R – property at 119th and Ridgeland in Alsip, Illinois (former Metropolitan Water Reclamation District (MWRD) of Greater Chicago biosolids drying area). (Note: The Subsurface Investigation Report for this site, dated Aug. 2014, contains an environmental addendum with results from a Phase II ESA. This report is located in Appendix D – Geotechnical Engineering).

2. Phase I ESA, dated May 2015, and No Further Remediation (NFR) letter, dated 08 Dec. 2005, for a proposed new DMDF at Site 329L-B – property at 12200 South Avenue O, Chicago, Illinois (former Republic Steel plant site).

3. Draft Phase I ESA, dated November 2014, and No Further Remediation (NFR) letter, dated Feb. 1999, for proposed new confined disposal facility at Site 330L – property at 11600 South Burley Avenue, Chicago, Illinois (former LTV Steel plant site).

CALUMET HARBOR AND RIVER
Tier 1 Sediment Evaluation

Prepared by:

Environmental Engineering Section
U.S. Army Corps of Engineers, Chicago District
111 North Canal Street
Chicago, Illinois 60606-7206

November 2010

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Tier 1

1.1 Approach

1.1.1 Objective of Tiered Approach to Sediment Evaluation

The U.S. Environmental Protection Agency (USEPA) and the U.S. Army Corps of Engineers (USACE) have jointly developed the Great Lakes Dredged Material Testing and Evaluation Manual (GLTEM) (USEPA and USACE 1998). The GLTEM document outlines a structured, sequential approach to sediment evaluation and testing to determine if dredged sediment from harbors and rivers tributary to the Great Lakes may be disposed in open waters of the Great Lakes.

The objective of the tiered testing approach is to make optimal use of the resources in generating the required information for a factual determination of compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines, using an integrated chemical, physical, and biological approach.

Section 401 of the CWA requires that all Federal permits and licenses, including those for discharge of dredged material into waters of the United States, authorized pursuant to Section 404 of the CWA, must be certified as complying with applicable State water quality standards (WQS). The Guidelines at 40 CFR 230.10 (b) state in part that "No discharge of dredged or fill material shall be permitted if it: (1) Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable WQS."

1.1.2 Tier 1 Objectives

The purpose of the Tier 1 evaluation is to compile existing information used to make a factual determination regarding compliance with the CWA Section 404(b)(1) Guidelines, and to generate a list of "Contaminants of Concern." Disposal operations that are excluded from testing or have historic data sufficient to make the factual determination may proceed without additional testing. If a factual determination of non-compliance can be made, and it is determined that the dredged sediments will not be disposed of in open water, additional testing is not required, except as necessary for consideration of other disposal options. If there is not sufficient information for a factual determination, the information is deemed inconclusive, and a Tier 2 evaluation is performed. The Tier 1 evaluation is not intended to provide a comprehensive investigation of all potential sources of sediment contamination, but rather is intended to indicate whether sediment testing is warranted based on existing data and potential sources of sediment contamination.

1.2 Description of Project Area

1.2.1 Project Description

The Calumet Harbor and River vicinity, the navigational project area, and a project map for Calumet Harbor with approximate divisions between the quality of the harbor and river sediment and harbor and approach channel sediment are shown in Figures 1, 2, and 3, respectively.

Figure 1: Calumet Harbor and River Vicinity

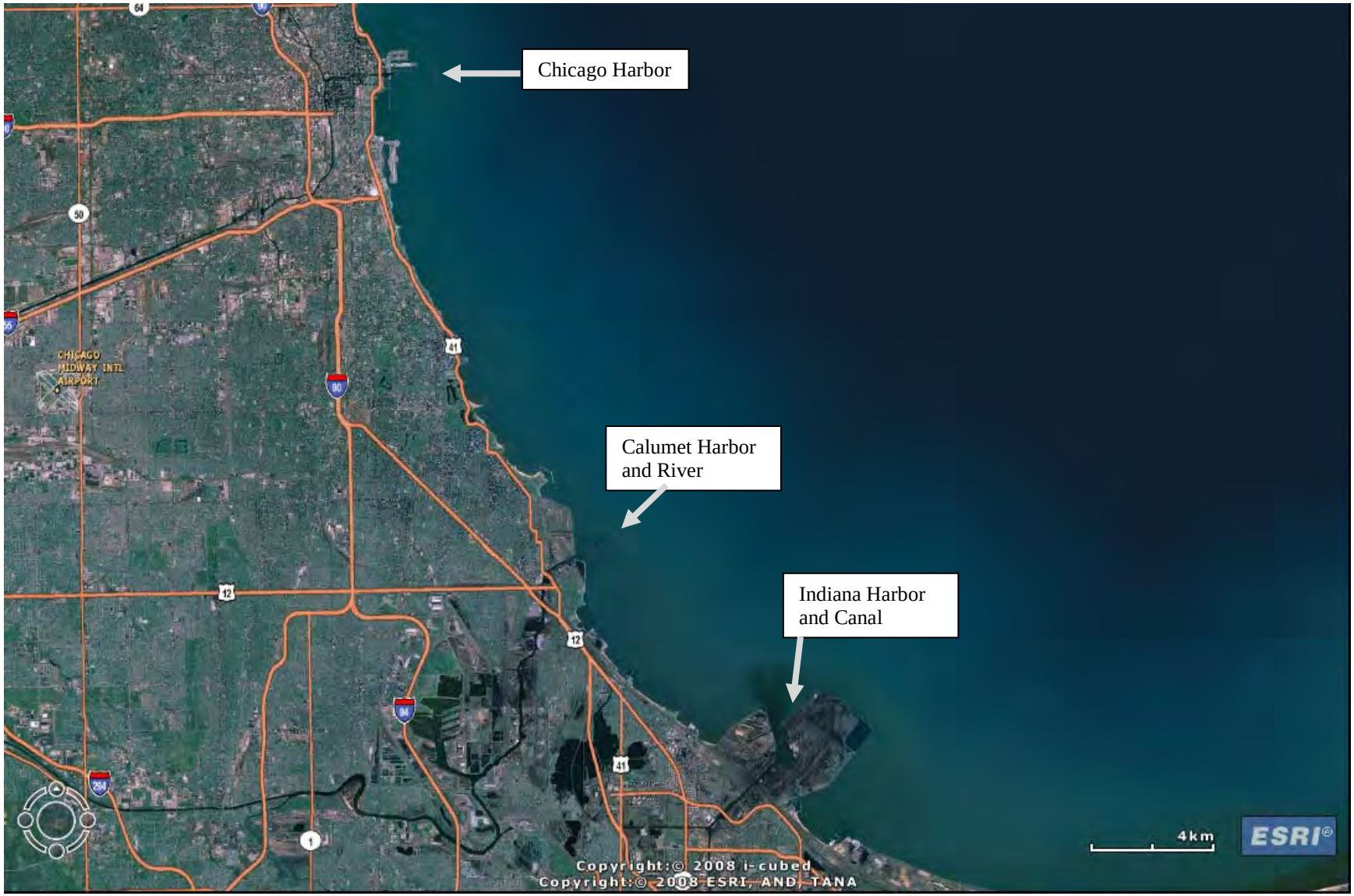
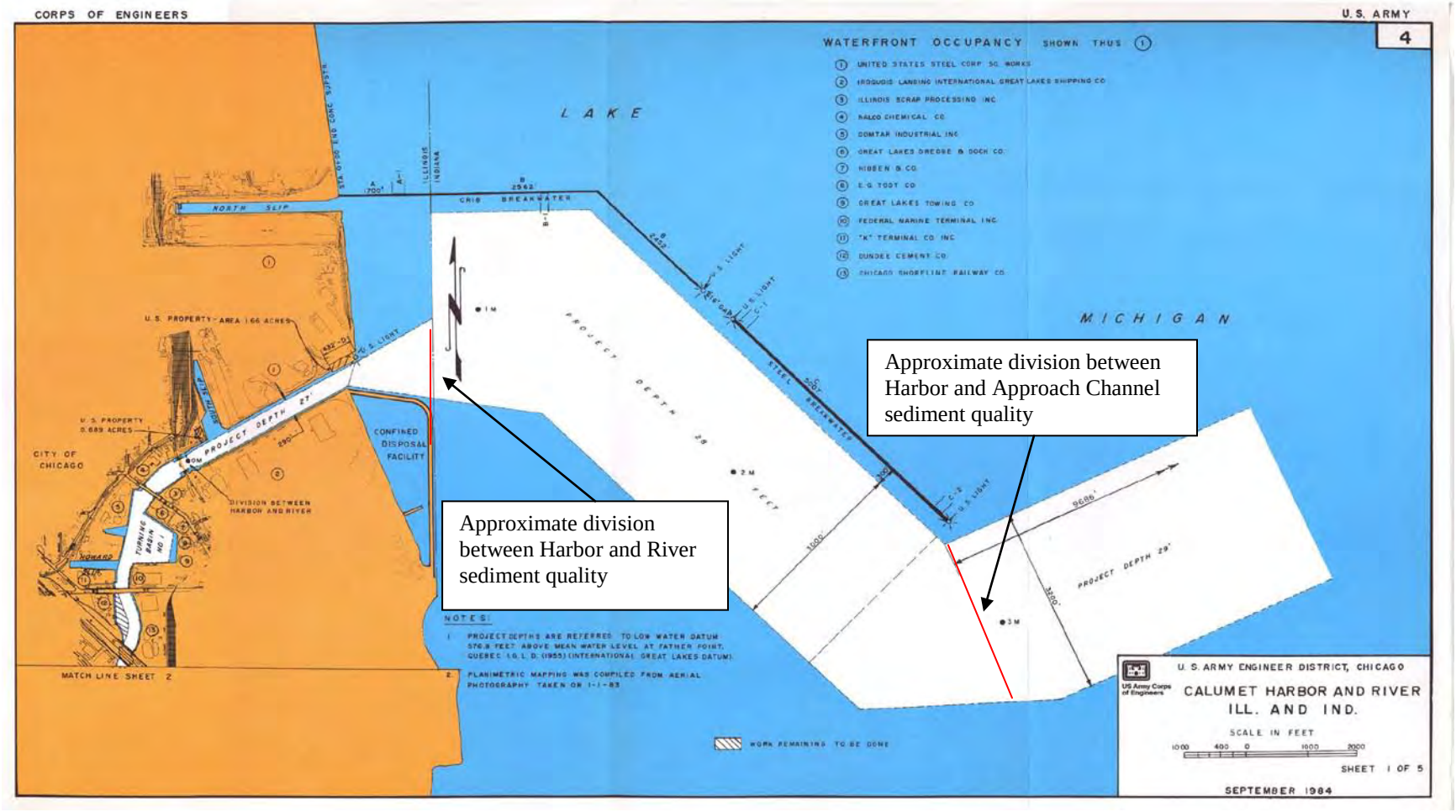


Figure 2: Calumet Harbor and River Navigational Project Area

Figure 3: Calumet Harbor Project Area



As shown in Figure 1, Calumet Harbor is located near the southern end of Lake Michigan, approximately 12 miles southeast of downtown Chicago. Federal improvements to the Calumet Harbor and River navigation project were first authorized by the Rivers and Harbors Act of 11 July 1870 (USACE 1985). Subsequent Rivers and Harbors Acts authorized the construction and maintenance of the breakwater and additional work to increase the width and depth of the channel and improve navigation. The breakwater is north and northeast of the harbor, and it is approximately 11,700 feet long. The Federal channel includes the following areas and authorized depths relative to Low Water Datum (LWD): A harbor approach channel with an authorized depth of 29 feet, a harbor anchorage area with an authorized depth of 28 feet, and the Calumet River channel, which typically has a authorized depth of 27 feet, although a portion of the channel south of the Wisconsin Slip has an authorized depth of 28 feet. In addition, the Calumet River has three (3) turning basins, and all three turning basins have an authorized depth of 27 feet.

1.2.2 Watershed Description

The Calumet Harbor and River is a major industrial port, and the river provides passage from Lake Michigan to the Sanitary and Ship Canal, which flows toward the Illinois River and eventually connects to the Mississippi River and the Gulf of Mexico. The nexus between the Calumet River and Lake Michigan is a vital concern because Lake Michigan is the source of drinking water for millions of people. Due to the importance of this waterway and environmental concerns, a number of studies have been conducted that document the historical industrialization of the Calumet Harbor and River area and investigate potential sources for sediment contamination and adverse impacts to water quality (Colten 1985, Ross 1989, Fitzpatrick and Bhowmik 1990, Kay et al. 1996, Kay et al. 1997). Fitzpatrick and Bhowmik (1990) observed that the hydrology of the area has become complex due to the development and modification of the waterway for navigation and flood control. They determined that the flow conditions can generally be grouped into four different drainage patterns, and, under certain flow conditions, the Calumet River periodically discharges to Lake Michigan. These authors recommended the implementation of tighter controls of water pollution, particularly from landfills, sludge beds, and sewer discharges.

1.2.3 Dredging History

Between 1924 and 1967, navigational dredging for the Calumet Harbor and River was normally accomplished by dipper dredge, and the dredged material was placed in bottom-dump scows and deposited in an authorized deep-water disposal area in Lake Michigan (Colten 1985 and USACE 1981). In the mid 1960s, environmental concerns were raised about the degradation of water quality in the Great Lakes, and USACE began investigating the feasibility of using alternate disposal areas (Miller 1998). After 1967, hydraulic dredges were used to transfer material dredged from the Calumet Harbor and River to different on-land disposal areas located along the waterway, and overflow from the on-land disposal areas was typically discharged back to the waterway (Colten 1985 and USACE 1981). During late 1967 – 1968, the Federal Water Pollution Control

Administration (FWPCA) (an agency that preceded the U.S. Environmental Protection Agency (USEPA)) monitored a dredging operation and concluded that the dredging operations had a negligible immediate effect on the water quality of the Calumet River, but the detention time for settlement of the effluent was not long enough to effectively reduce the turbidity and suspended solids (USACE 1981 and USACE 1969). For dredging operations performed in 1980, the USEPA did not allow the overflow to be discharged into the Calumet River (USACE 1981).

Public Law 91-611, Section 123 of the Rivers and Harbors Act of 1970, authorized the construction, operation, and maintenance of contained disposal facilities for material dredged from the Great Lakes and connecting channels, and coordination with other stakeholders to find an acceptable containment site for Chicago area dredged material began in 1971 (USACE 1981 and 1982). Various proposals and sites were discussed with numerous agencies and groups, and eventually, an acceptable site was identified. The Environmental Impact Statement (EIS) for the Chicago Area Confined Disposal Facility (CDF) (USACE 1982) provides details of the coordination that occurred, alternatives considered, and the basis for selection of the site. The CDF site covers an area of approximately 45 acres, and it is located in Calumet Harbor, south of the entrance channel to the Calumet River (see Figure 3). Dredged material from the Calumet Harbor and River has been placed into the Chicago Area CDF since 1984, and a Dredged Material Management Plan (DMMP) is in preparation because the facility is currently nearing its capacity.

1.3 Sources of Information

1.3.1 Environmental Databases

In early 2001, a draft CWA Section 404(b)(1) contaminant determination report was prepared that included a database search using Vista Information Solutions, Inc. In general, the search identified numerous sites in the vicinity that represented potential sources for pollutants. Within approximately a mile of the entrance to the Calumet River, the search found a Resource, Conservation, and Recovery Act (RCRA) corrective action site, two (2) state equivalent Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Superfund) sites, one (1) CERCLA site, a Treatment, Storage, and Disposal (TSD) site, eleven (11) Leaking Underground Storage (LUST) sites, and eleven (11) permitted solid waste landfill, incinerator, or transfer station sites. The database search results have been included in Appendix A. The database search was performed around ten (10) years ago, so conditions may have subsequently improved, but the information in the database search remains a cause for concern because it provides evidence of industrial or commercial activities that represent potential sources for contamination. It is evident from the 2001 database search that there is a need for sediment testing, and testing was and continues to be performed in association with dredging events. As a result, the benefit of performing a new database search would likely be marginal, and a new database search was not performed specifically for this report.

1.3.2 Historic Sediment Data

A review of the historic sediment quality data associated with previous dredging and sampling events was performed to identify contaminants of concern and sediment quality trends. Since recent data provide a more accurate representation of the current sediment quality and the material that will be dredged during future maintenance operations, older data, collected prior to 1999, were not included in this review.

Based on the historical sediment quality data, it is evident that sediment within the Calumet Harbor and River navigational project can be divided into the following three categories: (1) The Calumet Harbor Approach Channel, which has an authorized project depth of 29 feet; (2) Calumet Harbor, which has an authorized project depth of 28 feet, and (3) the Calumet River channel, which typically has a authorized depth of 27 feet, but a portion of the channel south of the Wisconsin Slip has an authorized depth of 28 feet. The approximate divisions for the sediment quality in these categories are shown in Figure 3.

As shown in Figure 3, the Calumet Harbor Approach Channel is the area furthest lakeward from the shoreline, and the approximate division between the harbor and the approach channel sediment quality is in a southeastern direction from the lakeward end of the breakwater. The Chicago District does not have sediment sampling data from the approach channel area because, for the past few decades, the depths in the approach channel have remained below the authorized dredge depth, so there has not been a need to dredge this area. Although sampling has not been performed and dredging has not been needed, it could become necessary to dredge portions of the approach channel in the future. Based on a sample collected from a nearby reference site in 2000, the sediment in the approach channel is expected to be relatively free from contaminants and comparable to the sandy and littoral drift sediment in this area of Lake Michigan. Reference sites are simply areas that have physical characteristics similar to a proposed sediment placement site; however, reference sites must be locations that have not been impacted by previous dredging operations.

In addition to the approach channel, Figure 3 shows the Calumet Harbor navigation channel, and the approximate division between the harbor and river sediment quality. The entire navigational project area is shown in Figure 2, and it can be seen in this figure that the Calumet River navigation extends to Lake Calumet, a distance of approximately seven (7) miles from the harbor.

Analytical sample results for the harbor and river areas were acquired from two (2) different sources. The first was the analytical results of grab samples collected from the barge during past dredging operations. After dredged material is placed into the barge, sediment samples are collected on a weekly basis prior to the placement of the material into the CDF. The interval between 1999 and 2009 included five (5) dredging events for river maintenance, and two (2) dredging events for harbor maintenance. During the five (5) river dredging events, forty (40) grab samples were collected, and during the two (2) harbor dredging events, twenty (20) grab samples were collected. Although this review focused on recent data, a more complete history of the sediment data from the grab

samples collected during dredging events has been included in Appendix B. The second source for data was two (2) different sediment sampling events, where grab or core samples were collected directly from specified locations within the river or harbor. The first sampling event was in the Calumet River in October 1999 (LES 2000), and the second sampling event was in Calumet Harbor in September 2000 (LES and AScI 2001). Seven (7) samples were collected from the Calumet River in 1999, and twenty (20) samples were collected from Calumet Harbor in 2000. The individual sample results for both of these events are provided in Appendices C and D.

As mentioned earlier, a draft CWA Section 404(b)(1) contaminant determination report was prepared in 2001, and it included the results from the sediment sampling event conducted in Calumet Harbor in 2000. The analytical results of this sampling event were provided in three (3) reports; the first was prepared by Lakeshore Engineering Services Inc. and AScI Corporation (LES and AScI 2001) and other reports were written by AScI Corporation (2000a and 2000b). As discussed earlier, the individual sample data are provided in Appendices C and D. The information in Appendix C includes figures showing the sample locations and management units, and Appendix D contains elutriate and bioassay testing results. This Tier 1 evaluation will focus on the sediment chemistry results.

Table 1 shows a summary of the sediment sampling data from the harbor and river sources discussed above. The table shows the maximum and mean concentrations measured in the sediment samples collected from the barge during the dredging operations between 1999 and 2009 and from the sediment sampling events conducted in 1999 in the Calumet River and 2000 in Calumet Harbor. The river data included forty (40) grab samples collected during dredging operations and seven (7) samples collected from specified locations in 1999, for a total of forty-seven (47) river samples. The harbor data included twenty (20) grab samples collected during dredging operations and twenty (20) samples collected from specified locations in 2000, for a total of forty (40) harbor samples. The river and harbor data have been listed separately, and the approximate division between the river and harbor sediment quality is shown in Figure 3.

The historical list of contaminants of concern was based on guidance established by the USEPA (1977). The results suggest that parameters evaluated in the past are still a concern, and none should be eliminated from future testing. The list does not include semi-volatile organic compounds (SVOC), such as polycyclic aromatic hydrocarbons (PAHs). Although SVOCs were not specifically listed as contaminants of concern, analytical testing for these compounds was performed during the sediment sampling event in 2000 in Calumet Harbor, and the test results are shown in Table 2.

Tables 1 and 2 compare the results to the values in the tiered approach to corrective action objectives (TACO) (Title 35 of the Illinois Administrative Code (IAC) Part 742). The State of Illinois utilizes TACO to evaluate risks to human health posed by environmental conditions and to develop baseline remediation objectives intended to achieve acceptable risk levels for contaminated sites. The exposure route-specific values in TACO are intended for soils, and the concentrations are solely based on human health

Table 1: Sediment Sampling Results 1999 to 2009 – Comparisons to Regulatory Values

Sediment Parameters			Calumet River	Calumet Harbor	TACO Industrial [1]	TACO Residential [1]	Counties Within Metropolitan Statistical Areas	Ceiling Concentration for Sewage Sludge [2]	2000 Lake Michigan Ref. Site 3
Arsenic	mg/kg	Max	124	12	1200	750	13.0	75	8.8
		Mean	23.5	7.4					7
Barium	mg/kg	Max	86.0	47	140000	5500	110	NA	14
		Mean	68.7	27					11.3
Cadmium	mg/kg	Max	15.5	1.3	2000	78	0.60	85	< 1
		Mean	3.36	1.0					< 1
Chromium	mg/kg	Max	347	55	420	230	16.2	NA	8.7
		Mean	58.8	26					6.5
Copper	mg/kg	Max	502	49	8200	2900	19.6	4300	17
		Mean	92.7	28					12.2
Lead	mg/kg	Max	550	140	700	400	36.0	840	13
		Mean	286	63.0					11.6
Manganese	mg/kg	Max	5050	890	4100	1600	636	NA	NA
		Mean	1495	622					NA
Mercury	mg/kg	Max	1.1	0.13	0.1	0.1	0.06	57	0.022
		Mean	0.25	0.08					0.022
Nickel	mg/kg	Max	100	33	4100	1600	18.0	420	11
		Mean	41.7	18					9.5
Zinc	mg/kg	Max	4690	400	61000	23000	95.0	7500	51
		Mean	1011	164					40
Ammonia Nitrogen	mg/kg	Max	255	470	NA	NA	NA	NA	14
		Mean	139	106					8.4
TKN	mg/kg	Max	2970	520	NA	NA	NA	NA	330
		Mean	1070	402					190
Oil & Grease	mg/kg	Max	6580	800	NA	NA	NA	NA	NA
		Mean	2785	412					NA
Phosphorus	mg/kg	Max	1100	430	NA	NA	NA	NA	190
		Mean	538.4	204					157
Cyanide	mg/kg	Max	5.9	2.3	4100	1600	0.51	NA	0.36
		Mean	1.4	0.35					0.36
PCBs	mg/kg		13	0.39	1	1	NA	NA	< 0.04
		Mean	1.03	0.10					< 0.04
Number of Samples Collected			47	40					

Notes for Table 1:
[1] Based on lowest value through either the inhalation or ingestion exposure route for an industrial/commercial site or construction worker. The value of the soil component of the groundwater ingestion exposure route was not used because there were no data from TCLP or SPLP testing.
[2] From Title 40 of the Code of Federal Regulations Table 1 of §503.13
For non-detect Samples, the< indicates the reporting limit was used to calculate the mean.
NA = Not available

Table 2: Sediment Sampling Results – Calumet Harbor 2000 – Comparisons to Regulatory Values

Sediment Parameters			Calumet Harbor 2000	TACO Industrial	TACO Residential	Metropolitan Areas	2000 Lake Michigan Ref. Site 3
Phenol	mg/kg	Max	0.95	100	100	NA	< 0.33
		Mean	< 0.36				
3/4-Methylphenol	mg/kg	Max	0.54	NA	NA	NA	< 0.33
		Mean	< 0.34				
Benzo(a)anthracene	mg/kg	Max	0.54	2	0.9*	1.8	< 0.42
		Mean	< 0.42				
Benzo(a)pyrene	mg/kg	Max	0.44	0.8	0.09*	2.1	< 0.42
		Mean	< 0.42				
Benzo(b)fluoranthene	mg/kg	Max	0.66	5	0.9*	2.1	< 0.42
		Mean	< 0.43				
Chrysene	mg/kg	Max	0.66	160	88	2.7	< 0.42
		Mean	< 0.42				
Fluoranthene	mg/kg	Max	0.95	4,300	3,100	4.1	< 0.42
		Mean	< 0.53				
Phenanthrene	mg/kg	Max	0.76	NA	NA	2.5	< 0.42
		Mean	< 0.46				
Pyrene	mg/kg	Max	1.0	4,200	2,300	3.0	< 0.42
		Mean	< 0.57				
Number of Samples Collected			20				9

NA = Not Available
< = Less than detection limit
*For sites in populated areas, it is acceptable to use the background concentration (i.e. Metropolitan Areas)
Remaining semi-volatiles were undetected
For non-detect samples, the< indicates the reporting limit was used to calculate the mean.

criteria. The residential TACO values are for sites located on residential property, which refers to property used for habitation by individuals, or where children have the potential for exposure to contaminants at educational facilities, health care facilities, child care facilities, or outdoor recreational areas. Industrial property refers to property that is not residential and is not used for agricultural or conservation (wildlife habitat) purposes.

The exposure routes considered by TACO include inhalation and ingestion for receptors and construction workers and the groundwater ingestion route. The groundwater ingestion route values listed for inorganic chemicals requires knowledge of whether the groundwater is Class I (potable resource groundwater) or Class II (general resource groundwater). In addition, an evaluation for the groundwater ingestion route requires

knowledge of the groundwater pH or an analysis by either the toxicity characteristic leaching procedure (TCLP) (USEPA Test Method 1311) or the synthetic precipitation leaching procedure (SPLP) (USEPA Test Method 1312). Since the TACO values were for comparison purposes, and there was a lack of information on the type of groundwater, pH, and leaching procedure test results, the sediment concentrations were not compared to groundwater ingestion route values. As a result, the TACO values listed in Tables 1 and 2 are the lowest values for either the ingestion or inhalation exposure routes for receptors or construction workers.

It important to understand that dredged materials commonly have physical and chemical characteristics that differ from the characteristics of soils at upland contaminated sites. As a consequence, the use of TACO criteria for the evaluation of the potential risks to human health posed by dredged materials is questionable. Nevertheless, the State of Illinois does not have specific regulations for assessing risks associated with dredged materials, so in the past the Illinois Environmental Protection Agency (IEPA) has referred to TACO, or the regional background concentrations in TACO, as a basis for decision-making. The regional background concentrations in TACO are included in Table 1 under the column titled "counties within metropolitan statistical areas" and in Table 2 under the column titled "metropolitan areas."

In addition to the TACO values, Table 1 compares the values to the ceiling concentrations for biosolids. The concentrations of pollutants must not exceed the ceiling concentration for biosolids if they are to be sold or given away in a bag or other container for land application. Furthermore, these biosolids have to meet Class A pathogenic bacteria reduction requirements. Pathogenic bacteria are not usually a concern for sediments, so a potential beneficial use for the dredged material could be to mix it with biosolids prior to land application. As with the TACO criteria, the biosolids criteria are not directly applicable to sediment; however, since mixing the dredged material with biosolids prior to land application provides an opportunity for beneficial use, the biosolids criteria are included here for discussion purposes. The last column of Tables 1 and 2 also include a reference site sample from Lake Michigan for comparison.

1.4 Tier 1 Conclusions

1.4.1 General Conclusions

There is often considerable variability in the data, even when the sediment from the harbor and river are analyzed separately. This variability can partially be attributed to the changes in the dredging locations, because dredging is predominantly for regions where shoaling occurs. The harbor and river consist of large spatial areas, and the shoals often form in different areas due to variations in the flow, sediment transport mechanisms, and impacts from barge and ship traffic. The variability is also a consequence of the extensive industrial history and dynamic changes that have been associated with the development of the surrounding urban area, depositional heterogeneity, and the sources for the pollution, which include combined sewer overflows, surface runoff, and point and non-point source contamination. Other factors that likely contributed to the variability are the different analytical laboratories that have been used over the years, changes to

sampling techniques and instrumentation, and the use of alternative test methods or procedures.

Although there is considerable variability in the contaminant concentrations over time, and even during individual dredging events, it is evident that there has not been a substantial improvement in the river sediment quality. Table 1 of Appendix B shows a chronological history of the sample results from grab samples collected from the barge during the different maintenance dredging operations. This table shows that historically high concentrations of several parameters, such as arsenic, chromium, copper, lead, manganese, zinc, and oil and grease, can be observed in samples collected from the Calumet River as recently as 2009.

As discussed above, the variations in the flow and the flow direction influences sediment deposition, and the hydrology of the Calumet Harbor and River area has become complex due to the development and modification of the waterway. Previous investigations determined that the Calumet River periodically discharges to Lake Michigan, and this is a concern because the historical data show that many parameters in the river sediment have elevated levels, and the river sediment is often considered to be impaired relative to residential or industrial TACO criteria. Since the research suggests the river periodically discharges to the harbor, and the levels in the river sediment are elevated in comparison to the harbor sediment, it is likely that contaminant transport from the river contributed in the past and may still be contributing to the impairment of the harbor sediment.

Table 1 indicated that the harbor and river sediments have many of the same contaminants of concern, and evidence of adverse impacts to the harbor sediment from the river are shown spatially by the results of the sediment sampling event performed in Calumet Harbor in 2000. Figure 4 shows the sample locations and designated Management Units (MUs), and Tables 3 and 4 show a statistical analysis of the results. Table 3 shows the average concentrations of most contaminants of concern were noticeably higher in MU 1 and 2 than in MU 3 and 4, and, as shown in Figure 4, MU 1 and 2 were the areas closest to the river. In addition, Table 4 shows the average concentrations in samples collected from surrounding reference sites were generally lower than in MU 3 and 4. The sites are shown on a figure included in Appendix C, and, as mentioned earlier, the all the individual results for this sampling event were provided in Appendices C and D.

Figure 4: Management Units - 2000 Calumet Harbor Sampling Event

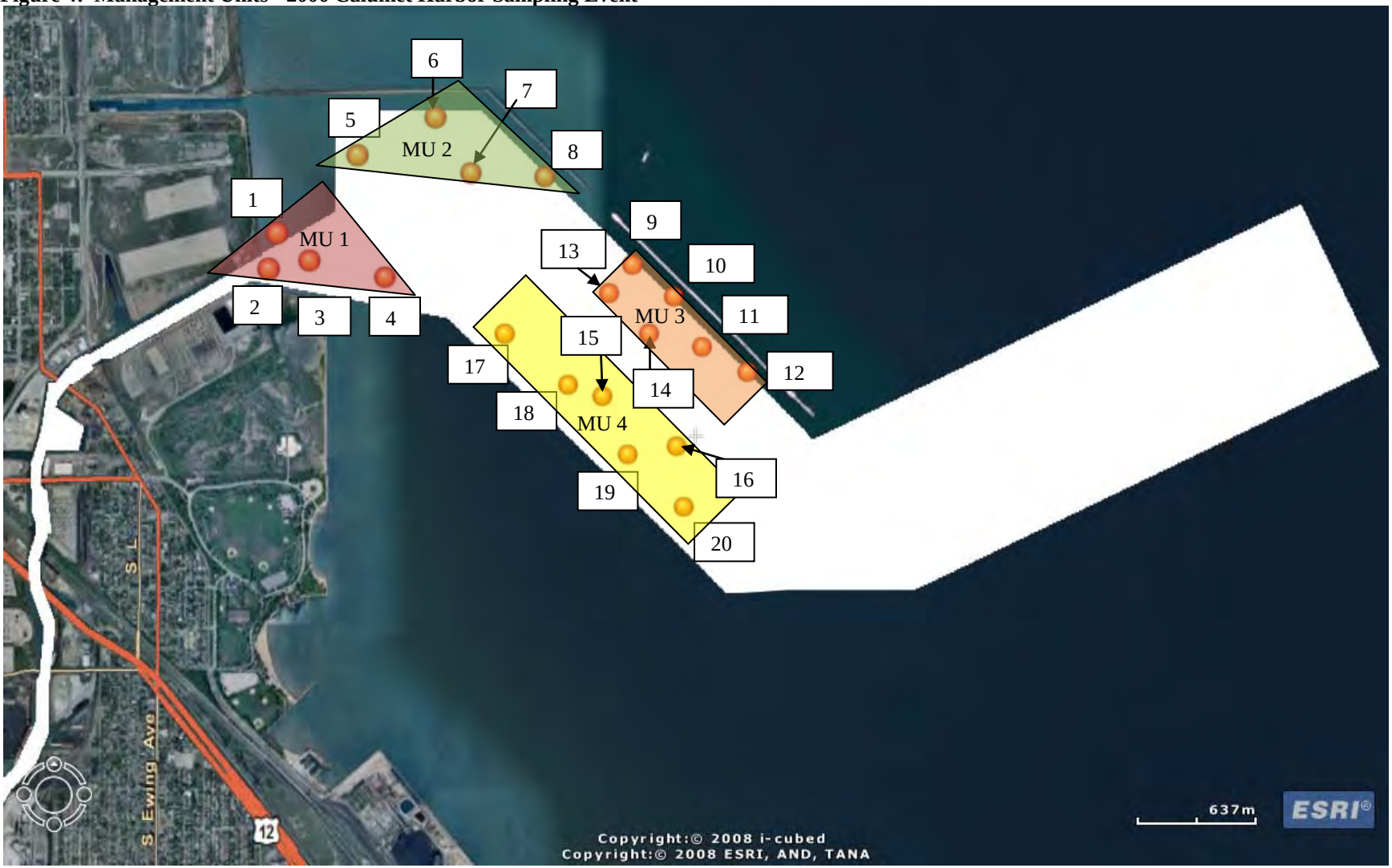


Table 3: Statistical Analysis - Results from 2000 Calumet Harbor Sampling Event

Sample Type	Units [2]	MU1 Avg.		MU1 Std. Dev	MU2 Avg.		MU2 Std. Dev	MU3 Avg.		MU3 Std. Dev	MU4 Avg.		MU4 Std. Dev
Metals													
Arsenic	mg/kg	9.1	+/-	2.0	7.425	+/-	1.1	5.7	+/-	1.2	5.1	+/-	0.8
Barium	mg/kg	36	+/-	8.4	26	+/-	4.3	18.7	+/-	3.1	18.3	+/-	2.8
Cadmium	mg/kg	0	+/-	0	0	+/-	0	1	+/-	0	0	+/-	0
Chromium	mg/kg	26.25	+/-	2.1	21.5	+/-	3.1	20.3	+/-	6.1	20.7	+/-	3.8
Copper	mg/kg	37.75	+/-	4.5	26.75	+/-	2.2	23.0	+/-	6.3	23.2	+/-	4.5
Lead	mg/kg	96.5	+/-	16.8	75	+/-	24.7	47.3	+/-	18.3	48.8	+/-	11.1
Mercury	mg/kg	0.093	+/-	0.014	0.093	+/-	0.021	0.069	+/-	0.023	0.062	+/-	0.013
Nickel	mg/kg	16.8	+/-	0.96	14.8	+/-	1.5	14	+/-	1.4	14.5	+/-	1.2
Phosphorous	mg/kg	310	+/-	27	282.5	+/-	35	230	+/-	26	243	+/-	16
Selenium	mg/kg	0.43	+/-	0.07	0.48	+/-	0.03	0.538	+/-	0.078	0.518	+/-	0.043
Silver	mg/kg	0	+/-	0	0	+/-	0	0	+/-	0	0	+/-	0
Zinc	mg/kg	205	+/-	25	170	+/-	59	155	+/-	35	120	+/-	18
Inorganics, Misc.													
Ammonia Nitrogen	mg/kg	80.5	+/-	10.3	65.8	+/-	18.4	42.0	+/-	22.1	39.0	+/-	12.0
TKN	mg/kg	423	+/-	65	430	+/-	73	377	+/-	62	382	+/-	71
Total Cyanide	mg/kg	0.315	+/-	0.098	0	+/-	0	0	+/-	0	0	+/-	0
TVS (%)	%	3.66	+/-	0.27	3.30	+/-	0.64	0.59	+/-	0.81	3.00	+/-	0.41
Total Solids (%)	%	57.1	+/-	3.2	55.1	+/-	5.2	59.0	+/-	2.8	61.0	+/-	4.0
COD	mg/kg	64250	+/-	9639	48250	+/-	6602	36833	+/-	4916	38833	+/-	3312
TOC	mg/kg	12000	+/-	816	10975	+/-	1812	8900	+/-	1008	9667	+/-	758
Fines (%) [3]	%	69.8	+/-	4.0	74.4	+/-	10.8	59.6	+/-	7.8	61.3	+/-	13.2
Moisture Content	%	75.7	+/-	7.7	79.7	+/-	16.3	59.7	+/-	7.5	58.8	+/-	13.3

Notes:

1 – The Statistical Summary was computed for detectable data only. If all data points in data series were non-detect, then the average was set to zero;

If only one data point in the data series was non-detect, then the average was set to that non-detect value and the standard deviation was set to zero.

MU1, MU2 based on 4 samples, MU3, MU4 based on 6 samples, RS1, RS2, RS3 based on 3 samples

2 - All units are mg/kg, except where indicated

3 - % Fines is total of silt and clay fraction

Table 4: Statistical Analysis - Results from 2000 Calumet Harbor Reference Sites

Sample Type	Units [2]	RS1 Avg.		RS1 Std. Dev	RS2 Avg.		RS2 Std. Dev	RS3 Avg.		RS3 Std. Dev
Metals										
Arsenic	mg/kg	3.4	+/-	0.5	1.9	+/-	0.2	7.0	+/-	1.5
Barium	mg/kg	10.4	+/-	2.4	7.6	+/-	3.5	11.3	+/-	2.5
Cadmium	mg/kg	0	+/-	0	0	+/-	0	0	+/-	0
Chromium	mg/kg	5.4	+/-	0.6	3.5	+/-	1.2	6.5	+/-	2.3
Copper	mg/kg	21.3	+/-	5.1	11.8	+/-	4.8	12.2	+/-	6.0
Lead	mg/kg	14.3	+/-	1.5	6.8	+/-	2.8	11.6	+/-	1.7
Mercury	mg/kg	0.038	+/-	0.004	0	+/-	0	0.022	+/-	0
Nickel	mg/kg	8.4	+/-	0.4	7.2	+/-	0	9.5	+/-	2.1
Phosphorous	mg/kg	167	+/-	31	120	+/-	10	157	+/-	42
Selenium	mg/kg	0.337	+/-	0.015	0	+/-	0	0.191	+/-	0.225
Silver	mg/kg	0	+/-	0	0	+/-	0	0	+/-	0
Zinc	mg/kg	96.3	+/-	4	33.7	+/-	2.1	40.0	+/-	9.8
Inorganics, Misc.										
Ammonia Nitrogen	mg/kg	2.0	+/-	0.6	0	+/-	0	8.4	+/-	8.0
TKN	mg/kg	82.3	+/-	16.6	36.0	+/-	11.1	190	+/-	125
Total Cyanide	mg/kg	0	+/-	0	0	+/-	0	0.36	+/-	0
TVS (%)	%	1.12	+/-	0.28	0.57	+/-	0.03	1.27	+/-	0.45
Total Solids (%)	%	75.9	+/-	1.9	78.0	+/-	1.3	76.4	+/-	7.2
COD	mg/kg	16033	+/-	7497	5467	+/-	1973	15800	+/-	5892
TOC	mg/kg	1463	+/-	1311	827	+/-	476	3433	+/-	2159
Fines (%) [3]	%	0.63	+/-	0.21	0.23	+/-	0.32	8.3	+/-	10.4
Moisture Content	%	32.7	+/-	1.0	28.3	+/-	0.9	25.5	+/-	7.1

Notes:

1 – The Statistical Summary was computed for detectable data only. If all data points in data series were non-detect, then the average was set to zero;

If only one data point in the data series was non-detect, then the average was set to that non-detect value and the standard deviation was set to zero.

MU1, MU2 based on 4 samples, MU3, MU4 based on 6 samples, RS1, RS2, RS3 based on 3 samples

2 - All units are mg/kg, except where indicated

3 - % Fines is total of silt and clay fraction

Although contaminant transport from the river might be having an adverse effect on the harbor sediment, in general, as seen in Table 1, the parameter concentrations in the harbor sediment are considerably lower than in the river sediment. Furthermore, except for ammonia nitrogen, the maximum parameter concentrations were measured in the river sediment. Incidentally, the maximum value for ammonia nitrogen in the harbor samples was 470 mg/kg, but it is reasonable to believe it was an unusual “outlier” result. This is because the average ammonia nitrogen value measured for the harbor samples was lower than the river samples, and, for the sampling event conducted during 2000, the maximum value for the harbor samples was 96 mg/kg and the average was 52 mg/kg. In Table 1, the average value for ammonia nitrogen in the river samples was 139 mg/kg, so, even though the harbor maximum concentration of ammonia nitrogen was higher than the maximum concentration in river, contaminant transport from the river continues to be suspected as a source for the elevated concentrations in the harbor.

As seen in Tables 3 and 4, the data from the Calumet Harbor sampling event in 2000 show a number of parameters have elevated levels relative to the sediment at the

reference sites. In addition, the ammonia concentrations and percent fines in the harbor sediment samples were higher than in the reference site samples. The data indicated that the harbor sediment was primarily fine-grained, silty material (> 50% fines) compared with the reference sites, which were predominantly sandy material (< 3% fines).

1.4.2 Sediment Placement Options

Since the sediment in the Calumet Harbor Approach Channel is expected to be relatively free from contaminants and comparable to the sandy and littoral drift sediment in this region of Lake Michigan, it is anticipated that the material dredged from this area will be suitable for open-lake placement. Nevertheless, since low levels of contaminants from the river and harbor might be present, a Tier 2 investigation needs to be performed to sample and analyze the approach channel sediment for the parameters of concern and to verify that the sediment will not impact the water quality. Because the Approach Channel is not dredged regularly, it is recommended than any Tier 2 investigation of that material be deferred until dredging becomes necessary.

Based on historical data, the sediment in the Calumet River area is unsuitable for open-lake placement, and it is also impaired in comparison to the State of Illinois TACO criteria. The levels of several contaminants of concern indicate the river sediment would also not be suitable for upland placement as unrestricted soil (soil grade material) nor upland regulated fill (fill grade material). As in the past, it is recommended that the Calumet River material be placed in a CDF or a similar confined and regulated upland facility.

The placement options for the Calumet Harbor sediment are more difficult to determine than for the approach channel or Calumet River because the sediment quality is in between the other areas. The historic data show that in comparison to the river sediment the concentrations of nearly all the parameters were considerably lower in the harbor sediment. Nevertheless, open-lake placement of Calumet Harbor sediment is not recommended due to the high ammonia concentration and fine grain size of the material. The elutriate data for the 2000 Calumet Harbor sampling event, provided Appendix D, indicate the open-lake placement of harbor material would have the potential to result in elevated ammonia-nitrogen levels, which may cause water quality impacts at the placement site. Ammonia levels significantly exceeded the water quality standards for the open waters of Lake Michigan. The sediment chemistry, elutriate, and physical data all suggest that the Calumet Harbor sediment is inappropriate for open-lake placement. Given the potential for water quality impacts, particularly with respect to ammonia and the generation of a turbidity plume, combined with the potential for toxicity to the organisms, as indicated by the bioassay testing provided in Appendix D, open-lake placement of Calumet Harbor sediment is not recommended.

In addition, due to the highly silty, fine-grained nature of the sediment and the potential for water quality and biological impacts, beach nourishment is not recommended either. Although open-lake placement and beach nourishment are not recommended, it is evident from the historic data that the sediment within the harbor, with the approximate divisions shown in Figure 3, may satisfy the TACO residential criteria, and this material has the

potential to be beneficially used as regulated fill (fill grade) material or possibly unrestricted soil (soil grade) material. However, there are a number of additional considerations, and there will need to be coordination with the State of Illinois.

Although asbestos is not typically a sediment related concern, in 2006 the Illinois Office of the Attorney General organized a task force to investigate the safety of sand used for beach nourishment, with regard to potential human asbestos exposure due to the upland placement of dredged sediment. The issue of asbestos in sediment was raised due to the Lake Michigan shoreline proximity of a superfund site with known soil asbestos contamination. The investigation included sampling at multiple beaches along southern Lake Michigan and trace asbestos analysis for the sand samples. The task force study concluded that the Illinois beach areas investigated represented a minimal human health risk to beach users from asbestos. Subsequent investigation of the Waukegan Outer Harbor, which is 1 mile south of the potential asbestos source, concluded that any risk from asbestos is within the background rate of the American population for contracting cancer. The Illinois Environmental Protection Agency subsequently concluded that the Waukegan Outer Harbor material is suitable for unconfined upland use. Because Calumet Harbor is approximately 45 miles south of Waukegan Harbor and there are no known asbestos sources near the harbor, it is highly unlikely that asbestos would represent a human health risk during the upland use of sediment from the Calumet Harbor. Although there are no asbestos sediment samples for Calumet Harbor, there are no known sources of asbestos and there is no reason to believe that asbestos contamination of the sediment is a realistic concern. However, this issue may need coordination with the State of Illinois before the Calumet Harbor sediment could be considered suitable for unconfined upland use.

As noted earlier, the TACO levels that were compared to the sediment data were the lowest values for either the ingestion or inhalation exposure routes for receptors or construction workers. Due to a lack of information on the type of groundwater, pH, and leaching procedure test results, the sediment concentrations were not compared to groundwater ingestion route values. Consequently, SPLP will need to be performed to compare the values to TACO groundwater ingestion route values.

In addition, there were harbor sediment samples that exceeded the mercury inhalation exposure route for a construction worker of 0.1 mg/kg. The TACO inhalation route value for mercury for residential property is 10 mg/kg, which is two orders of magnitude greater, but there are several footnotes, one of which states that the remediation objective must also include the construction worker inhalation objective, which is 0.1 mg/kg. Another footnote indicates that this inhalation objective only applies at sites where elemental mercury is a contaminant of concern, and it is unlikely that the mercury at the site is elemental mercury.

Calumet Harbor sediment has the potential to be suitable for upland beneficial use; however, the most recent sediment sampling event data from specified locations in the harbor were ten (10) years old, and there are no recent data on semivolatile organic compounds. Tier 2

testing is recommended to verify the material will meet the regulatory requirements required for unconfined upland use. In particular, the following need to be determined:

1. The only semivolatile organic compound and volatile organic compound testing was performed for the 2000 Calumet Harbor sampling event, so these data in addition to the metals and nutrient data should be required,
2. Asbestos and mercury issues including the potential need for human health risk assessment, and
3. Comparison of the results to TACO residential and metro background, including the SPLP comparison to the groundwater exposure values.

It is anticipated that the effects of CWA regulation and enforcement and the cleanup of sediment contamination sources, including non-point sources, should eventually result in sediment quality improvement, but it is discouraging that historically high concentrations of several parameters were measured in samples collected from the Calumet River as recently as 2009. The regulations are becoming more stringent and the associated costs and demand for CDFs are increasing, so alternative placement options and measures to reduce the amount of sediment dredged need to be considered.

In summary, based on the historical data, it is evident that sediment within the Calumet Harbor and River navigational project falls into the following three categories:

- Calumet Harbor Approach Channel – relatively clean and probably is suitable for open-lake placement, but more data are to needed to verify. It is recommended that further investigation of the Approach Channel be deferred until such a time that dredging is required.

- Calumet River – In comparison to the TACO values considered by the State of Illinois, the river material needs to be managed at a CDF.

- Calumet Harbor – Not suitable for open-lake placement, but it appears to satisfy the State of Illinois requirements for soil grade material and may be suitable for unconfined upland reuse pending a Tier 2 investigation. It is recommended that coordination begin with the State of Illinois to define the testing requirements necessary to make a final determination of the material suitability.

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Appendix A: Vista Information Solutions, Inc. Database Search

Appendix B: Sediment Bulk Chemistry in Past and Recent Dredging Events

Appendix B: Table 1 – Sediment Bulk Chemistry – Metal Concentrations in Past and Recent Dredging Events

Sediment Parameters	Units		Year of Dredging Operation												
			1984 River	1985 River	1986 River*	1989 River	1994 River	2000-01 River	2001 River	2003 River	2007 Harbor	2008 River	Jun 2009 River	Dec. 2009 Harbor	Overall
Arsenic	mg/kg	Max	12	74	4.3	124	27	57.9	12.7	124	11	--	--	10	124
		Mean	5.2	19.1	2.2	54.4	20	17.4	8.8	46.9	7.4	8.8	44	8.8	20.3
		Min	0.4	<0.3	0.66	6.84	11	6.7	4.4	<10	4.6	--	--	7.1	<0.3
Barium	mg/kg	Max	110	52	190	124	75	86	77	74	47	--	--	37	190
		Mean	46.3	27.8	66	71	65	<57	64	48.2	29.5	52	110	32	55.8
		Min	23	8.4	28	30	57	32	51	30	19	--	--	27	8.4
Cadmium	mg/kg	Max	5	2	5.1	15.8	4.8	6.2	15.5	2.7	1.3	--	--	1.3	15.8
		Mean	2.9	1.3	2.7	8.23	3.5	2.5	8.2	1.7	<1.03	<1.0	9.2	<1.05	3.61
		Min	0.88	0.82	0.82	<0.50	2.7	0.2	0.9	0.88	<1.0	--	--	<1.0	0.2
Chromium	mg/kg	Max	60	27	62	86.9	101	347	35	162	55	--	--	46	347
		Mean	34.7	19.2	24	62.3	61	68	18	52.4	25.6	20	110	35	44.2
		Min	23	12	3	20.9	31	19	2	24	14	--	--	30	2
Copper	mg/kg	Max	100	44	82	87.4	131	118	68	502	49	--	--	39	502
		Mean	57.6	29.9	42	67.4	86	64	56	103.8	27.5	24	140	33	60.9
		Min	34	24	4.4	26.4	47	14	44	43	16	--	--	27	4.4
Iron	mg/kg	Max	54,000	30,000	12,000	151,000	120,000	82,800	127,000	96,300	No Data	No Data	No Data	No Data	151,000
		Mean	40,323	18,909	8,100	54,043	76,475	38,388	38,044	49,582	No Data	No Data	No Data	No Data	40,483
		Min	22,350	13,000	5,400	16,100	37,400	14,800	12,700	27,900	No Data	No Data	No Data	No Data	5,400
Mercury	mg/kg	Max	0.66	0.12	0.90	0.169	0.57	0.62	0.20	0.19	0.13	--	--	0.12	0.90
		Mean	0.157	0.07	0.57	0.09	0.39	<0.19	<0.15	0.15	0.097	0.027	0.32	0.10	0.192
		Min	<0.01	0.04	0.11	0.022	0.23	<0.1	<0.1	<0.10	0.051	--	--	0.077	0.022
Manganese	mg/kg	Max	2,100	700	160	2,910	2,080	3,980	1,820	5,050	890	--	--	710	5,050
		Mean	1,069	451.8	140	1,691	1,440	1,257	780	1,515	625	760	2,900	619	1,104
		Min	600	390	130	344	881	394	476	717	530	--	--	500	130
Nickel	mg/kg	Max	50	32	19	73.7	63	61	35	100	31	--	--	24	100
		Mean	27	24.3	14	56.8	41	43.4	23	40.5	19.7	46	68	22	35.5
		Min	15	19	8.6	33.6	23	28.4	12	25	13	--	--	18	8.6
Lead	mg/kg	Max	520	130	250	276	639	367	161	393	140	--	--	93	1,200
		Mean	297.3	88	140	179.4	350	179.7	77	178	59.2	56	1,200	71	239
		Min	50	50	18	35	119	8.8	33	84	29	--	--	56	8.8
Zinc	mg/kg	Max	2,300	440	280	849	1,920	1,060	481	4,690	400	--	--	290	4,690
		Mean	1,108	270.5	170	423.5	1,051	511.9	221	942	172	180	4,000	203	770
		Min	280	180	61	80	282	54.3	82	283	95	--	--	150	54.3
Number of Samples Collected			11	11	7	7	4	18	9	11	13	1	1	7	100

Appendix B: Table 1 (Continued) – Sediment Bulk Chemistry - Wet Chemistry in Past and Recent Dredging Events

Sediment Parameters		Year of Dredging Operation and Dredging Location												
		1984 River	1985 River	1986 River*	1989 River	1994 River	2000-01 River	2001 River	2003 River	2007 Harbor	2008 River	Jun 2009 River	Dec. 2009 Harbor	Overall
Total Solids (%)	Max	63.2	73	74	66.8	65	86	49	No Data	66	--	--	76	86
	Mean	52	54.6	54	54.1	57	63.7	48.5	No Data	57.1	72	57	61	57.3
	Min	45.5	43	37	39.9	50.7	40	48	No Data	47	--	--	52	37
Total Volatile Solids (%)	Max	17	8.3	19	10.9	8.3	15.4	3.7	No Data	5.6	--	--	4.1	19
	Mean	11.1	7.2	9.3	6.34	7.2	5.4	3.6	No Data	3.85	13	7.1	3.4	6.99
	Min	5.1	2.7	2.4	3.8	6.2	2.8	3.5	No Data	2.6	--	--	2.6	2.4
Cyanide (mg/kg)	Max	5.1	0.56	0.54	2.8	1.4	2.1	1	5.8	2.3	--	--	0.54	5.8
	Mean	1.2	0.2	0.23	1.24	1.3	<0.79	<0.64	1.9	<0.47	<0.23	<0.36	0.29	0.74
	Min	<0.14	0.08	<0.01	<0.15	1.2	<0.5	<0.5	<0.20	<0.22	--	--	0.17	0.08
Chemical Oxygen Demand (mg/kg)	Max	290,000	73,000	52,000	962,000	200,000	134,000	107,000	282,000	240,000	--	--	110,000	962,000
	Mean	135,309	55,046	39,000	172,500	136,000	81,170	76,689	176,936	112,000	180,000	100,000	83,286	112,328
	Min	65,000	27,000	21,000	11,500	94,000	6,130	39,500	99,300	53,000	--	--	62,000	6,130
Ammonia (as N) (mg/kg)	Max	240	110	240	141	293	255	244	253	470	--	--	220	470
	Mean	137.45	72.9	80	59.97	216	134	166	210	152	32	140	170	131
	Min	80	2.4	15	26.8	142	20	81	138	67	--	--	130	2.4
TKN (mg/kg)	Max	4,900	890	1500	1,220	9,850	2,970	1,310	1,430	No Data	No Data	No Data	No Data	9,850
	Mean	1,624	721.9	910	514.3	7,328	1,224	932	1,212	No Data	No Data	No Data	No Data	1,808
	Min	670	81	360	156	4,200	541	627	713	No Data	No Data	No Data	No Data	81
Oil & Grease (mg/kg)	Max	15,000	4,400	6,500	99,500	1,640	5,780	3,350	6,580	790	--	--	800	99,500
	Mean	7,445	1,888	3,360	19,059	1,423	<1,394	1405	2714	338	2,200	13,000	486	4,559
	Min	1,000	970	650	326	1,080	20	258	1120	100	--	--	320	20
Phosphorus (total) (mg/kg)	Max	1,000	500	540	11.3	3,300	492	465	778	430	--	--	9.9	3,300
	Mean	513.6	307	360	15.8	1,118	252	295	511	290	160	730	<6.9	380
	Min	300	300	180	<0.10	227	8.9	208	350	190	--	--	3.4	<0.10
PCBs (mg/kg)	Max	19	1.2	12	39	7.3	4.1	<0.33	13	0.39	--	--	0.15	39
	Mean	4.4	0.7	5.4	5.04	3.8	<0.79	<0.33	2	<0.155	0.179	4.8	<0.041	2.31
	Min	0.69	0.3	0.41	<0.25	0.8	<0.33	<0.33	<0.33	<0.075	--	--	<0.022	<0.022
Total Organic Carbon (mg/kg)	Max	No Data	No Data	96,500	198,000	No Data	No Data	No Data	No Data	21,000	--	--	18,000	198,000
	Mean	No Data	No Data	57,600	98,014	No Data	No Data	No Data	No Data	12,300	17,000	71,000	16,000	45,319
	Min	No Data	No Data	9,000	24,000	No Data	No Data	No Data	No Data	8,300	--	--	14,000	8,300
# Samples Collected		11	11	7	7	4	18	9	11	13	1	1	7	100

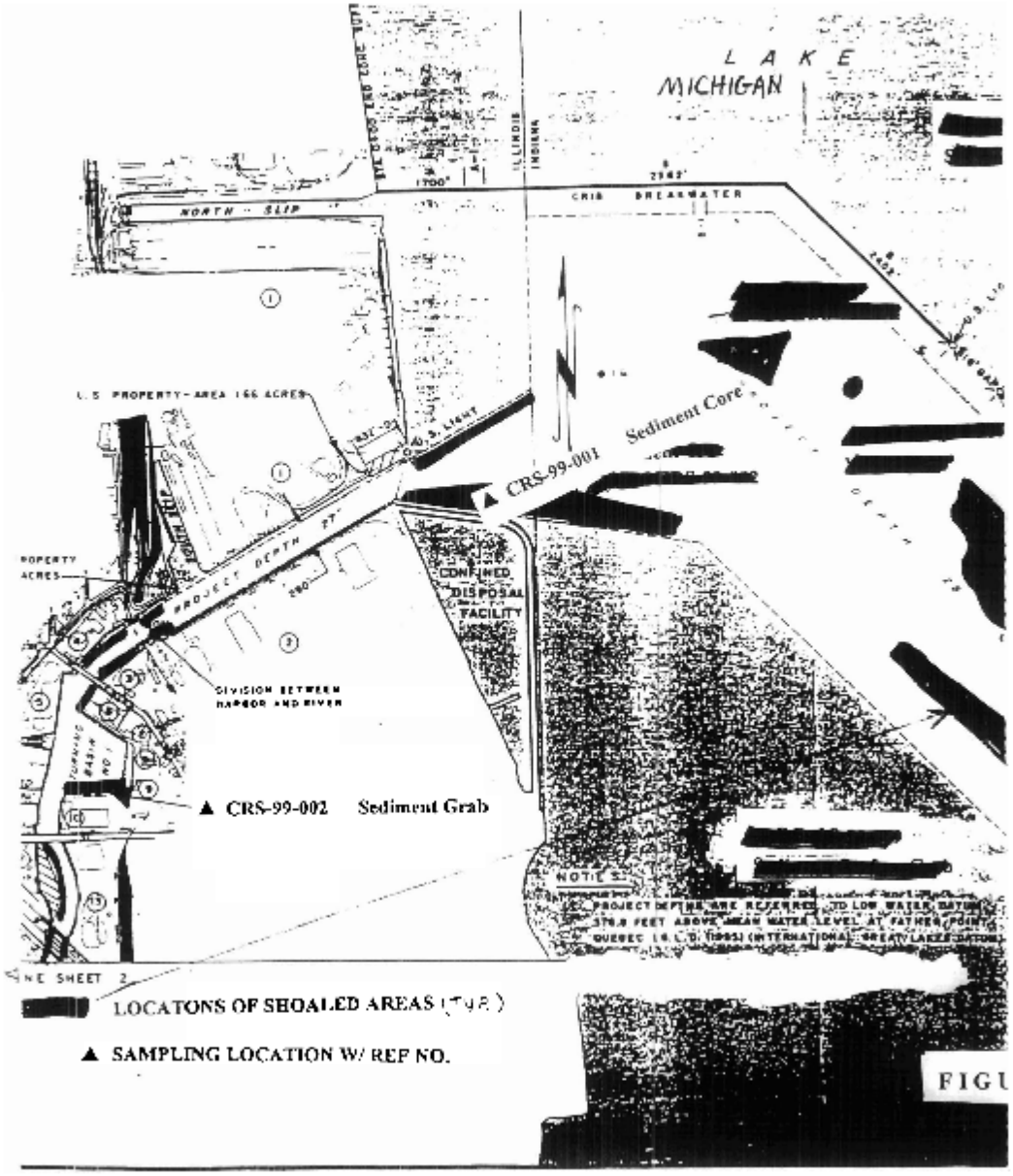
Appendix B, Table 2 – Past and Recent Dredging Event Information

Event No.	Year of Placement Operation	Volume of Dredged Material	Location of Dredging
1	Oct. – Dec. 1984	100,000 yd^3	Calumet River
2	July – Sept. 1985	108,000 yd^3	Calumet River
3	May – June 1986	62,000 yd^3	Chicago Harbor & Calumet River
4	April – June 1989	70,100 yd^3	Calumet River
5	May 1991	3,100 yd^3	Calumet River
6	December 1994	62,000 yd^3	Calumet River
7	Aug. 2000 – Apr. 2001	205,500 yd^3	Calumet River
8	Sept. – Dec. 2001	291,000 yd^3	Calumet River Entrance & Harbor
9	Sept. – Dec. 2003	135,000 yd^3	Calumet River
10	Sept. – Dec. 2007	131,020 yd^3	Calumet Harbor
11	April 2008	186 yd^3	Calumet River
12	June 2009	600 yd^3	Calumet River
13	Oct. – Dec. 2009	167,404 yd^3	Calumet Harbor
	Total Dredged	1,335,910 yd^3	

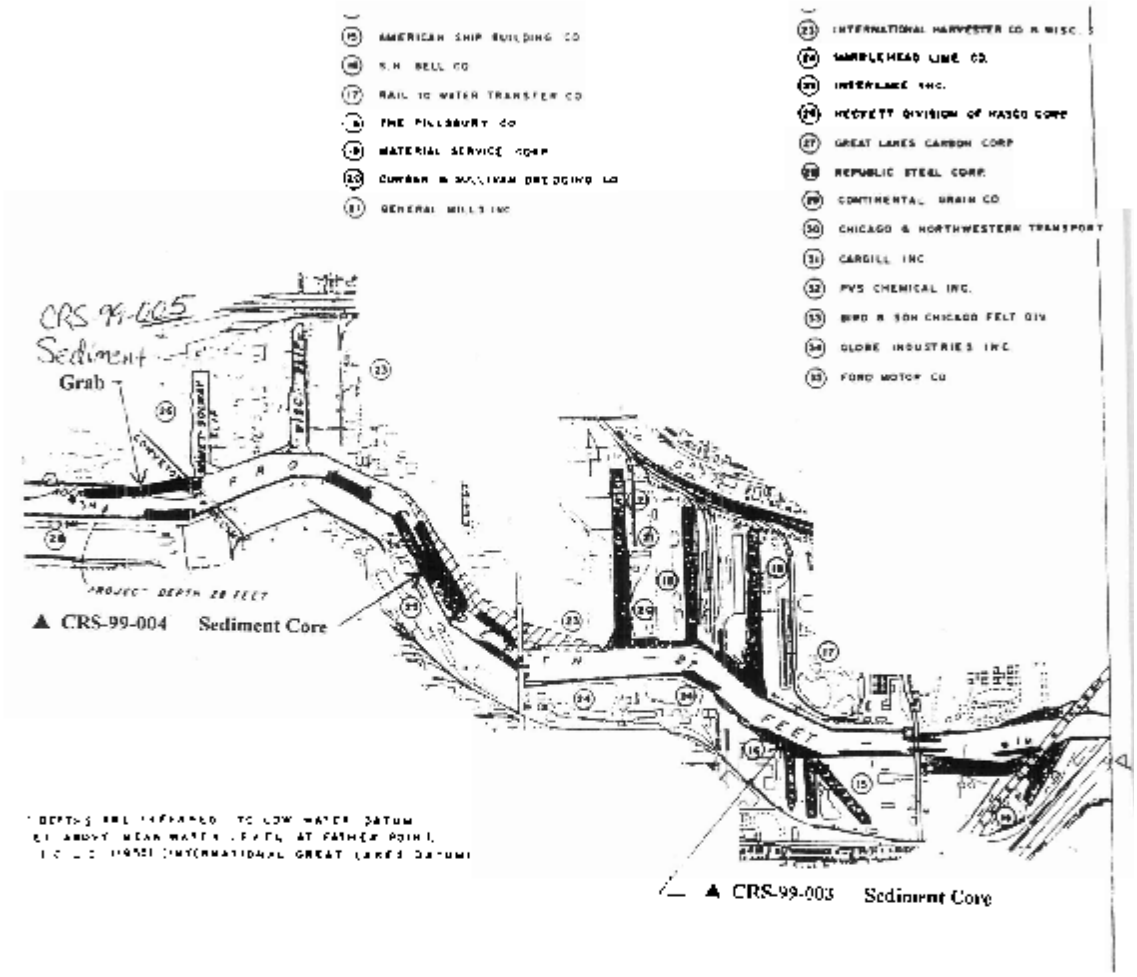
Note:
The fifth dredging event shown in Appendix B, Table 2 was conducted in 1991 by a private company, KCBX Terminals, and the project was intended to remove sediment from a dock area, which is outside the Federal navigation channel. Since dredged material from this dock area could differ from the material within the navigation channel, the sample results from the relatively small, 3,100-cubic yard, dredging event were not included in Appendix B, Table 1. Appendix B, Table 1 includes twelve (12) dredging events between 1984 and 2009 and the collection and analysis of 100 sediment samples. As shown in Table 3, the majority of the dredging has occurred in the Calumet River, and the three (3) dredging events in Calumet Harbor occurred within the last decade.

Appendix C: 1999 Calumet River and 2000 Calumet Harbor Bulk Sediment Chemistry Results

APPENDIX C-1 - Map of Calumet River Sediment Stations



APPENDIX C-2 – Map of Calumet River Sediment Stations



SHEET 2 OF 2

APPENDIX C-3 - Map of Calumet River Sediment Stations

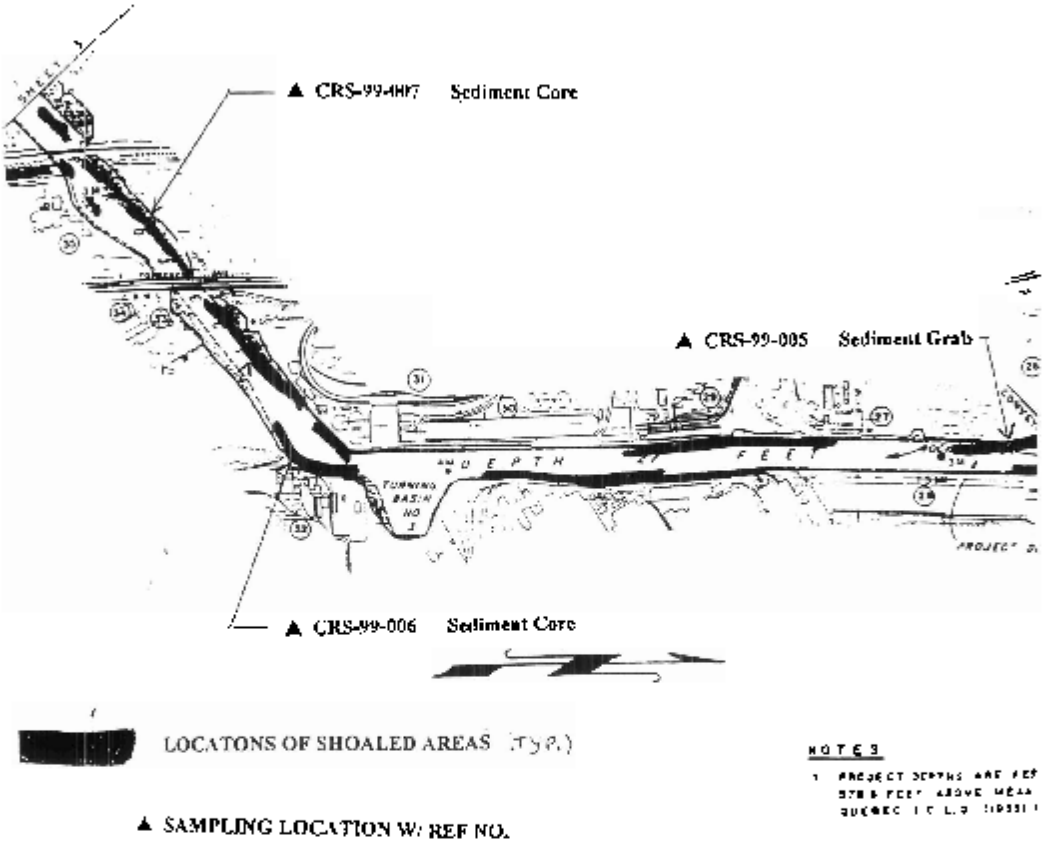


FIGURE A-SHEET

Appendix C: Table 1 – 1999 Calumet River Sediment Sampling Data

	Actual Reporting Limit	Units[1]	CRS – 99 –						
			001	002	003	004	005	006	007
Date Sampled			25-Oct-99	25-Oct-99	25-Oct-99	26-Oct-99	25-Oct-99	24-Oct-99	24-Oct-99
Sample Type			Core	Grab	Core	Core	Grab	Core	Core
Metals									
Arsenic	varies	mg/kg	21	16	18	22	18	46	11
Barium	1	mg/kg	73	64	79	80	70	84	48
Cadmium	varies	mg/kg	1.6	1.4	1.9	4.3	2.1	3.6	0.47
Chromium	0.5	mg/kg	54	48	49	72	99	96	29
Copper	1	mg/kg	56	62	59	88	140	320	30
Lead	varies	mg/kg	180	120	170	340	220	550	52
Mercury	0.1	mg/kg	0.22	0.23	0.2	0.27	0.28	1.1	n/d
Nickel	varies	mg/kg	27	28	29	41	50	70	30
Zinc	varies	mg/kg	520	430	620	1500	1100	1600	190
Iron	varies	mg/kg	110000	59000	60000	78000	67000	83000	27000
Manganese	varies	mg/kg	2000	1100	2200	1800	2000	1200	530
Ammonia Nitrogen	1	mg/kg	240	77	120	160	85	220	86
TKN	varies	mg/kg	980	1000	640	1100	1500	1000	900
Oil and Grease	varies	mg/kg	n/d	n/d	810	670	n/d	2800	n/d
Tot. Phos.	varies	mg/kg	630	600	620	770	690	1100	400
% Vol. Residue	n/a	%	2.3	3.1	3.9	4.4	4.8	3.1	2.5
Total Solids (%)	n/a	%	53	56.6	66.3	59.5	50.3	58.4	71.2
COD	varies	mg/kg	11000	12000	180000	210000	310000	180000	63000
% Fines [2]	n/a	%	73	66.7	43.8	63.7	83	47.2	44.4
% Sand	n/a	%	27	31.8	46.7	33.9	17	43	52.2
% Passing 200 sieve	n/a	%	80.4	72.9	48.2	69.3	88.2	50.7	46.1
Total Cyanide	0.20 – .23	mg/kg	0.8	1.5	2.5	5.9	1.7	0.34	1.1
PCBs	varies	ug/kg							
Aroclor-1242			n/d	n/d	110	280	340	1400	n/d
Aroclor-1260			n/d	99	n/d	n/d	n/d	n/d	n/d

Remaining PCBs were undetected

Notes: [1] All units are mg/kg, except where indicated
[2] % fines includes silt and clay
n/a: not applicable
n/d: not detectable

Calumet Harbor 2000 Sediment Sampling Location Description:
Sediment cores were collected using a truck-mounted drill rig on a floating barge. The lower end of the drill rod was fitted with a 3-inch diameter split-spoon sampler. The drill was allowed to penetrate the sediment by gravity, and then pounded further with a hydraulic hammer on the drill rig. The barge was maneuvered to the approximate sampling location by positioning floating buoys at pre-determined GPS coordinates. Once the barge was in the approximate sampling location, two spuds were lowered into the harbor to anchor the barge.

At many of the core locations, the sediments were soft and it was difficult to obtain full recovery using the split-spoon sampler. In those cases, the sediments from the top layer tended to be under-represented, so the sediment volume for these locations was supplemented with grab samples collected from the same location using a deep-lake Ponar dredge.

Designation of Management Units and Reference Sites
The sediment sample locations in Calumet Harbor were divided into four (4) Management Units (MU1, MU 2, MU3, and MU4), based on the shoaled areas. The delineation of these Management Units was based on existing information and soundings conducted in 1998. A figure showing the MUs is provided in the Lakeshore Engineering Services Inc. sampling report (2001) and the information has also been included below..

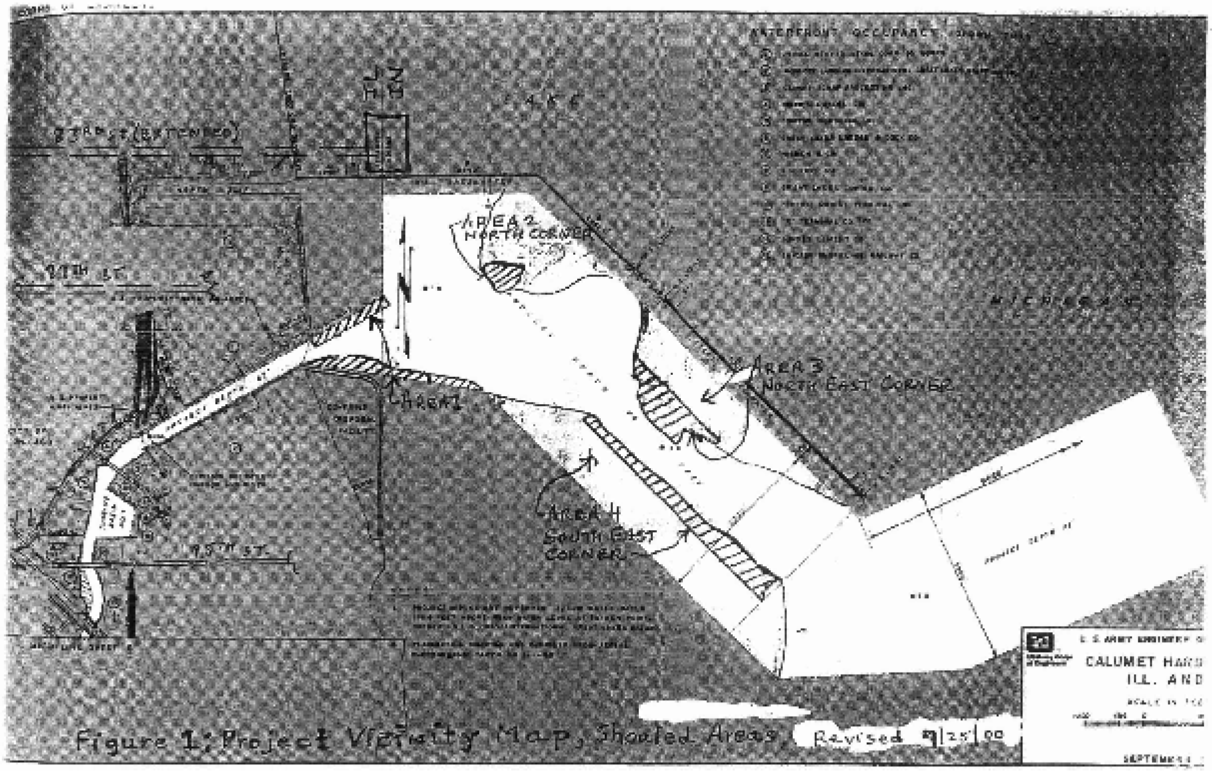
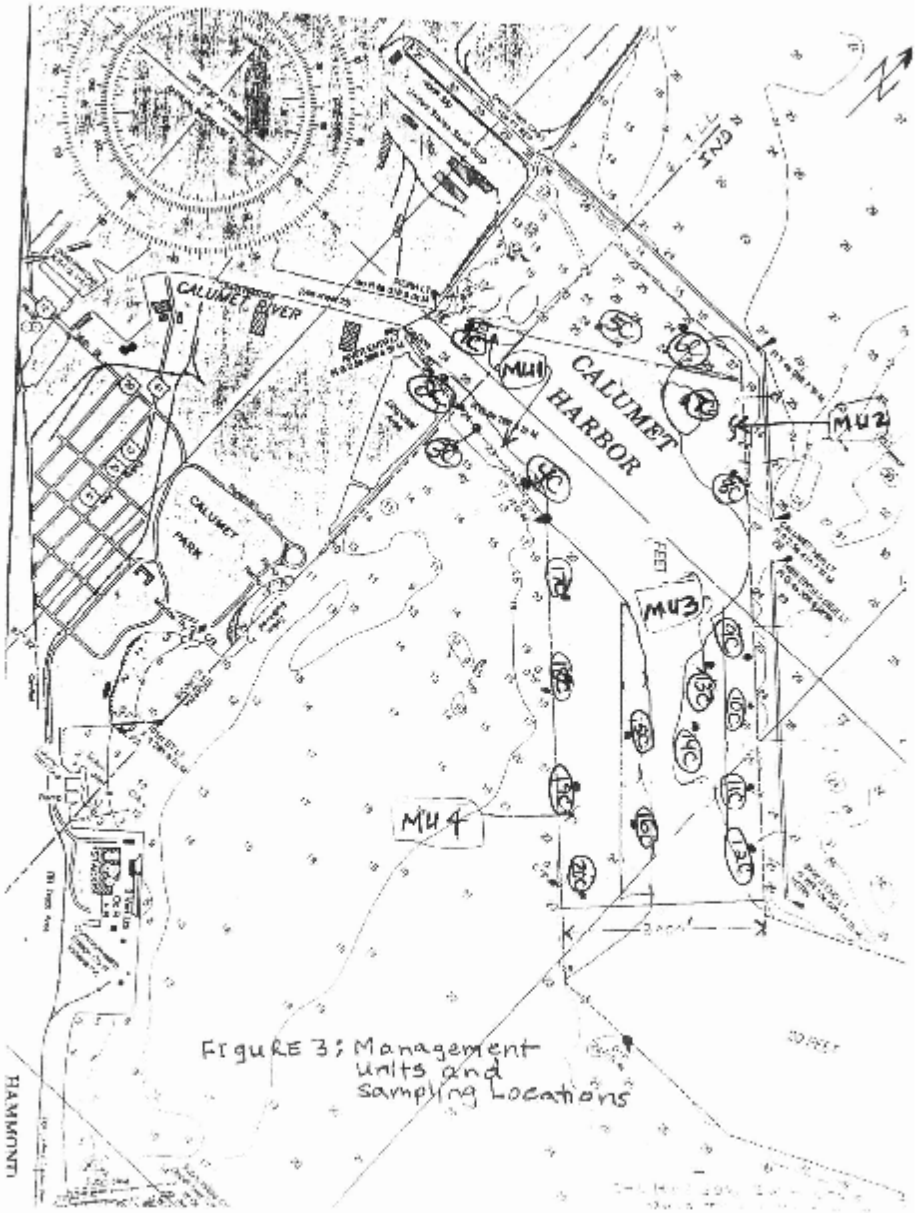
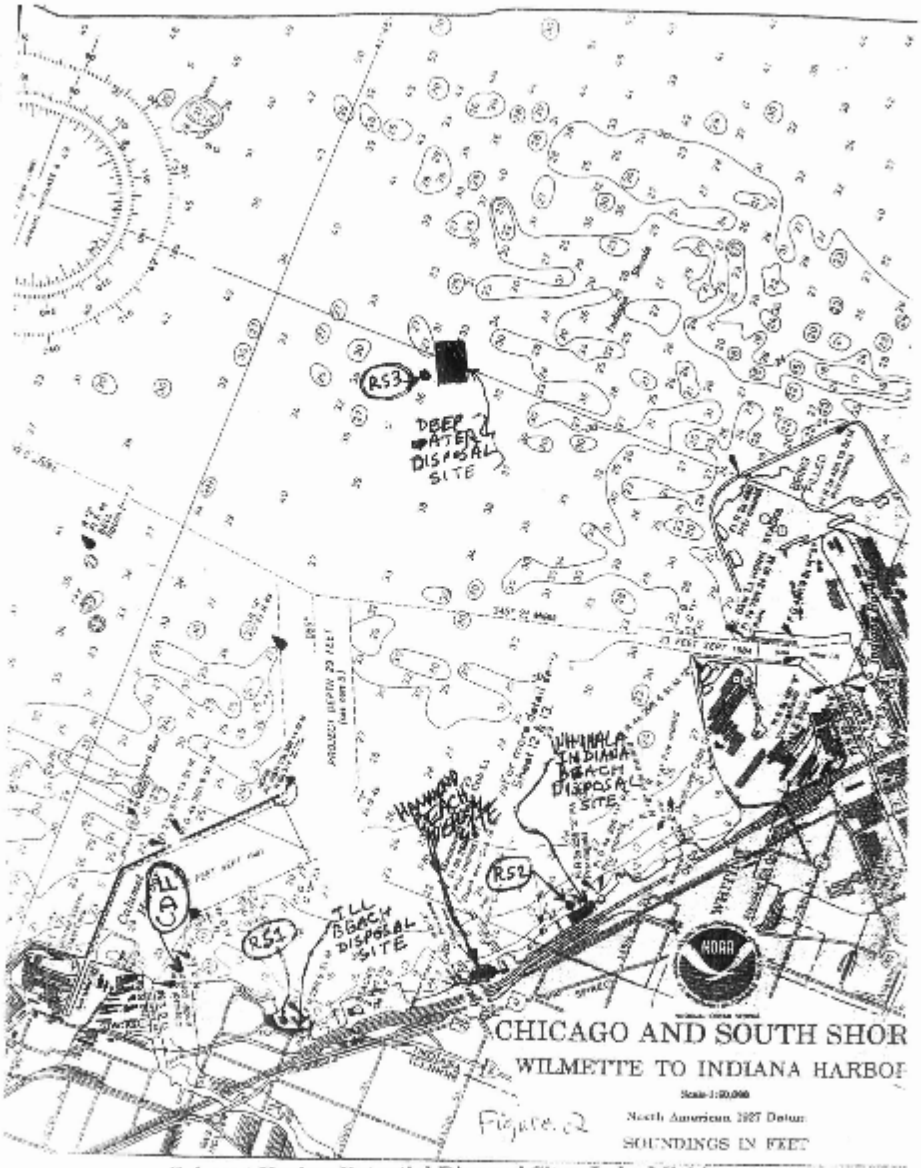


Figure 1: Project Vicinity Map, Shoaled Areas, Revised 9/25/00



Calumet Harbor Management Units and Sampling Stations



Calumet Harbor Potential Disposal Sites, Lake Michigan

Appendix C: Table 2 – Sediment and Water Sample Locations - Calumet Harbor

	Sample ID	Sample Type	Sample Location	Remarks
Mgmt. Unit 1	CH00-1C	Core	North of harbor entrance	For bulk chemistry and/or geotechnical analyses
	CH00-2C	Core	North of harbor entrance	For bulk chemistry and/or geotechnical analyses
	CH00-3C	Core	South of harbor entrance	For bulk chemistry and/or geotechnical analyses
	CH00-4C	Core	South of harbor entrance	For bulk chemistry and/or geotechnical analyses
	CH00-5C	Core	South of harbor entrance	For bulk chemistry and/or geotechnical analyses
	CH00-MU1-EL	Elutriate	See remarks	Mixture of site water and composite of 4 sediment core sample from MU1, prepared in laboratory, for chemical analyses.
	CH00-MU1-B	Biological	See remarks	Composite of 4 sediment core samples from MU1, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.
Mgmt. Unit 2	CH00-6C	Core	North Corner	For bulk chemistry and/or geotechnical analyses
	CH00-7C	Core	North Corner	For bulk chemistry and/or geotechnical analyses
	CH00-8C	Core	North Corner	For bulk chemistry and/or geotechnical analyses
	CH00-MU2-EL	Elutriate	See remarks	Mixture of site water and composite of 3 sediment core sample from MU2, prepared in laboratory, for wet chemistry analyses.
	CH00-MU2-B	Biological	See remarks	Composite of 3 sediment core samples from MU2, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.
Mgmt. Unit 3	CH00-9C	Core	North corner - inside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-10C	Core	North corner - inside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-11C	Core	North corner - inside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-12C	Core	North corner - outside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-13C	Core	North corner - outside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-14C	Core	North corner - outside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-MU3-EL	Elutriate	See remarks	Mixture of site water and composite of 6 sediment core sample from MU3, prepared in laboratory, for wet chemistry analyses.
	CH00-MU3-B	Biological	See remarks	Composite of 6 sediment core samples from MU3, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.

Appendix C: Table 2 (continued) – Sediment and Water Sample Locations - Calumet Harbor

	Sample ID	Sample Type	Sample Location	Remarks
Mgmt. Unit 4	CH00-15C	Core	North corner - inside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-16C	Core	North corner - inside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-17C	Core	North corner - inside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-18C	Core	North corner - outside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-19C	Core	North corner - outside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-20C	Core	North corner - outside shipping channel	For bulk chemistry and/or geotechnical analyses
	CH00-MU4-W	Water	Area 4	For wet chemistry & elutriate preparation for chemical and biological analyses.
	CH00-MU4-EL	Elutriate	See remarks	Mixture of site water and composite of 6 sediment core sample from MU4, prepared in laboratory, for wet chemistry analyses.
	CH00-MU4-B	Biological	See remarks	Composite of 6 sediment core samples from MU4, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.
Ref. Site 1	CH00-1G	Grab	Near shore Calumet Park Beach	For bulk chemistry
	CH00-2G	Grab	Near shore Calumet Park Beach	For bulk chemistry
	CH00-3G	Grab	Near shore Calumet Park Beach	For bulk chemistry
	CH00-RS1-W	Water	Near shore Calumet Park Beach	For wet chemistry & liquid-phase biological testing.
	CH00-RS1-B	Biological	See remarks	Composite of 3 sediment grab samples from RS1, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.
Ref. Site 2	CH00-4G	Grab	Near shore Whihala Beach	For bulk chemistry
	CH00-5G	Grab	Near shore Whihala Beach	For bulk chemistry
	CH00-6G	Grab	Near shore Whihala Beach	For bulk chemistry
	CH00-RS2-W	Water	Near shore Whihala Beach	For wet chemistry & liquid-phase biological testing.
	CH00-RS2-B	Biological	See remarks	Composite of 3 sediment core samples from RS2, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.
Ref. Site 3	CH00-7G	Grab	Deep lake ref. site	For bulk chemistry
	CH00-8G	Grab	Deep lake ref. site	For bulk chemistry
	CH00-9G	Grab	Deep lake ref. site	For bulk chemistry
	CH00-RS3-W	Water	Deep lake ref. site	For wet chemistry & liquid-phase biological testing.
	CH00-RS3-B	Biological	See remarks	Composite of 3 sediment core samples from RS3, and site water, prepared in laboratory, for solid and liquid phase biological effects testing.

- *Management Unit 1* was adjacent to the Chicago Area CDF and shoaling has occurred to the north as well as to the south of the harbor entrance channel. The quantity to be dredged in MU 1 was estimated to be 106,000 cubic yards with one foot of over-depth allowance.

- *Management Unit 2* was identified as the northern corner due to its relative location within the project site. It was situated approximately 2,000 feet northeast of the CDF. The quantity to be dredged was estimated at 141,000 cubic yards with one foot over-depth.

- *Management Unit 3* was identified as the northeast corner, and was situated closer to the steel breakwater, which runs in a northwest- southeast direction. The quantity to be dredged in MU 3 was estimated at 220,000 cubic yards with one foot over-depth.

- *Management Unit 4* was identified as the southeast corner due to its relative position within the project site. The quantity to be dredged from MU 4 was estimated at 334,000 cubic yards with one foot over-depth. Historical records indicated that this area was never dredged to its maximum allowable project depth in the past.

Appendix C: Table 3 – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU1					MU2			
				CH00-1C	CH00-2C	CH00-3C	CH00-4C	CH00-DUP2	CH00-5C	CH00-6C	CH00-7C	CH00-8C
Date Sampled				9/21/2000	9/21/2000	9/21/2000	9/21/2000	9/21/2000	9/20/2000	9/20/2000	9/21/2000	9/21/2000
Sample Type				core	core	core	core	Core	core	core	core	core
								(4C)				
Arsenic	1	1	mg/kg	12	8.1	8.7	7.6	7.9	7.4	8.9	7.2	6.2
Barium	5	5	mg/kg	47	33	37	27	29	24	32	26	22
Cadmium	1	1	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	1	1	mg/kg	28	28	24	25	26	20	25	23	18
Copper	2.5	2.5	mg/kg	43	38	38	32	31	24	28	29	26
Lead	5	5	mg/kg	120	86	97	83	86	68	110	70	52
Mercury	0.02	0.02	mg/kg	0.072	0.098	0.10	0.10	0.09	0.079	0.10	0.12	0.074
Nickel	5	5	mg/kg	18	17	16	16	16	14	16	16	13
Phosphorous	5	n/s	mg/kg	350	300	300	290	300	300	320	270	240
Selenium	0.3	0.3	mg/kg	<0.3	0.35	0.45	0.49	0.58	0.46	0.49	0.52	0.45
Silver	1	1	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	2	2	mg/kg	240	200	200	180	180	170	250	150	110
Ammonia Nitrogen	1	0.5	mg/kg	76	96	75	75	62	83	59	78	43
TKN	20	1	mg/kg	330	480	430	450	480	400	450	520	350
Total Cyanide	0.2	0.005	mg/kg	0.22	0.40	0.40	0.24	<0.2	<0.2	<0.2	<0.2	<0.2
TVS (%)	1%	n/a	%	3.39	3.47	3.92	3.86	3.9	2.75	3.82	3.87	2.74
Total Solids (%)	1%	10%	%	57.9	61.1	55.8	53.6	54.7	58.8	48.4	53.4	59.7
COD	200	10	mg/kg	77000	65000	61000	54000	51000	47000	57000	48000	41000
Total Organic Carbon	75	n/s	mg/kg	11000	12000	12000	13000	12000	9300	12000	13000	9600
Fines (%)[2]	n/a	n/a	%	62.5, 6.7	57.0, 8.3	60.1, 9.4	64.0, 11.0	63.0, 11.3	55.3, 9.4	73.2, 10.8	69.1, 14.5	57.0, 8.4
Moisture Content	n/a	n/a	%	82.7	65.3	74.6	80.1	78.4	68.9	102.2	81.1	66.5
Strength	n/a	n/a	TSF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Atterburg Limits	n/a	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes: See last Table 3.

Appendix C: Table 3 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU3						
				CH00-9C	CH00-10C	CH00-11C	CH00-12C	CH00-DUP3	CH00-13C	CH00-14C
Date Sampled				9/21/2000	9/26/2000	9/26/2000	9/26/2000	9/26/2000	9/26/2000	9/26/2000
Sample Type				core	core	core	core	core	core	core
								(12C)		
Arsenic	1	1	mg/kg	6.3	7.8	5	4.7	4.6	4.7	5.7
Barium	5	5	mg/kg	21	24	17	16	16	17	17
Cadmium	1	1	mg/kg	<1	1.0	<1	<1	<1	<1	<1
Chromium	1	1	mg/kg	22	31	22	15	17	15	17
Copper	2.5	2.5	mg/kg	33	28	22	18	17	17	20
Lead	5	5	mg/kg	63	77	40	34	36	37	33
Mercury	0.02	0.02	mg/kg	<0.02	0.11	0.067	0.056	0.067	0.062	0.052
Nickel	5	5	mg/kg	15	16	14	12	13	13	14
Phosphorous	5	n/s	mg/kg	250	270	230	200	220	210.0	220
Selenium	0.3	0.3	mg/kg	0.51	0.65	0.54	0.42	0.44	0.52	0.59
Silver	1	1	mg/kg	<1	<1	<1	<1	<1	<1	<1
Zinc	2	2	mg/kg	130	180	100,2.0	78,87	91,86	80,85	78,80
Ammonia Nitrogen	1	0.5	mg/kg	39	81	51	37	42	22	22
TKN	20	1	mg/kg	400	480	390	320	340	310	360
Total Cyanide	0.2	0.005	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TVS (%)	1%	n/a	%	2.92	3.83	3.47	2.27	2.63	2.33	1.66
Total Solids (%)	1%	10%	%	60.9	54.9	57.2	60.4	60.6	62.5	58.3
COD	200	10	mg/kg	41000	43000	39000	31000	32000	32000	35000
Total Organic Carbon	75	n/s	mg/kg	9600	9800	10000	8300	8400	7800	7900
Fines (%) [2]	n/a	n/a	%	54.1, 10.2	57.8, 12.0	53.3, 10.8	47.5, 9.1	49.5, 10.2	39.5, 9.2	43.8, 10.3
Moisture Content	n/a	n/a	%	61.5	71.6	64.6	53.7	57.5	52.8	54.1
Strength	n/a	n/a	TSF	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Atterburg Limits	n/a	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes: See last Table 3.

Appendix C: Table 3 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU4						
				CH00-15C	CH00-16C	CH00-16C-clay	CH00-17C	CH00-18C	CH00-19C	CH00-20C
Date Sampled				9/20/2000	9/20/2000	9/20/2000	9/26/2000	9/26/2000	9/20/2000	9/19/2000
Sample Type				core	core	clay core	core	core	core	core
Arsenic	1	1	mg/kg	4.8	6.6	8.7	5.2	4.8	4.5	4.5
Barium	5	5	mg/kg	18	24	32	17	17	17	17
Cadmium	1	1	mg/kg	<1	<1	<1	<1	<1	<1	<1
Chromium	1	1	mg/kg	19	28	17	21	20	19	17
Copper	2.5	2.5	mg/kg	21	32	28	20	21	24	21
Lead	5	5	mg/kg	44	70	16	50	48	39	42
Mercury	0.02	0.02	mg/kg	0.059	0.086	0.023	0.069	0.054	0.053	0.053
Nickel	5	5	mg/kg	14	17	33	14	14	14	14
Phosphorous	5	n/s	mg/kg	240	270	220	240	240	250	220
Selenium	0.3	0.3	mg/kg	0.52	0.59	0.57	0.5	0.46	0.53	0.51
Silver	1	1	mg/kg	<1	<1	<1	<1	<1	<1	<1
Zinc	2	2	mg/kg	110	150	58	130,120	110,120	110	98
Ammonia Nitrogen	1	0.5	mg/kg	34	61	15	39	28	42	30
TKN	20	1	mg/kg	420	430	460	320	270	400	450
Total Cyanide	0.2	0.005	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TVS (%)	1%	n/a	%	3.28	3.42	2.68	2.53	2.45	3.07	3.26
Total Solids (%)	1%	10%	%	58.6	58.8	86.4	64.5	67.3	57	59.5
COD	200	10	mg/kg	37000	45000	62000	40000	37000	38000	36000
Total Organic Carbon	75	n/s	mg/kg	9800	11000	16000	9100	8800	9600	9700
Fines (%) [2]	n/a	n/a	%	52.2, 9.7	52.7, 10.5	39.8, 22.8	42.9, 6.6	36.1, 6.6	64.0, 10.9	65.5, 10.0
Moisture Content	n/a	n/a	%	66.5	58	13.9	46	41.7	77.4	63.3
Strength	n/a	n/a	TSF	n/a	n/a	3.5	n/a	n/a	n/a	n/a
Atterburg Limits	n/a	n/a		n/a	n/a	15,25,10	n/a	n/a	n/a	n/a

Notes: See last Table 3.

Appendix C: Table 3 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	Reference Site 1			
				CH00-1G	CH00-2G	CH00-3G	CH00-DUP1
Date Sampled				9/18/2000	9/18/2000	9/18/2000	9/18/2000
Sample Type				grab	grab	grab	grab
							(3G)
Arsenic	1	1	mg/kg	3.8	2.9	3.6	3.7
Barium	5	5	mg/kg	10	8.3	13	16
Cadmium	1	1	mg/kg	<1	<1	<1	<1
Chromium	1	1	mg/kg	5.1	6.1	4.9	5.6
Copper	2.5	2.5	mg/kg	27	20	17	24
Lead	5	5	mg/kg	14	13	16	20
Mercury	0.02	0.02	mg/kg	<0.02	0.041	0.035	<0.02
Nickel	5	5	mg/kg	7.9	8.5	8.7	8.7
Phosphorous	5	n/s	mg/kg	160	200	140	150
Selenium	0.3	0.3	mg/kg	0.32	0.35	0.34	0.34
Silver	1	1	mg/kg	<1	<1	<1	<1
Zinc	2	2	mg/kg	100	93	96	94
Ammonia Nitrogen	1	0.5	mg/kg	2.5	1.4	2.0	1.6
TKN	20	1	mg/kg	80	67	100	96
Total Cyanide	0.2	0.005	mg/kg	<0.2	<0.2	<0.2	0.26
TVS (%)	1%	n/a	%	1.23	0.8	1.32	1.33
Total Solids (%)	1%	10%	%	74.9	78.1	74.8	75.4
COD	200	10	mg/kg	17000	8100	23000	25000
Total Organic Carbon	75	n/s	mg/kg	2700	89	1600	3500
Fines (%) [2]	n/a	n/a	%	0.7	0.8	0.4	0.4
Moisture Content	n/a	n/a	%	32.6	31.7	33.7	34.6
Strength	n/a	n/a	TSF	n/a	n/a	n/a	n/a
Atterburg Limits	n/a	n/a		n/a	n/a	n/a	n/a

Notes: See last Table 3.

Appendix C: Table 3 (continued – last Table 3) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	Reference Site 2			Reference Site 3		
				CH00-4G	CH00-5G	CH00-6G	CH00-7G	CH00-8G	CH00-9G
Date Sampled				9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
Sample Type				grab	grab	grab	grab	grab	grab
Arsenic	1	1	mg/kg	1.8	2.2	1.8	6.1	8.8	6.2
Barium	5	5	mg/kg	5.1	10	<5	9	11	14
Cadmium	1	1	mg/kg	<1	<1	<1	<1	<1	<1
Chromium	1	1	mg/kg	2.5	4.9	3.1	4.1	6.6	8.7
Copper	2.5	2.5	mg/kg	7.5	11	17	5.5	14	17
Lead	5	5	mg/kg	5.2	10	5.1	9.7	13	12
Mercury	0.02	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	0.022
Nickel	5	5	mg/kg	<5	7.2	<5	<5	8	11
Phosphorous	5	n/s	mg/kg	110	130	120	110	170	190
Selenium	0.3	0.3	mg/kg	<0.3	<0.3	<0.3	<0.3	0.032	0.35
Silver	1	1	mg/kg	<1	<1	<1	<1	<1	<1
Zinc	2	2	mg/kg	32	36	33	32	51	37
Ammonia Nitrogen	1	0.5	mg/kg	ND	ND	ND	ND	2.7	14
TKN	20	1	mg/kg	26	48	34	90	150	330
Total Cyanide	0.2	0.005	mg/kg	<0.2	<0.2	<0.2	<0.2	0.36	<0.2
TVS (%)	1%	n/a	%	0.6	0.56	0.54	0.8	1.3	1.7
Total Solids (%)	1%	10%	%	79.1	78.4	76.6	79	81.9	68.3
COD	200	10	mg/kg	3200	6800	6400	9400	17000	21000
Total Organic Carbon	75	n/s	mg/kg	290	990	1200	1400	3200	5700
Fines (%) [2]	n/a	n/a	%	0	0.1	0.6	0.7	4.1	16.4, 3.7
Moisture Content	n/a	n/a	%	27.3	29	28.7	26.5	18	32
Strength	n/a	n/a	TSF	n/a	n/a	n/a	n/a	n/a	n/a
Atterburg Limits	n/a	n/a		n/a	n/a	n/a	n/a	n/a	n/a

Notes:
1 - All units are mg/kg, except where indicated
2 - % Fines are % silt, % clay
n/a: not applicable
ND: not detectable
n/s: not specified

Appendix C: Table 4 – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU1				
				CH00-1C	CH00-2C	CH00-3C	CH00-4C	CH00-DUP2
Date Sampled				9/21/2000	9/21/2000	9/21/2000	9/21/2000	9/21/2000
Sample Type				core	core	core	core	core
								(4C)
Semivolatiles								
Phenol	0.33	0.66	mg/kg	0.95	ND	ND	ND	ND
3/4-Methylphenol	0.33	0.66	mg/kg	0.54	ND	ND	ND	ND
Anthracene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND
Benzo(a)anthrecene	0.42	0.66	mg/kg	0.40	0.35	0.54	ND	ND
Benzo(a)pyrene	0.42	0.66	mg/kg	ND	ND	0.44	ND	ND
Benzo(b)fluoranthene	0.42	0.66	mg/kg	0.43	0.35	0.66	ND	ND
Benzo(k)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND
Benzo(g,h,I)perylene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND
Chrysene	0.42	0.66	mg/kg	0.52	0.39	0.66	0.36	0.33
Fluoranthene	0.42	0.66	mg/kg	0.73	0.62	0.95	0.58	0.49
Phenanthrene	0.42	0.66	mg/kg	0.70	0.54	0.76	0.45	0.44
Pyrene	0.42	0.66	mg/kg	0.73	0.61	1.0	0.67	0.58

Remaining semivolatiles were undetected

Appendix C: Table 4 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU2			
				CH00-5C	CH00-6C	CH00-7C	CH00-8C
Date Sampled				9/20/2000	9/20/2000	9/21/2000	9/21/2000
Sample Type				core	core	core	core
Semivolatiles							
Phenol	0.33	0.66	mg/kg	ND	ND	ND	ND
3/4-Methylphenol	0.33	0.66	mg/kg	ND	ND	ND	ND
Anthracene	0.42	0.66	mg/kg	ND	ND	ND	ND
Benzo(a)anthrecene	0.42	0.66	mg/kg	0.37	0.33	0.44	ND
Benzo(a)pyrene	0.42	0.66	mg/kg	ND	ND	0.38	ND
Benzo(b)fluoranthene	0.42	0.66	mg/kg	0.37	0.38	0.58	ND
Benzo(k)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND
Benzo(g,h,I)perylene	0.42	0.66	mg/kg	ND	ND	ND	ND
Chrysene	0.42	0.66	mg/kg	0.41	0.38	0.51	ND
Fluoranthene	0.42	0.66	mg/kg	0.69	0.55	0.77	0.53
Phenanthrene	0.42	0.66	mg/kg	0.54	0.42	0.61	0.42
Pyrene	0.42	0.66	mg/kg	0.69	0.60	0.84	0.56

Remaining semivolatiles were undetected

Appendix C: Table 4 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU3						
				CH00-9C	CH00-10C	CH00-11C	CH00-12C	CH00-DUP3	CH00-13C	CH00-14C
Date Sampled				9/21/2000	9/26/2000	9/26/2000	9/26/2000	9/26/2000	9/26/2000	9/26/2000
Sample Type				core	core	core	core	core	core	core
								(12C)		
Semivolatiles										
Phenol	0.33	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
3/4-Methylphenol	0.33	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Anthracene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthrecene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.42	0.66	mg/kg	0.37	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,I)perylene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.42	0.66	mg/kg	0.37	ND	ND	ND	ND	ND	ND
Fluoranthene	0.42	0.66	mg/kg	0.61	0.47	0.44	0.36	0.35	0.50	0.41
Phenanthrene	0.42	0.66	mg/kg	0.49	0.36	0.34	ND	ND	0.41	ND
Pyrene	0.42	0.66	mg/kg	0.65	0.53	0.44	0.38	0.35	0.52	0.43

Remaining semivolatiles were undetected

Appendix C: Table 4 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	MU4						
				CH00-15C	CH00-16C	CH00-16C-clay	CH00-17C	CH00-18C	CH00-19C	CH00-20C
Date Sampled				9/20/2000	9/20/2000	9/20/2000	9/26/2000	9/26/2000	9/20/2000	9/19/2000
Sample Type				core	core	clay core	core	core	core	core
Semivolatiles										
Phenol	0.33	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
3/4-Methylphenol	0.33	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Anthracene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthrecene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	0.35	ND	ND	ND
Benzo(k)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,I)perylene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.42	0.66	mg/kg	ND	ND	ND	0.37	ND	ND	ND
Fluoranthene	0.42	0.66	mg/kg	0.40	0.47	ND	0.58	0.52	ND	0.44
Phenanthrene	0.42	0.66	mg/kg	ND	0.36	ND	0.46	0.45	ND	0.37
Pyrene	0.42	0.66	mg/kg	0.42	0.53	ND	0.62	0.61	ND	0.46

Remaining semivolatiles were undetected

Appendix C: Table 4 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	Reference Site 1				Reference Site 2		
				CH00-1G	CH00-2G	CH00-3G	CH00-DUP1	CH00-4G	CH00-5G	CH00-6G
Date Sampled				9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
Sample Type				grab	grab	grab	grab	grab	grab	grab
							(3G)			
Semivolatiles										
Phenol	0.33	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
3/4-Methylphenol	0.33	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Anthracene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthrecene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,I)perylene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.42	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND

Remaining semivolatiles were undetected

Appendix C: Table 4 (continued) – 2000 Calumet Harbor Sediment Sampling Data

	Actual Reporting Limit	Required Reporting Limit	Units[1]	Reference Site 3		
				CH00-7G	CH00-8G	CH00-9G
Date Sampled				9/18/2000	9/18/2000	9/18/2000
Sample Type				grab	grab	grab
Semivolatiles						
Phenol	0.33	0.66	mg/kg	ND	ND	ND
3/4-Methylphenol	0.33	0.66	mg/kg	ND	ND	ND
Anthracene	0.42	0.66	mg/kg	ND	ND	ND
Benzo(a)anthrecene	0.42	0.66	mg/kg	ND	ND	ND
Benzo(a)pyrene	0.42	0.66	mg/kg	ND	ND	ND
Benzo(b)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND
Benzo(k)fluoranthene	0.42	0.66	mg/kg	ND	ND	ND
Benzo(g,h,I)perylene	0.42	0.66	mg/kg	ND	ND	ND
Chrysene	0.42	0.66	mg/kg	ND	ND	ND
Fluoranthene	0.42	0.66	mg/kg	ND	0.39	ND
Phenanthrene	0.42	0.66	mg/kg	ND	0.33	ND
Pyrene	0.42	0.66	mg/kg	ND	ND	ND

Remaining semivolatiles were undetected

Calumet Harbor 2000 Sediment Bulk Chemistry Discussion:

Inorganic Parameters

Table 5 of Appendix C compares the MU's in Calumet Harbor to reference sites, and it can be observed that a number of the metal concentrations were elevated. For instance, arsenic in MU 1&2 relative to RS2; chromium in all the MU's relative to all the reference sites; copper in MU1 relative to RS 2&3; lead in all the MU's relative to all the reference sites; and zinc in all the MU's relative to RS 2&3. Ammonia nitrogen and percent fines are two additional indicator parameters of importance where the sediment bulk chemistry concentration at all the MU's was substantially higher than at the reference sites.

Organics

PCBs and pesticides were not detected in any of the samples taken at the MU's or the reference sites. There were some low (< 1ppm) concentrations of a few semivolatile compounds, more so in MU's 1&2 than in MU's 3&4, although RS3 did show low levels of fluoranthene and phenanthrene. For some volatile parameters, a low concentration was originally detected; however these analyses were outside laboratory acceptance criteria. Upon re-analysis they were shown to be non-detectable.

The results show a number of metal and semivolatile organic compounds in the Calumet Harbor sediment management units have elevated concentrations relative to the sediment at the reference sites. Furthermore, the ammonia concentrations and percent fines in the management units were significantly greater than at the reference sites. The data indicate that the harbor sediments are primarily fine-grained, silty material (> 50% fines) compared with the reference sites, which were predominantly sandy material (< 3% fines).

Appendix D: 2000 Calumet Harbor – Elutriate and Bioassay Testing

Calumet Harbor 2000 Sediment Sampling – Sediment Elutriate Test Results:
The standard elutriate test is described in the GLTEM (USEPA and USACE 1998). Basically, the sediment is agitated on a mechanical mixer for a half hour, and then the mixture is allowed to settle for an hour. The supernatant is decanted, placed into a centrifuge, and filtered. Four (4) elutriates were analyzed, each representing the different Management Units. A description of the management units is provided in Appendix C. Appendix D, Tables 1 and 2 show elutriate test and water quality results and maximum and mean (average) elutriate test results in comparison to the results of a water sample from Calumet Harbor. The Illinois water quality standards for Lake Michigan and water quality standards for effluent are shown in Appendix D, Table 2 for comparison.

Lake Michigan is a precious resource and the source of drinking water for millions of people. As a result, WQS are relatively low, and there are bioaccumulative chemicals of concern (BCCs) with acute aquatic life (AS), chronic aquatic life (CS), human health (HHS), and wildlife (WS) standards. Mercury and PCBs are both considered to be BCCs; the mercury WS is presently 1.3 nanograms per liter (ng/L) and the PCB HHS is 26 picograms per liter (pg/L). The laboratory reporting limit for mercury in the elutriate test was 0.2 μg/L and PCBs were not analyzed, so further evaluation may be necessary. Given that the standards for Lake Michigan are extremely low, they may not be achievable. The WQS, as indicated in Appendix D, Table 2, are for acute aquatic life (AS), but more stringent standards, such as for CS, HHS, WS might be considered to be applicable. It should be noted that USACE guidance allows the consideration of a mixing zone, but, due to the stringent standards and potential for the ambient water quality to exceed the WQS for parameters of concern, a mixing zone might not be allowable. The acute standards might represent a reasonable compromise between the more stringent standards and the use of a mixing zone.

Appendix D, Table 2 shows that a number of parameters had maximum elutriate concentrations that exceeded WQS for the open waters of Lake Michigan or for the WQS for the discharge of effluent from operations. These parameters included copper, lead, zinc, ammonia nitrogen, phosphorus, suspended solids, and dissolved solids.

The level of phosphorus in the water sample from Calumet Harbor was 0.026 mg/L, and the corresponding WQS for the open waters of Lake Michigan is 0.007 mg/L. In accordance with IAC Title 35, Part 302, Section 302.102 (b)(9), no mixing is allowed where the water quality standard for the constituent in question is already violated in the receiving water. The level of ammonia nitrogen in the water sample might have also exceeded the water quality standard. It can be observed from Appendix D, Table 2 that the laboratory reporting limits for both phosphorus and ammonia nitrogen exceeded the Lake Michigan WQS. For future testing, it will be important to ensure the laboratory can achieve reporting limits that are below or at least equivalent to the water quality standards.

The elutriate test data suggest that the dredging operations at Calumet Harbor would result in elevated levels of ammonia-nitrogen, which may cause water quality impacts at the placement site. The ammonia levels for all four (4) management units significantly exceeded the water quality standards for the open waters of Lake Michigan. The sediment chemistry, elutriate, and

physical data suggest that the Calumet Harbor sediments, particularly MU1 and MU2, would likely be inappropriate for open-lake placement.

Since the Tier 2 data did not quantify the interactive toxicological effects of sediment, no conclusions could be drawn regarding the biological effects of the dredged sediments. Therefore, a Tier 3 evaluation of the sediment was recommended in order to provide a more accurate understanding of the interactive effects of the sediment contaminants, especially ammonia nitrogen. Moreover, the Tier 3 evaluation was to provide a point of comparison between sediment and elutriate chemistry and interactive toxicological effects of sediment contaminants.

Appendix D: Table 1 – 2000 Calumet Harbor Elutriate and Water Quality Test Results

	Reporting Limit	Units	CH00-MU1-EL elutriate 9/21/2000 [1]	CH00-MU2-EL elutriate 9/21/2000	CH00-MU3-EL elutriate 9/26/2000	CH00-MU4-EL elutriate 9/20/2000	CH00-MU-W water 9/26/2000	CH00-RS1-W water 9/18/2000	CH00-RS2-W water 9/18/2000	CH00-RS3-W water 9/18/2000
Metals										
Arsenic	5	µg/L	8.8	8.2	5.8	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Barium	50	µg/L	92	98	59	62	< 50	< 50	< 50	< 50
Cadium	5	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	10	µg/L	32	26	< 10	< 10	< 10	< 10	< 10	< 10
Copper	25	µg/L	32	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Lead	10	µg/L	130	62	11	23	< 10	< 10	< 10	< 10
Mercury	0.2	µg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Nickel	10	µg/L	12	10	< 10	< 10	< 10	< 10	< 10	< 10
Selenium	5	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.0	< 5.0	< 5.0
Silver	10	µg/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Zinc	20	µg/L	220	100	< 20	41	< 20	< 20	< 20	< 20
Inorganics, Misc.										
Total Dissolved Solids	20	mg/L	230	260	150	98	140	190	190	210
Total Suspended Solids	20	mg/L	100	92	26	70	< 20	< 20	< 20	< 20
Ammonia Nitrogen	0.05	mg/L	7.9	6.7	3.0	3.7	0.074	< 0.05	< 0.05	< 0.05
TKN	0.5	mg/L	11	9.2	4.5	5.5	< 0.5	< 0.5	< 0.5	< 0.5
Hardness (as $CaCO_3$)	2	mg/L	120	140	130	130	140	140	130	140
Total Phosphorus	0.02	mg/L	0.18	0.11	0.11	0.054	0.026	0.028	0.023	0.07
pH (pH units)	0.05	S.U.	8.85	7.85	7.72	7.57	8.33	8.51	8.36	8.28
Total Cyanide	0.005	mg/L	0.0067	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

Appendix D: Table 2 – 2000 Calumet Harbor Comparison of Elutriate Results to WQS

Sediment Parameters	Units		2000 Elutriate Results[1, 2]	2000 Water Results	Lake Michigan WQS (Section) [3,4]	WQS for Effluent (Section)[5]
Arsenic	µg/L	Max	8.8	5*	50	250
		Mean	6.95		Open Waters (302.504(c))	(304.124)
Barium	µg/L	Max	98	50*	1000	2000
		Mean	77.75		Open Waters (302.504(c))	(304.124)
Cadmium	µg/L	Max	5*	5*	5.7	150
		Mean	5*		(AS) (302.504(a))	(304.124)
Total Chromium	µg/L	Max	32	10*	32.9	1000
		Mean	19.5		(AS) (302.504(a))	(304.124)
Copper	µg/L	Max	32	25*	17.2	500
		Mean	26.75		(AS) (302.504(a))	(304.124)
Lead	µg/L	Max	130	10*	50	200
		Mean	56.5		Open Waters (302.504(c))	(304.124)
Mercury	µg/L	Max	0.2*	0.2*	1.7	0.5
		Mean	0.2*		(AS) (302.504(e))	(304.126)
Nickel	µg/L	Max	12	10*	585	1000
		Mean	10.5		(AS) (302.504(a))	(304.124)
Selenium	µg/L	Max	5*	5*	10	NL
		Mean	5*		Open Waters (302.504(c))	
Silver	µg/L	Max	10*	10*	5	100
		Mean	10*		(302.208(g))	(304.124)
Zinc	µg/L	Max	220	20*	146	1000
		Mean	95.25		(AS) (302.504(a))	(304.124)
Ammonia Nitrogen	mg/L	Max	7.9	0.2*	0.02	2.5
		Mean	5.33		Open Waters (302.535)	(304.122)
TKN	mg/L	Max	11	0.5*	NL	NL
		Mean	7.55			
Phosphorus	mg/L	Max	0.18	0.026	0.007	1.0
		Mean	0.11		Open Waters (302.504(c))	(304.123)
Cyanide	mg/L	Max	0.0067	0.005*	0.022	0.1
		Mean	0.0054		(AS) (302.504(a))	(304.124)
Suspended Solids	mg/L	Max	100	10*	NL	15
		Mean	72			(304.124)
Dissolved Solids	mg/L	Max	260	140	180	NL
		Mean	184.5		Open Waters (302.504(c))	NL
Number of Elutriate Samples			4	1		

Notes for Appendix D: Table 2:

[1] Shaded cells indicate the maximum concentration exceeded either the effluent or Lake Michigan WQS.

[2] For the mean, the reporting limit was used for concentrations less than the reporting limit, and an asterisk * indicates non-detection and/or the concentration was equal to the quantitation limit.

[3] The WQS for Lake Michigan are from Illinois Administrative Code (IAC) Title 35: Part 302 - Subpart E: AS = Acute Aquatic Life Standard, and for the calculations for Section 302.504(a), the hardness was estimated to be 130 mg/L.

[4] NL = Not Listed

[5] The Effluent WQS are from IAC Title 35: Part 304 - Effluent Standards.

Calumet Harbor 2000 Sediment Sampling – Bioassay Test Results:
The chemical and elutriate data alone could not be used to determine the interactive toxicological effects of the sediment. As a result biological testing was deemed necessary to provide a better, more accurate understanding of the interactive effects of the sediment contaminants, and provide a point of comparison between sediment and elutriate chemistry and interactive toxicological effects of sediment contaminants.

Test Methodology:
Two solid phase assays were conducted using the amphipod *Hyalella azteca* for 10 day survival, and the midge *Chironomus tentans*, 10 day survival and growth. Both species have been widely used for sediment assessments, and are recommended for these assessments in the GLTEM (USEPA and USACE 1998). In addition, an elutriate bioassay was conducted to evaluate the dissolved and suspended particulate phase of the sediment. Elutriates were tested for the presence of acute toxicity to the cladoceran *Daphnia magna*. All bioassay testing was performed by AScI Corporation, from Duluth Minnesota, for the U.S. Army Corps of Engineers, Chicago District. The details of the testing are provided in two (2) laboratory reports prepared by AScI Corporation for LES (2000a and 2000b).

In the solid phase sediment tests, the control treatment is used to verify that the physical conditions of the test were satisfactory. Survival required in the control group to qualify the test as valid is 80 percent. Survival, weight or neonate production is then compared between treatments to determine if the sediments from the dredging areas can be placed in the lake without detriment to the ambient conditions. To be determined as unacceptable for placement at a proposed location, organism survival in the sediment to be dredged must be statistically different (significant at $p = 0.05$) and at least 10 percent lower than survival of the test organism in sediment from the reference location. Survival in the control is not compared to survival in the test treatments.

Solid phase tests are performed on both the management unit sediments and the reference site sediments. Elutriate phase tests are performed only on the management units. Samples for the biological testing were collected at the same time as the samples for bulk chemistry, water, and elutriate analysis.

Discussion of Bioassay Test Results:
The bioassay data was interpreted according to protocols outlined in the Inland Testing Manual (USEPA and USACE 1998a) and GLTEM (USEPA and USACE 1998).

Table 3 of Appendix D summarizes the *Hyalella azteca* survival results for the 10-day exposures. The laboratory control sediment supported acceptable 10-day mean survival of 94 ± 13 %. The reference site sediments RS-1, RS-2, and RS-3 had survival of rates of 96 ± 9 %, 82 ± 8 %, and 84 ± 15 %, respectively. The mean percentage survival rates for *Hyalella* exposed to test sediments MU-1, MU-2, MU-3, and MU-4 were 2 ± 5 %, 26 ± 31 %, 62 ± 31 %, 52 ± 11 %, respectively.

Appendix D: Table 3 – Percent Survival of Organisms in Solid Phase Sediment Bioassays

Site ID	***H. azteca* Mean % Survival**	***C. tentans* Mean % Survival**	***C. tentans* mean weight (mg)**
Control	94 ± 13	82 ± 15	0.84 ± 0.20
Management Unit -- MU1	2 ± 5	42 ± 19	0.25 ± 0.16
Management Unit -- MU2	26 ± 31	72 ± 13	0.59 ± 0.19
Management Unit -- MU3	62 ± 31	82 ± 25	0.89 ± 0.26
Management Unit -- MU4	52 ±11	74 ± 9	0.82 ± 0.08
Reference site -- RS1	96 ± 9	90 ± 7	1.48 ± 0.24
Reference site -- RS2	82 ± 8	84 ± 9	1.07 ± 0.13
Reference site -- RS3	84 ± 15	86 ± 11	1.01 ± 0.19

AScI Corporation performed statistical analyses to interpret the results of the biological testing.

The *Hyalella azteca* survival data for each reference site was compared independently to the four (4) management units, and this statistical analysis revealed the following:

Reference Site 1 – All the management units caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-1.

Reference Site 2 – All the management units except MU3 caused significant (ρ=0.05) organism lethality compared to the reference sediment, RS2.

Reference Site 3 – All the management units except MU3 caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS3.

Table 3 of Appendix D also shows *Chironomus tentans* survival and growth data. The laboratory control sediment supported acceptable mean percentage survival of 82 ± 15 %. The mean percentage survival of organisms exposed to the reference sediments RS-1, RS-2, and RS-3 were 90 ± 7 %, 84 ± 9 %, and 86 ± 11 %, respectively. *Chironomus tentans* survival data for MU-1, MU-2, MU-3, and MU-4 were 42 ± 19 %, 72 ± 13 %, 82 ± 25 %, and 74 ± 9 %, respectively.

Chironomus tentans growth final mean dry weight for organisms exposed to the laboratory control sediment was an acceptable 0.84 ± 0.20 mg. Organisms exposed to the reference sediments RS-1, RS-2, and RS-3 had final mean dry weights of 1.48 ± 0.24 mg, 1.07 ± 0.13 mg, and 1.01 ± 0.19 mg, respectively. Mean dry weights of *Chironomus tentans* exposed to the test sediments MU-1, MU-2, MU-3, and MU-4 were 0.25 ± 0.16 mg, 0.59 ± 0.19 mg, 0.89 ± 0.26 mg, and 0.82 ± 0.08 mg, respectively.

The *Chironomus tentans* survival and growth data for each reference site was compared independently to the four (4) management units, and this statistical analysis revealed the following:

Reference Site 1 – Results of the analysis showed that MU-1 caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-1. None of the other management units caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-1. With respect to growth, results of analysis showed that all four management units caused significant (ρ=0.05) reduction when compared to organism growth for reference sediment, RS-1.

Reference Site 2 – Results of the analysis showed that MU-1 caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-2. None of the other management units caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-2. With respect to growth, results of analysis showed that MU-1 and MU-2 caused significant (ρ=0.05) *Chironomus tentans* growth reduction when compared to organism growth for the reference sediment, RS-2. MU-3 and MU-4 did not cause significant (ρ=0.05) *Chironomus tentans* growth reduction when compared to organism growth for the reference sediment, RS-2.

Reference Site 3 – Results of the analysis showed that MU-1 caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-3. None of the other management units caused significant (ρ=0.05) organism lethality when compared to the reference sediment, RS-3. With respect to growth, results of analysis showed that MU-1 and MU-2 caused significant (ρ=0.05) *Chironomus tentans* growth reduction when compared to organism growth for the reference sediment, RS-3. MU-3 and MU-4 did not cause significant (ρ=0.05) *Chironomus tentans* growth reduction when compared to organism growth for the reference sediment, RS-3.

Elutriate Phase Bioassay Results

Elutriates prepared from Calumet Harbor sediment samples were tested for the presence of acute toxicity to *Daphnia magna*. Table 4 of Appendix D shows the elutriate phase toxicity test results for *Daphnia magna*. The LC_{50} value indicates the percentage of a given elutriate, or Lethal Concentration, where 50% of the test organisms die upon exposure for a specified time period. The elutriate LC_{50} values were determined using the Trimmed Spearman-Karber Method. The 48-hour LC_{50} values for MU-1, MU-2, MU-3, and MU-4 were 32%, 47%, 40%, and > 100%, respectively. The > 100% value simply means that exposure of the *Daphnia magna* to an undiluted elutriate sample was not sufficient to cause 50% die-off of test organisms after 48 hours.

All Site Water Controls and Moderately Hard Reconstituted Water (MHRW) reference control supported complete (100%) survival. The reference control results indicate the elutriate tests produced valid results.

Appendix D: Table 4. Elutriate Toxicity Tests Results for Daphnia magna

Site ID	*Daphnia magna* 48-Hour LC_{50} (95% Confidence Interval)
Management Unit 1	32 (23 – 45)
Management Unit 2	47 (32 – 68)
Management Unit 3	40 (24 – 70)
Management Unit 4	>100 (Not Calculated)

Control Data not shown. All MHRW controls were 100 %

Management Unit MU-1 – For the elutriate exposures, survival was complete for the first 24 hours of the test. At test termination (48 hours), the 12.5 %, 25 %, 50 %, and 100 % elutriate concentrations supported percentage survival of 76 %, 64 %, 32 %, and 8 %, respectively.

Management Unit MU-2 – The undiluted (100%) elutriate produced a survival of 16 % after 48 hours of exposure (test termination). The 50 % elutriate concentration generated a 48-hour percentage survival of 56 %. The 25 % and 12.5 % elutriate concentrations had final survival percentages of 68 % and 76 %, respectively.

Management Unit MU-3 – The undiluted elutriate produced a survival of 32 % at test termination. Subsequent elutriate dilutions of 50 %, 25 %, and 12.5 % produced percentage survivals of 48 %, 56 %, and 80 %, respectively.

Management Unit MU-4 – This elutriate demonstrated minimal lethal effects to *Daphnia Magna*. After 48 hours, the 100 % and 50 % elutriate concentrations produced percentage survivals of 80 % and 92 %, respectively. All other dilutions showed complete survival at test termination.

All elutriates contained some measurable amounts of ammonia (5.0 –12.5 mg/L) at preparation. The toxicity results and ammonia concentrations suggest that ammonia was most likely the primary cause of toxicity to *Daphnia magna* for all management units.

Summary of Bioassay Test Results:

A summary of the Tier 3 testing is shown in Table 5 of Appendix D. MU1 caused significant lethality with respect to both *Hyalella azteca* and *Chironomus tentans* survival in comparison to all the reference sites. (MU1 was the only management unit to cause significant lethality with respect to *Chironomus tentans* survival in comparison to all the reference sites.) MU1 also exhibited a significant reduction in *Chironomus tentans* growth in comparison to all the reference sites. MU1 showed acute toxicity to *Daphnia magna* with a LC_{50} of 32%. MU2 caused significant lethality with respect to *Hyalella azteca* survival in comparison to all the reference sites. There was also a significant reduction in *Chironomus* growth in comparison to all reference sites. MU-2 caused acute toxicity to *Daphnia* with a LC_{50} of 47%. MU3 caused significant lethality with respect to *Hyalella azteca*, but only in comparison with RS1. Similarly, MU3 only caused a significant reduction in *Chironomus tentans* growth in comparison to RS1. MU3 showed acute toxicity to *Daphnia magna* with a LC_{50} of 40%. MU4 showed significant lethality

with respect to *Hyalella azteca* survival in comparison to all reference sites. MU4 only showed significant reduction in *Chironomus tentans* growth in comparison to RS1. The MU4 elutriate did cause partial lethality to the test organism during the test, but not enough to generate an LC_{50} (> 100% elutriate).

Appendix D: Table 5. Summary of Tier 3 Bioassay Test Results

	MU1			MU2			MU3			MU4		
BIOASSAY TEST [1]	**RS1**	**RS2**	**RS3**	**RS1**	**RS2**	**RS3**	**RS1**	**RS2**	**RS3**	**RS1**	**RS2**	**RS3**
Solid Phase												
Hyalella Survival	√	√	√	√	√	√	√			√	√	√
Chironomus Survival	√	√	√									
Chironomus Growth	√	√	√	√	√	√	√			√		
Elutriate Phase												
Daphnia LC_{50}	32 %			47 %			40 %			> 100%		

1 – For survival, check marks indicate that there was significant lethality in comparison to the reference site. For growth, check marks indicate a significant reduction in growth in comparison to reference site. Note that *Daphnia* LC_{50} is for the management unit sediment, and it is <u>not</u> compared to any reference site.

Bioassay Test Conclusions:

The biological toxicity testing indicated the sediment within the management units is qualitatively different in nature from the sediment within the reference sites. The Calumet Harbor material tends to be fine-grained, silty sediment, whereas the reference sites possessed relatively coarse-grained, sandy material.

Management Unit 1 – The biological toxicity testing showed that the MU1 sediment caused significant lethality and inhibited the growth of the test organisms compared with each of the reference site sediments. In addition, the MU1 sediment elutriate data indicated ammonia concentrations between 7.9 – 12.5 mg/L, which may be acutely toxic to aquatic organisms, as confirmed by the elutriate bioassay. Therefore, open-lake placement of MU1 sediment is not recommended.

Management Unit 2 – The biological toxicity testing showed that the MU2 sediment caused significant lethality to one (1) of the test organisms, and inhibited the growth of another organism, compared with each of the reference site sediments. In addition, the MU2 sediment elutriate data indicated ammonia concentrations between 6.7 – 9.8 mg/L, which may be acutely toxic to aquatic organisms, as confirmed by the elutriate bioassay. Therefore, open-lake placement of MU2 is not recommended.

Management Unit 3 – The biological toxicity testing showed that the MU3 sediment caused significant lethality to one (1) of the test organisms, and inhibited the growth of another organism, compared with the RS1 sediment. The MU3 sediment elutriate data indicated ammonia concentrations between 3.0 – 7.9 mg/L, which may be acutely toxic to aquatic organisms, as confirmed by the elutriate bioassay. The MU3 sediment did not cause significant lethality or inhibit growth compared with RS2 and RS3 sediments. However, given the potential for short-term water quality impacts, particularly with

respect to ammonia and short-term generation of a turbidity plume, as well as acute toxicity to test organisms, open-lake placement of MU3 sediments is not recommended.

Management Unit 4- Biological toxicity testing showed that the MU4 sediment caused significant lethality to one (1) of the test organisms compared with the sediments from the reference sites. The MU4 sediment elutriate test results indicated partial toxicity, but did not generate an LC_{50} for *Daphnia magna*. MU4 elutriate ammonia concentrations ranged from 3.7 – 5.0 mg/L, which significantly exceeds the water quality standards for the open waters of Lake Michigan. Given the potential for short-term water quality impacts, particularly with respect to ammonia and short-term generation of a turbidity plume, combined with the potential for biological impacts due to the sediment, open-lake placement of MU4 sediment is not recommended.

In general, the tiered evaluation indicated that MU1 and MU2 are similar in nature and can likely be handled as one source, while MU3 and MU4 are also of similar nature and can likely be handled as another source.

Sediment Sampling and Analysis Report
Calumet Harbor, Chicago, Illinois

December 2011

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Task Order # 0004

Prepared For:

Prepared For:

U.S. Army Corps of Engineers
Chicago District
111 N. Canal Street
Suite 600
Chicago, IL 60606

Prepared By:

FutureNet Group, Inc.
12801 Auburn Street
Detroit, Michigan 48223
Ph. 313-544-7117
Fax 313-544-7111
www.futurenetgroup.com

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1.0 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Chicago District, retained Future Net Group. Inc. (FNG) as a contractor to provide sediment sampling at designated sampling locations in the Calumet Harbor Federal Navigation Channel in Chicago, Illinois **(Appendix A)**. The purpose of the sediment sampling was to characterize the physical and chemical properties of the sediment in Calumet Harbor. Sediment sampling was performed to:

- Obtain physical and chemical data for the sediments to be dredged from Calumet Harbor to support a Clean Water Act (CWA) Section 404(b) (1) Contaminant Determination.

- Perform chemical testing of the sediment to assess the potential suitability of the dredged material from Calumet Harbor for upland beneficial use.

FNG performed sediment sample collection, and sediment logging services. Test America Analytical Laboratories (TA) of Pittsburgh, Pennsylvania, provided chemical analysis services. EMSL Laboratories (EMSL) of New Jersey provided asbestos analysis by elutriator method testing, and ECCS Mobile Laboratory (ECCS) of Madison, Wisconsin provided extended Pesticide and Herbicide list analysis. Coleman Engineering Company (Coleman) operated the sampling vessel and sample collection equipment.

Sampling activities were performed on October 18th, 21st, 22nd, and 23rd 2011. No field activities were conducted on October 19th and 20th, 2011 due to stormy weather conditions. The sampling crew (FNG Team) consisted of three (3) people: Dr. Ali Al-Saffar from FNG, and Mr. Joe Latange and Mr. Jason Frappier / Mr. John Edlebeck from Coleman. Coleman was retained by FNG to provide and operate the sediment sampling equipment (pontoon boat, tri-hull boat, gravity core, ponar, spilt spoon and micro-core samplers, etc.). One staff member from the USACE Chicago District Office, Mr. Richard Saichek, was also present during sampling for two (2) of the four (4) days (October 18 and 21) to provide quality assurance during the sampling activities.

Twenty (20) sediment samples, including three (3) composite samples and one (1) split sample were collected from three management units in Calumet Harbor. These management units were shown in the Scope of Work (SOW). The SOW also explains that the authorized width of the Federal Navigation Channel in Calumet Harbor is 3,000 feet, but only the center half width of 1,500 feet is currently

maintained. All the sediment samples were collected within the boundaries of the authorized navigation channel, but several samples were collected from outside the area presently being maintained.

The samples collected from Calumet Harbor are described below:

- **Management Unit One**
  - Three (3) samples were collected from the central portion of the navigation channel in Management Unit One, these samples were identified as CH-2011-MU1-G1 through CH-2011-MU1-G3.
  - Two (2) samples were collected from one location north of Management Unit One. This location was outside the area presently being maintained. Due to the thickness of the shoaling present at this location, this sample was split into two subsamples, identified as CH-2011-MU1-GNU (upper) and CH-2011-MU1-GNL (lower).
  - One (1) sample was collected from a location south of Management Unit One. This location was outside the area presently being maintained, and the sample was identified as CH-2011-MU1-GS.
  - Equivalent subsamples of sediment were obtained from each of the three (3) sediment samples collected from the central portion of the navigation channel in Management Unit One. These subsamples were then thoroughly mixed together to form one composite sample, identified as CH-2011-MU1-COMP.
- **Management Unit Two**
  - Three (3) samples were collected from the central portion of the navigation channel in Management Unit Two. These samples were identified as CH-2011-MU2-G1 through CH-2011-MU2-G3.
  - One (1) sample was collected from a location north of the Management Unit Two. This location was outside the area of the channel presently maintained. This sample was identified as CH-2011-MU2-GN.
  - One (1) sample was collected from a location south of Management Unit Two. This location was outside the area of the channel presently maintained. This sample was identified as CH-2011-MU2-GS.

- Equivalent subsamples of sediment were obtained from each of the three (3) sediment samples collected from the central portion of the navigation channel in Management Unit Two. These subsamples were then thoroughly mixed together to form one composite sample, identified as CH-2011-MU2-COMP.

- **Management Unit Three**
  - According to the SOW, three (3) samples were to be collected from the central portion of the navigation channel in Management Unit Three. The sampling team conducted a limited survey using a measuring tape but was unsuccessful at finding shoaling in and around the proposed sampling locations. Therefore, the sample locations were modified from the original locations due to the limited shoaling and based on conversations and direction of Mr. Richard Saichek, the Corps technical point-of-contact (POC) for the SOW. In order to find sample locations where there was shoaling of at least a foot or more in thickness, the samples had to be collected either north or south of Management Unit Three. These locations were outside or adjacent to the area of the channel presently being maintained. Three (3) samples were collected. These samples were identified as CH-2011-MU3-G1 through CH-2011-MU3-G3.
  - One (1) sample was collected from a location north of Management Unit Three. This location was outside the area of the channel presently being maintained. This sample was identified as CH-2011-MU3-GN.
  - One (1) sample was collected from a location south of Management Unit Three. This location was outside the area of the channel presently being maintained. This sample was identified as CH-2011-MU3-GS.
  - Equivalent subsamples of sediment were obtained from each of the three sediment samples collected from the central portion of Management Unit Three. These subsamples were then thoroughly mixed together to form a one composite sample, identified as CH-2011-MU3-COMP.

Sample locations are presented in **Appendix A,** and sample location coordinates and depth are recorded in the field log **and** the boring logs **(Appendix C and D)**. Sediment samples were collected using a gravity core sampler, a ponar, or a micro-core sampler. The type of sampler used at each location was determined based on the sample location, thickness of shoaled material, sediment properties (bulk

density, particle size distribution and mineralogy), stratigraphy, and sediment sample volume required for analysis.

Sampling, sample handling, and analytical techniques were conducted in accordance with the SOW dated July 2011, the Work and Sampling Plan, dated October 2011, and specifications of the current USACE Contract No. W912P6-10-D-003 Task Order # 0004 in addition to "Methods for Evaluating Solid Waste" 3rd ED, U.S. EPA No. SW-846 and "Description of Soils (Visual-Manual Procedure)", ASTM D 2488-69.

This report provides documentation of field activities, such as the samples that were collected and conditions that were encountered, and the laboratory analytical results. **Appendix B –** Analytical results summary tables presents a summary of the sediment and elutriate analytical chemistry results and analytical results of the asbestos testing.

FNG maintained a field log for this project. A typed summary field log form is included in **Appendix C**. Sediment boring logs are included in **Appendix D**. Photographs of each sample are included in **Appendix E,** and the captions below the photographs detail the sample location and identification number. The Test America laboratory analytical report is included in **Appendix F**. The ECCS laboratory analytical report for extended pesticides - herbicides is included in **Appendix G**. The EMSL asbestos analytical report is included in **Appendix H**. The Test America grain size analysis report is included in **Appendix I.**

2.0 SITE DESCRIPTION

The Calumet River and Harbor Federal Navigation Channel is located near the southern end of Lake Michigan, approximately 12 miles southeast of downtown Chicago. Calumet Harbor and the Calumet Harbor breakwater are primarily located in the State of Indiana. The outer harbor is protected by a 6,714 foot long concrete-capped timber crib breakwater to the north and northeast and a 5,007 foot long stone-filled steel sheet pile detached breakwater to the northeast. The authorized project depth and width for the Calumet Harbor approach channel are 29 feet and 3,200 feet, respectively, and the authorized project depth and width for the outer harbor are 28 feet and 3,000 feet, respectively.

The Calumet River is primarily located within the city limits of Chicago, Illinois, and it connects Calumet Harbor on Lake Michigan to the inland Lake Calumet. The authorized project depth for most of the Calumet River Federal Navigation Channel is 27 feet, and the authorized width of the entrance channel to the Calumet River is 290 feet. The principal commodities transported though this Federal navigation

channel include taconite, limestone, cement, chemical fertilizers, petroleum products, grains, steel, salt and miscellaneous freight.

3.0 FIELD SAMPLING ACTIVITIES

The limited field survey and sampling activities were conducted according to the SOW for the Calumet Harbor USACE task order #0004, as prepared and refined based upon discussions with the USACE POC for the SOW, Mr. Richard Saichek. Mr. Richard Saichek, was also present with FNG team in the boat during sampling activities conducted on the first two (2) of the four (4) days (October 18 and 21) to provide quality assurance.

3.1 Sampling Preparation

The SOW developed by USACE required sediment sampling within three (3) management units of the Calumet Harbor **(Appendix A)** as determined by USACE. In order to organize the sampling effort and prepare the sample containers, FNG developed a sampling plan based on the SOW.

The sampling plan summarized the following:

- Management unit and sample locations,
- Anticipated project depth,
- Estimated amount of sediment required for analysis,
- Sampling equipment,
- Analytical parameters,
- Containers required,
- Sample preservation requirements,
- Chain-of-custody, and
- Planned delivery of the samples to the laboratory.

The planned number and analytical parameters for sediment samples are presented in **Table 3.1.1** below:

Table 3.1.1: Sample ID's and Locations as Indicated in USACE SOW

Sample ID #	Sample Type (Depth)	Location	Analytes
CH-2011-MU1-G1	Grab	Management Unit 1	Bulk Chemistry, VOC, SPLP (1), Elutriate (1), Asbestos (1), and Grain Size
CH-2011-MU1-G2	Grab	Management Unit 1	Bulk Chemistry, VOC, SPLP (1), Elutriate (1), Asbestos (2), and Grain Size
CH-2011-MU1-G3	Grab	Management Unit 1	Bulk Chemistry, VOC, SPLP (1), Elutriate (1), and Grain Size
CH-2011-MU1-CNU	Core (-28 LWD*)	North of Management Unit 1	Bulk Chemistry, VOC, SPLP (2), Elutriate (2), Asbestos (3), and Grain Size
CH-2011-MU1-CNL	Core (-28 LWD*)	North of Management Unit 1	Bulk Chemistry, VOC, SPLP (3), Elutriate (3), and Grain Size
CH-2011-MU2-CS	Core (-28 LWD*)	South of Management Unit 1	Bulk Chemistry, VOC, SPLP (4), Elutriate (4), Asbestos (4), and Grain Size
CH-2011-MU2-G1	Grab	Management Unit 2	Bulk Chemistry, VOC, SPLP (5), Elutriate (5), Asbestos (5), and Grain Size
CH-2011-MU2-G2	Grab	Management Unit 2	Bulk Chemistry, VOC, SPLP (5), Elutriate (5), Asbestos (6), and Grain Size
CH-2011-MU2-G3	Grab	Management Unit 2	Bulk Chemistry, VOC, SPLP (5), Elutriate (5), and Grain Size
CH-2011-MU2-CN	Core (-28 LWD*)	North of Management Unit 2	Bulk Chemistry, VOC, SPLP (6), Elutriate (6), Asbestos (7), and Grain Size
CH-2011-MU2-CS	Core (-28 LWD*)	South of Management Unit 2	Bulk Chemistry, VOC, SPLP (7), Elutriate (7), Asbestos (8), and Grain Size
CH-2011-MU3-G1	Grab	Management Unit 3	Bulk Chemistry, VOC, SPLP (8), Elutriate (8), Asbestos (9), and Grain Size
CH-2011-MU3-G2	Grab	Management Unit 3	Bulk Chemistry, VOC, SPLP (8), Elutriate (8), Asbestos (10), and Grain Size
CH-2011-MU3-G3	Grab	Management Unit 3	Bulk Chemistry, VOC, SPLP (8), Elutriate (8), and Grain Size
CH-2011-MU3-CN	Core (-28 LWD*)	North of Management Unit 3	Bulk Chemistry, VOC, SPLP (9), Asbestos (11), Elutriate (9), and Grain Size
CH-2011-MU3-CS	Core (-28 LWD*)	South of Management Unit 3	Bulk Chemistry, VOC, SPLP (10), Elutriate (10), Asbestos (12), and Grain Size

*LWD = Low Water Datum. Depth represent the dredge depth, samples to be collected to a depth of one foot (1ft.) below the maintenance dredge depth

A gravity-core sampler was used to collect continuous sample to a depth of one foot (1ft.) below the maintenance dredge depth where the shoaling is between one (1 ft.) foot to two (2 ft.), if there was no

change in the sediment type, ponar sampler then used to collect quantity sample to fill the large jars for chemical analysis.

One (1) split sediment sample was collected from sample location CH-2011-MU1-CN using the hurricane sampler (spilt spoon and micro-core samplers). The sediment core collected at this location was split into two subsamples due to the thickness of shoaling present above the project depth.

The FNG team mobilized on Monday, October 17, 2011 with all equipment and materials required for collecting and processing sediment samples. The sampling crew confirmed with the utility companies, prior to mobilization and sampling, the locations of any underground utilities crossing the sampling location at Calumet Harbor, to ensure that no sample locations were located near any underground utility.

3.2 Field Documentation

Field conditions, activities, and field data were documented in a field log **(Appendix C)**. Information recorded in the log includes:

- Station identification number,
- Sample collection date,
- Depth at each sampling location,
- Thickness of each core retrieved,
- Number of cores or grabs and attempts at each station,
- Description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, “Description of Soils (Visual Manual Procedure)”,
- Type of sampling equipment used,
- Latitude and Longitude of station locations, and
- Time of sample collection

Prior to collecting sediment samples, the sample coordinates were determined using a portable Global Positioning System (GPS) (Garmin GPSMAP 276C) unit with one to three meter (1-3 m) accuracy. The GPS unit was programmed at FNG office and all sample coordinates were entered to guide the sampling team to the proposed sample locations. The water depth was measured by using a weighted scale tape.

Digital, color photographs **(Appendix E)** were taken of all sediment samples, prior to mixing, to document color, texture, and homogeneity. Sample location photographs were taken with regard to shore features. Photograph code numbers were logged on all of the photographs and recorded in the field log.

3.3 Weather / Climatic Conditions

The weather conditions during the sampling activities varied from sunny and calm to overcast to strong storm conditions with high winds. **Table 3.3-1** below summarizes the daily weather conditions encountered during the sampling activities:

Table 3.3-1: Weather Conditions

Day	Date	Sky Condition	Mean Temperature (°F)	Wind Speed and Direction
Tuesday	October 18, 2011	Mostly cloudy to overcast	46	7mph, NNW
Wednesday	October 19, 2011	Cloudy (Storm)	46	17 mph, N
Thursday	October 20, 2011	Cloudy (Storm)	44	18 mph, NW
Friday	October 21, 2011	Partly cloudy to overcast	46	6 mph, W
Saturday	October 22, 2011	Scattered clouds	52	4 mph, SSW
Sunday	October 23, 2011	Scattered clouds	55	5 mph, SW

Due to the stormy weather conditions occurred on October 19 and 20, 2011, sampling activities were suspended for safety reasons. Sampling activities were resumed on October 21 through October 23, 2011. Water clarity was typically poor with two feet (2 ft) or less visibility due to water turbidity.

3.4 Water Level

Referenced water level data were obtained hourly during the sampling activities and were used to calculate the amount of sediment required at each sample location. Water level data obtained was corrected based on the Low Water Datum (LWD) of Lake Michigan. The LWD of Lake Michigan is 577.5 feet above sea level.

Water level data obtained from the National Oceanic and Atmospheric Administration (NOAA) gauge located at Calumet Harbor, Illinois. The water levels fluctuated between 577.79 ft to 578.08 ft during the sampling activity period on October 18, 2011 to October 23, 2011 excluding October 19 and 20, 2011, see **Section 3.3** for weather condition.

3.5 Sample Locations

Sampling activities were initiated by navigating as close as possible to the coordinates of the pre-determined sample locations (provided by the USACE) by using the GPS unit. Landmarks and water depth served as additional guidance during sampling. The amount of sediment present above the project depth determined the minimum depth of sediment required for analysis.

All samples were collected within the management units of the Calumet Harbor as specified in the USACE Scope of Work dated July 2011 **(Appendix A)**.

3.6 Sample Collection

Seventeen (17) sediment samples were collected from three (3) management units from Calumet Harbor. Sediment samples were collected from three (3) locations within the central area of each of the three (3) management units except Management Unit 3 where the sampling team could not find shoaling. Sediment samples were collected in order to provide sufficient data for a statistically sound assessment of sediment quality. In addition, one (1) sample was collected from a location in the northern area of each management unit and one (1) sample collected from a location in the southern area of each management unit to assess the quality of the sediment within the navigational channel but outside the area presently being maintained. Sample CH-2011-MU1-GN was split to two (2) subsamples due to the thickness of shoaling at this location. One (1) sample was also collected as a duplicate sample. The project depth for the locations sampled during this project is 28 feet Low Water Datum (LWD). Samples were collected to a depth of one foot (1ft.) below the maintenance dredge depth.

At each location, the station coordinates were recorded, and the water depth was measured using a weighted measuring tape. The sampler was advanced into the sediment to recover representative, undisturbed sub-bottom sediment samples. At each sample location, the sampling equipment was cleaned and decontaminated before collecting the sample.

Water samples for the standard elutriate procedure were collected at the designated sample locations in Calumet Harbor using a Geotech™ geosub water pump with disposable polyethylene tubing. The water pump was lowered to a depth of half the water column (between the surface water level and top of sediment) to collect the sample. The water from the pump was placed into one (1) gallon plastic cube containers, these containers were immediately placed in a sturdy cooler with ice until delivered to the laboratory. Chemical preservatives were not required for the water samples collected for elutriate testing.

Three (3) types of sediment samplers mounted on two (2) separate boats were utilized to collect the sediment samples based on the requirements for each sampling location and the water conditions encountered. The types of sediment samplers used during the project included a gravity core, a ponar sampler, and a hydraulically driven soil probe sampler (split spoon and micro-core samplers), referred to as a Hurricane-probe sampler. Further details on the use of the sampling equipment are provided below:

- The gravity-core and ponar samplers were mounted on a 22-foot tri-hull workboat with two (2) 50-horsepower (hp) motors. The gravity-core and ponar samplers were used to collect the sediment samples when the shoaling was between one (1 ft.) foot and two (2ft.) feet above the project depth. First, the gravity core was advanced through the sediment column (multiple attempts) to collect a continuous section of sediment of one (1 ft) below the project depth, and then the ponar sampler was used to collect additional sediment if there were no distinguishable changes in the physical sediment properties (bulk density, particle size distribution, and mineralogy), stratigraphy, color, and/or odor of the sediment. Sediment samples collected were thoroughly homogenized before filling sample jars for analysis. Additional sampling equipment on the tri-hull workboat included a portable generator and an electric winch unit to operate the gravity core.

- The Hurricane-probe sampler was mounted on a 28-foot pontoon boat with a 50-hp motor. This sampler was only used to collect a sediment sample from location CH-2011-MU1-GN, where the shoaling thickness extended more than six (6) feet above the project depth. Additional sampling equipment on the pontoon boat included a portable generator, electrically operated spuds to anchor the boat, and a portable hydraulic power unit to operate the hurricane sampler. The hurricane sampler is effective on relatively stiff clays, packed sand, consolidated (cemented) materials, or loose sand.

The sampling was performed between the hours of 12:00 pm to 6:00 pm on October 18, 2011, 7:30 am to 7:00 pm on October 21 and 22, 2011, and 7:30 to and 1:00 pm on October 23, 1011. No sampling activity occurred neither on Wednesday, October 19, 2011 nor on Thursday, October 20, 2011 due to poor weather conditions. Prior to leaving the site, FNG cleaned the sample preparation area on the boat and properly disposed of all used sample tubes and unused sample material.

3.6.1 Sediment Sampling Procedures

Sample locations were provided by USACE on a survey map. The sample location coordinates were also provided in geographical coordinates (latitude and longitude) prior to mobilization to the site. The sampling crew navigated to the pre-determined sampling location coordinates and recorded the actual latitude and longitude of the sample location. Water depth was measured using a weighted, 50-foot long measuring tape. Water depth then was corrected to the LWD, and the data obtained was used to determine the amount of shoaling at each sample location. The electronic depth finder was used to provide an estimate water depth and served as additional guidance during sampling.

Based on the SOW and field conditions, different sediment samplers were used to recover representative, undisturbed, sub-bottom sediment samples from shoaled sample locations as mentioned above in **Section 3.6.** The thickness of the sediment cores varied for each sample location depending on the amount of shoaling **(Appendix D)**.

Additionally, equivalent subsamples of sediment were obtained from each of the three sediment samples collected from the central portion of each management unit. These subsamples were then thoroughly mixed together to form a composite sample for each management unit for extended chemical analyses.

Once retrieved from the designated sample locations, the samples were transferred to the designated sample preparation area on the boat. The length (sediment thickness) of each core was then measured and the sample was described and classified using the Unified Soil Classification System (USCS) **(Appendices C and D)**. The sediment sample was transferred directly to a stainless steel pan and was then photo-logged. The portion of the sample that was being retained for volatile organic compound (VOC) analysis was collected prior to any mixing or other disturbance to the sample as described in **Section 3.6.2** below. After the VOC sample was collected, unwanted materials such as wood, stones, and shells were removed and the sample was thoroughly mixed. The sample was then placed in labeled sample jars and stored in a sturdy cooler with ice.

3.6.2 Volatile Organic Compound Sample Collection Procedures

Samples collected for volatile organic compound analysis (VOC), were collected in general accordance with USEPA Method 5035a. This technique requires collection of a sample that is as undisturbed as possible and is immediately preserved to limit loss of volatiles from the sample as summarized below:

Subsamples of sediment from the retrieved sediment core were taken immediately upon retrieval of the sediment core from the subsurface to avoid volatile loss of contaminants of concern. Two pre-prepared

volatile organic analysis (VOA) vials, one containing 5 mL of methanol and one containing 5 mL of distilled water, were used for VOC sample preservation along with a 4-ounce jar for dry weight analysis. A photo ionization detector (PID) was used in the field to screen the headspace of the sediment samples for the presence of VOCs.

Once a discrete sediment core was collected, subsamples were taken using a plastic 10-mL syringe with the tip removed. Sub-cores of approximately 5 mL of sediment from the sediment core were weighed in the field using either a digital pan balance or a Pesola® Micro-Line Spring Scale. For each sample, a subsample of approximately 5 grams of sediment was weighed for the methanol preserved VOA and another subsample of approximately 5 grams of sediment was weighed for the distilled water VOA. The weighed subsample was then extruded into the 40-mL VOA vial, which was preserved with either 5 mL of methanol or 5 mL of distilled water. A 4-ounce jar was also filled with the sediment for laboratory analysis of percent moisture so the dry weight concentrations could be determined by the laboratory. The VOA vials were then sealed, immediately placed in a cooler with ice, and shipped to the laboratory at the end of the day.

The subsamples, which were collected with 5 ml of distilled water during the weekend sampling activities on October 23, 2011, were delivered to the Test America laboratory located at 2417 Bond Street, University Park, IL 60484 (Chicago area lab) by the field personnel. The samples were hand delivered to the Chicago area laboratory to meet the method time limit that requires that these samples be frozen within 24 hours. Samples collected over the weekend were not shipped by FedEx, because FedEx shipments on weekends could not reliably deliver overnight service. After the Chicago area laboratory froze the samples, the frozen samples were then shipped by the Test America laboratory in University Park, IL to the Test America laboratory in Pittsburg, PA for analysis.

3.6.3 Decontamination

Sampling equipment was decontaminated after each sample was processed. The decontamination procedure included scrubbing and rinsing the sampling pans and spoons with site water followed by an Alconox™ and distilled water wash followed by a distilled water rinse. The FNG team used new gloves and a new sampling tube for each sample location. The FNG team properly disposed of all used sampling tubing, gloves, and paper towels used during sampling activities.

3.6.4 Field Log

The field log was filled out completely, recording the pertinent details for each sample, before leaving each sample location. The NOAA reference water levels were confirmed upon return to the office. The typed summary of the field log is included in **Appendix C**, and sediment boring logs are included in **Appendix D.** FNG translated the field coordinates readings from latitude and longitude to Illinois East State Plane coordinates at the FNG office for mapping and drawing purposes.

3.6.5 Photographic Log

One (1) or more digital, color photographs were taken for each sample prior to homogenizing the material in the mixing pan. The photographic procedures involved orientating the pan to minimize shadows and glare on the wet sample. In addition, some photographs were taken of the sample location to indicate reference features onshore and photographs of the equipment were taken to document the sampling procedures **(Appendix E)**.

3.6.6 Sample Containers and Sample Preservation

All sediment samples were collected in pre-cleaned, laboratory-supplied borosilicate glass containers with Teflon® linings. Water samples were also collected in pre-cleaned, laboratory-supplied containers. The sample containers were placed in bubble wrap to prevent breakage and then the containers were cooled to 4°C using ice stored in zip lock plastic storage bags.

The samples were stored in darkness, except transiently during handling operations. Based upon the proposed analytical parameters, none of the samples required additional chemical or physical preservation other than ice and darkness, with the exception of the samples collected for VOC analysis. As discussed earlier, VOA vials were preserved with either methanol or distilled water that were immediately cooled to 4°C and frozen within 24 hours until analysis.

3.6.7 Sample Custody

Chain-of-custody was maintained during the sampling activities until the samples were delivered to the laboratory **(Appendix F, G & H)**. The procedures for sample packaging, shipping, and chain-of-custody explicitly followed the guidelines, as listed in the U.S. Army Corps of Engineers' Sample Handling Protocol for Low, Medium, and High Concentration Samples of Hazardous Waste, dated October 1986. Samples for this project were considered to be low level / environmental samples for safety, packaging and shipping purposes.

The signed chain-of-custody was stored in a zip lock bag and attached to the cooler's lid. The cooler was then sealed with tape and signed chain-of-custody cooler seals were attached. The sealed coolers were shipped by Federal Express to the designated laboratory at the end of each field day.

4.0 ANALYTICAL RESULTS

Samples were delivered under chain-of-custody to Test America in Pittsburg, Pennsylvania and to Test America in University Park, Illinois (see Section 3.6.2) to provide chemical analysis, EMSL Laboratories of New Jersey to provide asbestos analysis by elutriator method testing, and ECCS Mobile of Madison, Wisconsin to provide extended pesticide and herbicide analysis.

Laboratory analytical results for the sediment chemical testing are summarized in **Appendix B -** Chemical Analysis Results Summary Tables. The detailed laboratory analytical report and chain-of-custody documentation are included in **Appendix F, G & H** respectively and the laboratory CDs enclosed.

4.1 Quality Assurance / Quality Control

Data quality refers to the level of uncertainty associated with a particular data point. All elements of the sampling event, from the sampling design through the laboratory analysis and reporting, affect the quality of the data. Data quality associated with environmental measurement is a function of the sampling plan rationale and procedures used to collect the samples, as well as the analytical methods and instrumentation used in making the measurements. Uncertainty cannot be eliminated from environmental data. However, quality assurance / quality control (QA/QC) programs effective in measuring uncertainty in data are employed to monitor and control excursions from the desired data quality objectives.

Sources of uncertainty traced to the sampling component are poor sampling plan design, incorrect sample handling, faulty sample transportation, and inconsistent use of standard operating procedures. The most common sources of uncertainty that can be traced to the analytical component of the total measurement system are problems associated with calibration and contamination. To address these sources of uncertainty, the laboratory performs a number of QA procedures.

Laboratory terms concerning quality control include:

- BLK – Method Blank (applies to whole batch)
- LCS – Laboratory Control Sample (applies to whole batch)
- LCSD – Laboratory Control Duplicate Sample (applies to whole batch)
- MS – Matrix Spike (only applies to the soil spiked)

- MSD – Matrix Spike Duplicate (only applies to the soil spiked)
- RPD – Relative Percent Difference

For a spike QA/QC sample (LCS, MS, and MSD), the sample or blank material is spiked with a known concentration prior to extraction. This is a test of extraction efficiency. Internal standards of a known concentration are added after the extraction has been performed. The laboratory also spiked the organic samples with surrogate organic compounds. The purpose is to test the QA/QC of the analytical system. The percent recovery for a matrix spike is calculated by subtracting the measured concentration of the sample before the spike was added from the measured concentration of the sample after the spike was added, and then dividing this result by the amount spiked. RPD is the difference between the recovery for the MS and the MSD or possibly as LCS and LCSD. QA/QC measures included submitting a duplicate sample CH-2011-MU1-GS for internal laboratory QA/QC testing.

4.2 Data Qualifiers

4.2.1 Test America Case Narrative

A case narrative is presented in each of the three laboratory reports prepared by Test America. The case narratives summarize issues affecting the laboratory analysis/reporting for this project. Significant issues included:

- Methylene Chloride (CH_2Cl_2) was detected in two method blanks (MBs). One of the MB detections (0.408 ug/L) was for analysis batch 180-19824 of Job 180-5219-1, and the other MB detection (1.55 ug/L) was for analysis batch 180-18133 of Job 180-5048-1. Both of these concentrations were less than the reporting limit (RL) but above the method detection limit (MDL), so they were both qualified with a J flag, which indicates the result was less than the RL but greater than or equal to the MDL. Many of the sediment elutriate test (SET) samples were analyzed in the same analysis batch (19824), and the detected concentrations of methylene chloride in these samples were above the RL and ranged from 2.3 to 11 ug/L. However, since methylene chloride was detected in the MB for this analysis batch, the results were qualified with a B flag, which indicates the compound was found in the blank and sample. Methylene chloride and acetone ($(CH_3)_2CO$) were also detected in a few sediment samples at concentrations below the RL, so the concentrations were qualified with a J flag. As shown in Tables 11 and 12, other than surrogate compounds, which are added to the sample by the laboratory, methylene chloride and acetone were the only two VOCs detected in the sediment samples, and methylene chloride was the only VOC detected in the SET samples. Since methylene chloride and acetone are both common solvents used in the laboratory; used in such

methods as Method 3540C, soxhlet extraction, or Method 3510C, liquid-liquid extractions, it is likely that at such low concentrations these results may have been caused by the inadvertent addition of these target analytes through laboratory contamination. **Table 4.2.1** below summarizes the methylene chloride and acetone results of the sediment and SET samples:

Table 4.2.1 - Summary of methylene chloride and acetone detections

Sample Name CH-2011-	Methylene Chloride In Sediment [ug/kg]	Methylene Chloride Sediment Elutriate Test (SET) [ug/L]	Acetone In Sediment [ug/kg]
MU1-COMP		2.7	
MU1-CNU	ND	9.2 B	28 J
MU1-CNL	ND	6.6 B	20 J
MU1-CS	ND	10 B	15 J
MU1-G1	ND		ND
MU1-G2	ND		13 J
MU1-G3	ND		24 J
MU2-COMP		2.3	
MU2-CN	ND	11 B	ND
MU2-CS	2.2 J	8.9 B	ND
MU2-G1	ND		19 J
MU2-G2	ND		17 J
MU2-G3	ND		25 J
MU3-COMP		3.2	
MU3-CN	3.4 J	6.3 B	ND
MU3-CS	2.8 J	8.8 B	ND
MU3-CS (Dup)	2.4 J	8.8 B	ND
MU3-G1	ND		ND
MU3-G2	4.5 J B		18 J
MU3-G3	1.6 J B		20 J

Notes:
1) ND = Compound not detected
2) B = Compound was found in the blank and sample
3) J = Result was less than the RL but greater than or equal to the MDL

- **Test America Job ID: 180-5048-1**

o **GC/MS VOA.**

- The laboratory sample duplicate (LCSD) for batch 18133 exceeded control limits for the several analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. No data required qualification.
- No other analytical or quality issues were noted.

o **GC/MS Semi VOA.**

- Several samples were analyzed at a dilution due to the sample matrix
- Several compounds recovered outside QC limits in the matrix spike duplicate.
- No other analytical or quality issues were noted.

o **Metals.**

- The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following samples associated with batch 18624 were outside control limits for copper, antimony, and zinc: CH-2011-MU3-G1. The associated laboratory control sample (LCS) recovery met acceptance criteria.
- The presence of the '4' qualifier in the data indicates analytes where concentration in the un-spiked sample exceeded four times the spiking amount.
- No other analytical or quality issues were noted.

o **General Chemistry.**

- Several samples analyzed at a dilution for total phosphorus
- No other analytical or quality issues were noted.

o **Organic Prep.**

- No analytical or quality issues were noted

- **Test America Job ID: 180-5219-1**

o **GC/MS VOA, Method 8260B:**

- The laboratory control sample (LCS) and /or the laboratory sample duplicate (LCSD) for batch 19093 exceeded control limits for the following analytes: Trans 1, 3 Dichloropropene.
- No other analytical or quality issues were noted.

o **GC/MS Semi VOA**.

- The laboratory control sample (LCS) and /or laboratory control duplicate (LCSD) for batch 19662 exceeded control limits for Atrazine. Atrazine was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.
- Many samples were analyzed at a dilution due to the sample matrix. The samples were analyzed at the lowest method 8270C LL to provide the lowest possible limits.
- The matrix spike / matrix spike duplicate (MS/MSD) recoveries were outside the QC limits for several compounds.
- No other analytical or quality issues were noted.

o **GC Semi VOA.**

- The following samples were diluted due to the nature of the sample matrix for pesticides: CH-2011-MU1-GNL (180-5219-16), CH-2011-MU1-GNU (180-5219-15), CH-2011-MU3-GN (180-5219-12), CH-2011-MU3-GS (180-5219-13), CH-2011-MU3-GS(DUP) (180-5219-14). Elevated reporting limits (TLs) are provided.
- The RPD was outside QC limits for the LCS and LCSD for dalapon.
- No other analytical quality issues were noted.

o **Metals, method 6020.**

- The matrix spike and matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 18829 were outside control limits for antimony: CH-2011-MU1-GS (180-5219-1).
- Due to the high concentration of several analytes, the matrix spike / matrix spike duplicate (MS/MSD) for batch 18829 could not be evaluated for accuracy and precision. These results are marked with a "4" qualifier.

- The following samples were diluted due to the abundance of iron: CH-2011-MU1-GNL (180-5219-8), CH-2011-MU1-GNU (180-5219-7). Elevated reporting limits (RLs) are provided.
- No other analytical or quality issues were noted.

○ **General Chemistry.**

- Several samples were analyzed at dilution for total phosphours.
- The following samples were diluted due to the abundance of ammonia: CH-2011-MU1-GNL (180-5219-16), CH-2011-MU1-GNU (180-5219-15). Elevated reporting limits (RLs) are provided.
- The matrix spike / matrix spike duplicate (MS/MSD) recoveries for phosphorus batch 21316 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.
- No other analytical or quality issues were noted.

• **Test America Job ID: 180-5172-1**

All Samples were received in good condition within temperature requirements, with the exception of one of the two, one (1) gallon jugs collected for CH-2011-MU1-COMP, which was broken in transit. The one surviving one (1) gallon jug provided the laboratory with sufficient sample volume to complete the tests.

○ **GC/MC VOA**

- No analyzed issues were noted.

○ **GC/MS Semi VOA**

- Many samples were analyzed at a dilation due to sample matrix.
- The matrix spike and matrix spike duplicate recovered outside QC limits for several compounds and were also analyzed at a dilution.
- No other analytical or quality issues were noted

○ **GC Semi VOA**

- No analyzed issues were noted.

- **Metals**

- No analyzed issues were noted

- **General Chemistry**

- Many samples were analyzed at a dilution for Total Phosphorus.

- Methods 335.1 (cyanide, non-amenable) and 9012A (cyanide, amenable): The following samples were received with greater than 50% of holding time (14 days) expired: CH-2011-MU1-G3 (180-5172-3), CH-2011-MU2-G1 (180-5172-5). As such, the laboratory had insufficient time remaining to perform the analysis within holding time. The laboratory analysis determines the total cyanide and non-amenable cyanide concentrations. The amenable cyanide concentration is then calculated by subtracting the non-amenable cyanide concentration from the total cyanide concentration. An equipment malfunction did not allow for the cyanide analysis of two sediment samples at the Pittsburg, PA laboratory. The two samples affected were therefore, shipped to Test America's Canton Laboratory, however the shipment did not occur in time to allow the Canton Laboratory to perform the cyanide analysis within the holding time.

- Method 7196A (Chromium (VI)): The matrix soluble spike and post digestion spike (MSS/PDS) recoveries for batch 20176 and 20323 (reanalysis of batch 20176) were outside of control limits. The associated laboratory control sample (LCSS/LCSI) recoveries were within acceptance limits, which demonstrated that the analytical system was operating within proper control. This condition is most likely due to a matrix interference causing a natural reducing chemical state in the sample. An oxidation-reduction potential (ORP) test was therefore performed for laboratory QC sample 180-5172-b-7. The resulting data point fell into the reducing portion on the diagram, which indicates the sample is naturally reducing. The chart is included in the analytical report case narrative (page 4 of 103). The ORP test indicated that the sample matrix was potentially reducing Chromium VI due to its natural ORP state. This indicates that the sample matrix was adversely affecting the QC data for matrix soluble spike and post digestions spike recovery. To verify the results, Test America performed a reanalysis in accordance with the SOP. The method requires the laboratory to re-extract the samples if the QC fails, which is the reason that two batches were performed. Test America laboratory reported the MSS/PDS recovery data for both batches to provide all the QA/QC information generated.

- Geotechnical: No analytical or quality issues were noted.

4.2.2 ECCS Laboratory Case Narrative

- Samples A114210-01, A114302-01 and A11302-02 were re-extracted and re-analyzed for the n-methly carbamate pesticides by EPA Method 8218 due to a surrogate failure. The re-analysis confirmed the original low surrogate value. Both sets of data are in the ECCS report.

- The confirmation column for the organchlorine pesticides by EPA Method 8081 analysis had an interference peak present for diedrin in the matrix spike and matrix spike duplicate samples.

- The "LC" footnote means the results may be biased low because of low continuing calibration verification. The LC footnote was included for samples A114210-01, A114302-01 and A114302-02 because there were low continuing calibration verification (CCV) recoveries for 4,4-DDT and methoxychlor. The lower control limit is 80% and the recoveries were 73.9% and 79.7%, respectively. The LC footnote was also included for samples A114210-01, A114302-01 and A1143202-02 because there were low CCV recoveries for aldicarb, carbaryl, methiocarb, methomyl and propoxur. The lower control limit is 85% and the recoveries were 82.9%, 82.8%, 84.2%, 84.5% and 83.1%, respectively.

- All samples were reported to the limit of detection.

4.2.3 EMSL Laboratory Case Narrative

- Asbestos: No analytical or quality issues were noted.

4.3 Quality Assurance/Quality Control Review

FNG performed a QA/QC review regarding the laboratory data and the report. Based on the review performed, the data presented in this report is accurate and appropriate for the purposes they were collected. The laboratory data should be utilized with the incorporated data qualifiers as indicated on the laboratory reports. The laboratory data was reviewed for completeness, holding time compliance with the method standards, method detection limits, field and method blanks, MS/MSD, surrogate recovery, and non-conformances. The review indicated that the laboratory data was complete with respect to the analysis required in the SOW. Samples were analyzed within their respective holding times with the exception of two samples for cyanide analysis as described in **Section 4.2.1**. Method detection limits were elevated in cases where samples were required to be analyzed with a dilution. The dilution of the sample was required because the samples contained organic compounds that caused matrix interference

that inhibited the sensitivity of the analyzer. Issues with the laboratory control system, method blanks, MS/MSDS results and surrogate recovery are summarized in **Sections 4.2.1 and 4.2.2**.

A sample naming non-conformance with the SOW was identified during the internal review. It was identified that some sediment samples were mistakenly labeled during the field activities. Some sediment sample identifications in this report are slightly different than the sample identifications provided by USACE in the SOW. **Table 4.3** below presents the sediment sample identifications reported in this report versus the original sample identifications indicated in SOW.

Table 4.3: Sample identification indicated in SOW versus sample identification by field personnel

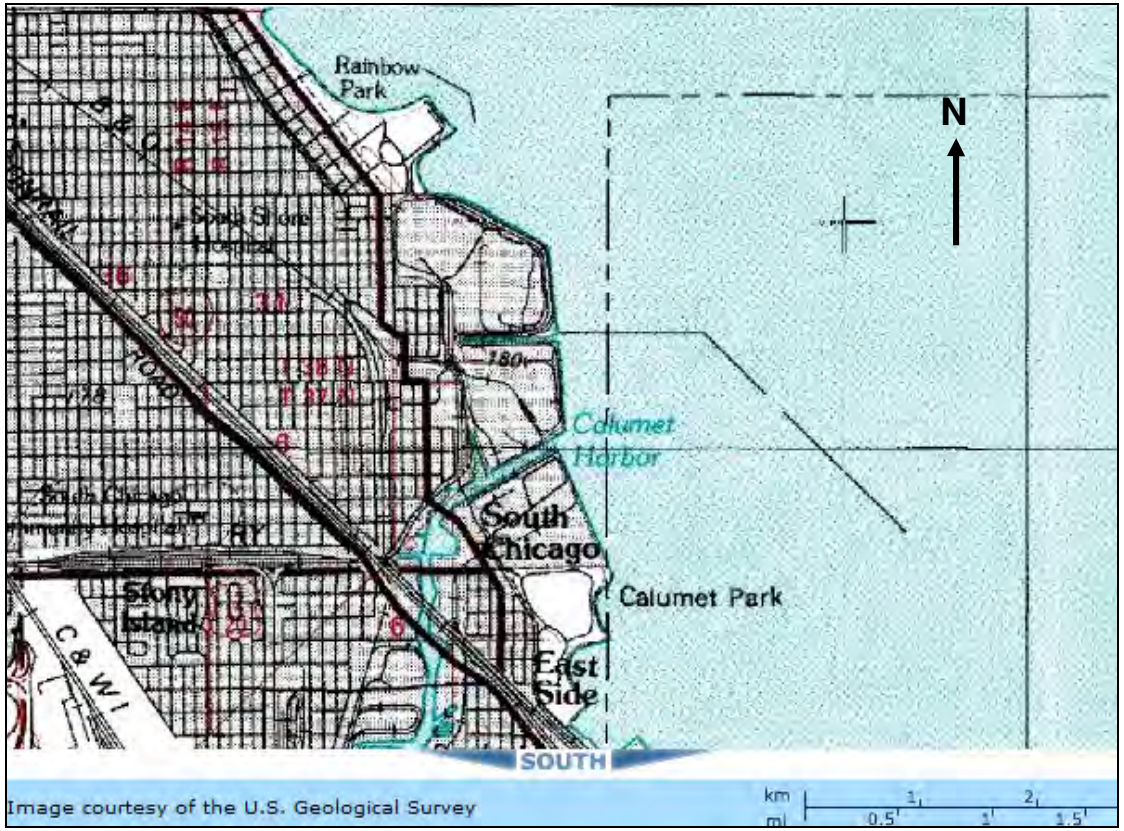
SOW Sample ID #	Field Sample ID #
CH-2011-MU1-CNU	CH-2011-MU1-GNU
CH-2011-MU1-CNL	CH-2011-MU1-GNL
CH-2011-MU2-CS	CH-2011-MU2-GS
CH-2011-MU2-CN	CH-2011-MU2-GN
CH-2011-MU2-CS	CH-2011-MU2-GS
CH-2011-MU3-CN	CH-2011-MU3-GN
CH-2011-MU3-CS	CH-2011-MU3-GS

Appendix A

Figures

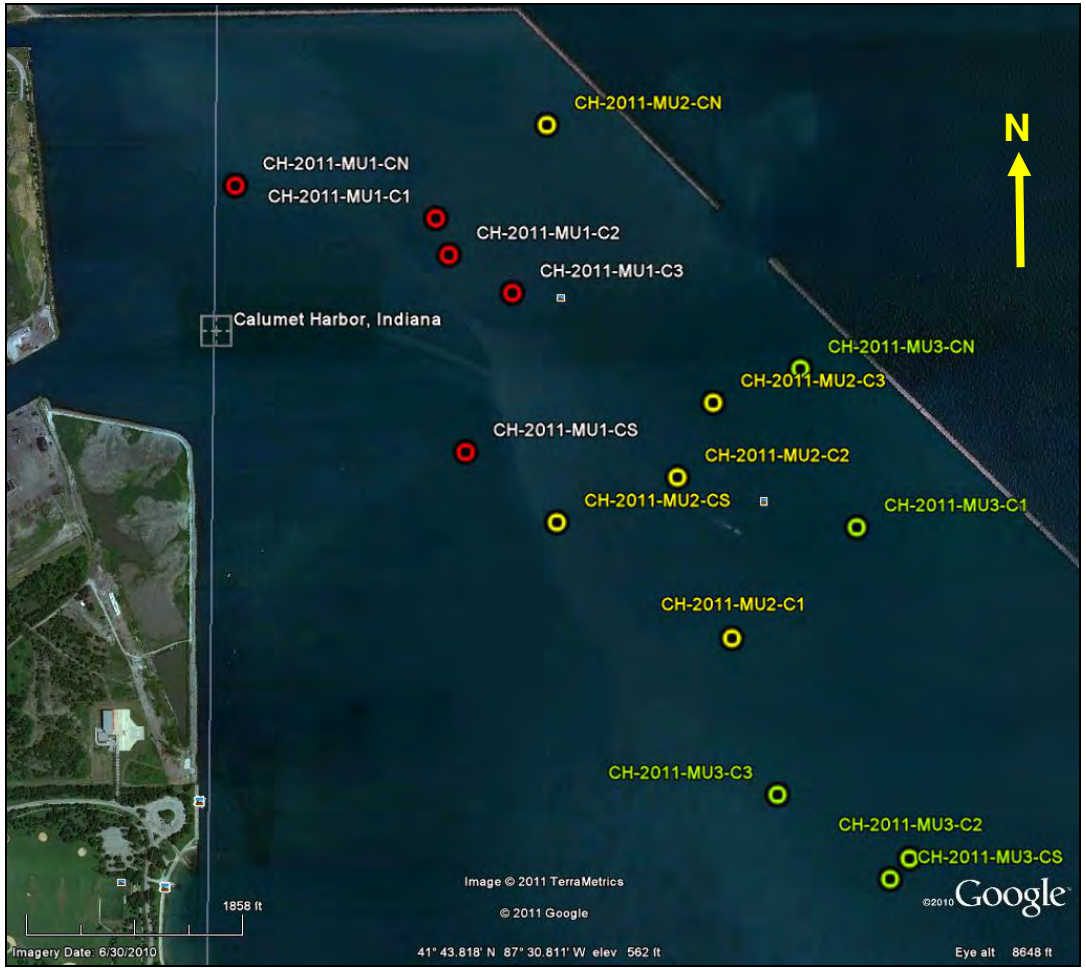
APPENDIX A

FIGURE 1: TOPOGRAPHIC MAP – CALUMET HARBOR



APPENDIX A

FIGURE 2: AERIAL PHOTOGRAPH – CALUMET HARBOR



APPENDIX A

FIGURE 3: SAMPLE LOCATIONS MAP – CALUMET HARBOR

Appendix B

Analytical Results Summary Tables

APPENDIX B

Table -1: Sediment Analytical Results - Anions

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNU		CH-2011-MU1-GNL		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-7		180-5219-8		180-5219-1	
	CAS#	Analysis Method	Units	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
Chloride	16887-00-6	300	mg/Kg	**24**	B	**26**	B	**23**	B	**19**	B	**14**	B	**17**	B
Fluoride	16984-48-8	300	mg/Kg	**1.7**		**2.9**		**2.1**		**2.4**		**3.1**		**1.7**	
Nitrate as N	14797-55-8	300	mg/Kg	**0.67**	J	**0.49**	J	**0.47**	J	<0.1		<0.086		**0.94**	
Sulfate	14808-79-8	300	mg/Kg	**190**	B	**40**	B	**55**	B	**97**	B	**17**	B	**240**	B
Cyanide, Non-amenable	NA	335.1	mg/Kg	**1.4**		**0.86**	J	**0.86**		**2**		**1.7**		**0.85**	
Total Cyanide	57-12-5	9012A	mg/Kg	**0.32**	J	**0.24**	J	<0.2	H	**1.6**		**1.5**		**0.22**	J
Total Phosphate	NA	365.1	mg/Kg	**380**		**390**		**370**		**430**		**140**		**310**	

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Analysis Method	Units	10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
Chloride	16887-00-6	300	mg/Kg	**20**	B	**16**	B	**17**	B	**25**	B	**15**	B
Fluoride	16984-48-8	300	mg/Kg	<0.28		**0.69**	J	**2**		**2.6**		**0.66**	J
Nitrate as N	14797-55-8	300	mg/Kg	<0.12		<0.094		<0.096		**0.8**	J	<0.093	
Sulfate	14808-79-8	300	mg/Kg	**150**	B	**69**	B	**22**	B	**170**	B	**88**	B
Cyanide, Non-amenable	NA	335.1	mg/Kg	**0.69**	JH	**0.3**	J	**1**		**2.1**		**0.83**	
Total Cyanide	57-12-5	9012A	mg/Kg	**0.26**	JH	**0.15**	J	**0.26**	J	<0.21		<0.15	
Total Phosphate	NA	365.1	mg/Kg	**400**		**300**		**350**		**300**		**280**	

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Analysis Method	Units	10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
Chloride	16887-00-6	300	mg/Kg	**18**		**14**	J	**15**	J	**19**	B	**18**	B	**20**	B
Fluoride	16984-48-8	300	mg/Kg	**7.3**	B	**6.2**	B	**4.7**	B	**2.2**		**0.53**	J	**0.97**	
Nitrate as N	14797-55-8	300	mg/Kg	**0.55**	J B	**0.49**	J B	**0.87**	J B	**0.56**	J	<0.11		**0.51**	J
Sulfate	14808-79-8	300	mg/Kg	**56**		**35**		**41**		**140**	B	**140**	B	**200**	B
Cyanide, Non-amenable	NA	335.1	mg/Kg	**1.6**	B	**1.5**	B	**2.2**		**0.96**		**0.86**	J	**0.77**	J
Total Cyanide	57-12-5	9012A	mg/Kg	**0.46**	J	**0.56**	J	**0.87**	J	<0.18		**0.85**	J	1	
Total Phosphate	NA	365.1	mg/Kg	**180**		**290**		**310**		**300**		**320**		**300**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
< - Not detected
NA- Not Applicable

APPENDIX B

Table -2: Elutriate Analytical Results - Anions

Parameter	Matrix			Management Unit #1								Management Unit #2					
	Sample ID			CH-2011-MU1-COMP		CH-2011-MU1-GNU		CH-2011-MU1-GNL		CH-2011-MU1-GS		CH-2011-MU2-COMP		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-9		180-5219-15		180-5219-16		180-5219-9		180-5172-10		180-5219-10		180-5219-11	
	Date Collected			10/22/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units														
Chloride	16887-00-6	300	mg/L	**15**		**14**		**14**		**15**		**13**		**14**		**13**	
Fluoride	16984-48-8	300	mg/L	**0.22**	B	**0.1**	B	**0.18**	B	**0.087**	B	**0.088**	B	**0.069**	B	**0.078**	B
Nitrate as N	14797-55-8	300	mg/L	**0.73**		**0.54**		**0.34**		**0.53**		**0.24**		**0.77**		**0.34**	
Sulfate	14808-79-8	300	mg/L	**21**		**21**		**23**		**23**		**20**		**21**		**22**	
Cyanide, Non-amenable	NA	335.1	mg/L	**0.12**		**0.067**		**0.2**		**0.075**		**0.042**		**0.11**		**0.02**	
Total Cyanide	57-12-5	9012A	mg/L	<0.005		**0.011**		**0.042**		<0.005	J	<0.005		<0.005		<0.005	
Ammonia, distilled	7664-41-7	350.1	mg/L	**3.7**	B	**13**	B	**13**	B	**3.2**	B	**1.9**	B	**3.2**	B	**1.7**	B

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-COMP		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-6		180-5219-12		180-5219-13		180-5219-14	
	Date Collected			10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units								
Chloride	16887-00-6	300	mg/L	**14**		**15**		**14**		**14**	
Fluoride	16984-48-8	300	mg/L	**0.093**	B	**0.3**	B	**0.082**	B	**0.076**	B
Nitrate as N	14797-55-8	300	mg/L	**0.29**		**0.36**		**0.29**		**0.27**	
Sulfate	14808-79-8	300	mg/L	**22**		**22**		**23**		**23**	
Cyanide, Non-amenable	NA	335.1	mg/L	**0.07**		**0.047**		**0.031**		**0.039**	
Total Cyanide	57-12-5	9012A	mg/L	<0.005		<0.005		<0.005		<0.005	
Ammonia, distilled	7664-41-7	350.1	mg/L	**2.7**	B	**1.9**	B	**2.6**	B	**2.5**	B

Bold - Analysis is above detection limit
B - Compound was found in the blank and sample.
NA- Not Applicable

APPENDIX B

Table -3: Sediment Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units												
Metals															
Antimony	7440-36-0	6020	mg/Kg	**0.28**	B	**0.25**	B	**0.38**	B	**0.54**		**0.5**		**0.16**	
Arsenic	7440-38-2	6020	mg/Kg	**7.1**		**6.2**		**6.8**		**10**		**9.8**		**4**	
Barium	7440-39-3	6020	mg/Kg	**33**		**28**		**30**		**37**		**35**		**19**	
Beryllium	7440-41-7	6020	mg/Kg	**0.49**		**0.43**		**0.46**		**0.53**		**0.57**		**0.27**	
Boron	7440-42-8	6020	mg/Kg	**16**	B	**14**	B	**14**	B	**13**	B	**12**	B	**9.5**	B
Cadmium	7440-43-9	6020	mg/Kg	**0.52**		**0.44**		**0.53**		**0.44**		**0.8**		**0.3**	
Calcium	7440-70-2	6020	mg/Kg	**70000**		**66000**		**75000**		**69000**	B	**57000**	B	**62000**	B
Chromium	7440-47-3	6020	mg/Kg	**22**	B	**20**	B	**21**	B	**17**	B	**29**	B	**12**	B
Cobalt	7440-48-4	6020	mg/Kg	**7.5**		**6.7**		**7.4**		**6.7**		**6.6**		**4.9**	
Copper	7440-50-8	6020	mg/Kg	**26**		**23**		**25**		**19**		**31**		**15**	
Cr (VI)	18540-29-9	7196A	mg/Kg	<0.21		<0.2		<0.2		<0.14		<0.17		<0.17	
Cyanide, Amenable	NA	9012A	mg/Kg	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
Iron	7439-89-6	6020	mg/Kg	**21000**	B	**19000**	B	**20000**	B	**40000**	B	**43000**	B	**12000**	B
Lead	7439-92-1	6020	mg/Kg	**41**	B	**39**	B	**38**	B	**54**	B	**85**	B	**19**	B
Magnesium	7439-95-4	6020	mg/Kg	**33000**	B	**31000**	B	**37000**	B	**33000**	B	**27000**	B	**29000**	B
Manganese	7439-96-5	6020	mg/Kg	**570**		**500**		**550**		**680**	B	**720**	B	**380**	B
Mercury	7439-97-6	7471A	mg/Kg	**0.095**		**0.083**		**0.11**		**0.16**		**0.14**		**0.05**	
Nickel	7440-02-0	6020	mg/Kg	**17**		**15**		**17**		**14**		**18**		**10**	
Potassium	9/7/7440	6020	mg/Kg	**1900**		**1600**		**1700**		**1300**		**1300**		**1000**	
Selenium	7782-49-2	6020	mg/Kg	**0.58**		**0.44**	J	**0.54**		**0.34**	J	**0.53**		**0.36**	J
Silver	7440-22-4	6020	mg/Kg	**0.14**		**0.11**		**0.12**		**0.17**		**0.25**		**0.062**	J
Sodium	7440-23-5	6020	mg/Kg	**160**		**150**		**160**		**160**		**140**		**120**	
Thallium	7440-28-0	6020	mg/Kg	**0.36**		**0.31**		**0.33**		**0.53**		**0.49**		**0.19**	
Vanadium	7440-62-2	6020	mg/Kg	**21**	B	**19**	B	**21**	B	**20**	B	**21**	B	**14**	B
Zinc	7440-66-6	6020	mg/Kg	**100**		**92**		**98**		**110**		**190**		**60**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -3: Sediment Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-10		180-5219-11	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units										
Metals													
Antimony	7440-36-0	6020	mg/Kg	**0.26**	B	**0.17**	B	**0.14**	B	**0.5**		**0.17**	
Arsenic	7440-38-2	6020	mg/Kg	**5.2**		**3.7**		**3.9**		**9.2**		**3.9**	
Barium	7440-39-3	6020	mg/Kg	**24**		**15**		**17**		**38**		**20**	
Beryllium	7440-41-7	6020	mg/Kg	**0.37**		**0.25**		**0.27**		**0.59**		**0.29**	
Boron	7440-42-8	6020	mg/Kg	**12**	B	**9.1**	B	**9.5**	B	**16**	B	**9.9**	B
Cadmium	7440-43-9	6020	mg/Kg	**0.43**		**0.32**		**0.24**		**0.8**		**0.36**	
Calcium	7440-70-2	6020	mg/Kg	**69000**		**78000**		**66000**		**74000**	B	**89000**	B
Chromium	7440-47-3	6020	mg/Kg	**17**	B	**12**	B	**11**	B	**32**	B	**12**	B
Cobalt	7440-48-4	6020	mg/Kg	**6**		**4.6**		**4.6**		**8.5**		**5.6**	
Copper	7440-50-8	6020	mg/Kg	**21**		**13**		**12**		**34**		**13**	
Cr (VI)	18540-29-9	7196A	mg/Kg	<0.19		<0.16		<0.15		<0.21		<0.15	
Cyanide, Amenable	NA	9012A	mg/Kg	<0.5		<0.5		<0.5		<0.5		<0.5	
Iron	7439-89-6	6020	mg/Kg	**16000**	B	**12000**	B	**11000**	B	**35000**	B	**13000**	B
Lead	7439-92-1	6020	mg/Kg	**32**	B	**19**	B	**17**	B	**79**	B	**20**	B
Magnesium	7439-95-4	6020	mg/Kg	**34000**	B	**38000**	B	**31000**	B	**36000**	B	**41000**	B
Manganese	7439-96-5	6020	mg/Kg	**490**		**410**		**360**		**730**	B	**440**	B
Mercury	7439-97-6	7471A	mg/Kg	**0.11**		**0.051**		**0.05**		**0.11**		**0.045**	
Nickel	7440-02-0	6020	mg/Kg	**14**		**9.2**		**9.3**		**22**		**12**	
Potassium	9/7/7440	6020	mg/Kg	**1400**		**990**		**1100**		**1800**		**1100**	
Selenium	7782-49-2	6020	mg/Kg	**0.45**		**0.33**	J	**0.27**	J	**0.63**		**0.27**	J
Silver	7440-22-4	6020	mg/Kg	**0.098**		**0.058**	J	**0.055**	J	**0.24**		**0.052**	J
Sodium	7440-23-5	6020	mg/Kg	**140**		**150**		**140**		**170**		**170**	
Thallium	7440-28-0	6020	mg/Kg	**0.27**		**0.19**		**0.18**		**0.44**		**0.24**	
Vanadium	7440-62-2	6020	mg/Kg	**17**	B	**15**	B	**14**	B	**25**	B	**16**	B
Zinc	7440-66-6	6020	mg/Kg	**83**		**63**		**52**		**180**		**62**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -3: Sediment Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-12		180-5219-13		180-5219-14	
	Date Collected			10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units												
Metals															
Antimony	7440-36-0	6020	mg/Kg	**0.33**	B	**0.27**	B	**0.31**	B	**0.21**		**0.21**		**0.21**	
Arsenic	7440-38-2	6020	mg/Kg	**5.8**		**5.7**		**5.8**		**5.5**		**5.3**		**5.3**	
Barium	7440-39-3	6020	mg/Kg	**27**		**26**		**29**		**25**		**22**		**22**	
Beryllium	7440-41-7	6020	mg/Kg	**0.41**		**0.4**		**0.4**		**0.41**		**0.36**		**0.33**	
Boron	7440-42-8	6020	mg/Kg	**13**	B	**14**	B	**16**	B	**13**	B	**12**	B	**12**	B
Cadmium	7440-43-9	6020	mg/Kg	**0.54**		**0.49**		**0.46**		**0.37**		**0.39**		**0.43**	
Calcium	7440-70-2	6020	mg/Kg	**79000**		**87000**		**84000**		**78000**	B	**79000**	B	**85000**	B
Chromium	7440-47-3	6020	mg/Kg	**21**	B	**19**	B	**21**	B	**17**	B	**16**	B	**16**	B
Cobalt	7440-48-4	6020	mg/Kg	**7.2**		**6.5**		**7.1**		**6.5**		**5.8**		**5.9**	
Copper	7440-50-8	6020	mg/Kg	**26**		**24**		**28**		**20**		**21**		**21**	
Cr (VI)	18540-29-9	7196A	mg/Kg	<0.19		<0.18		<0.21		<0.17		<0.18		<0.19	
Cyanide, Amenable	NA	9012A	mg/Kg	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
Iron	7439-89-6	6020	mg/Kg	**18000**	B	**17000**	B	**19000**	B	**16000**	B	**15000**	B	**15000**	B
Lead	7439-92-1	6020	mg/Kg	**37**	B	**33**	B	**31**	B	**26**	B	**26**	B	**25**	B
Magnesium	7439-95-4	6020	mg/Kg	**40000**	B	**44000**	B	**42000**	B	**38000**	B	**38000**	B	**41000**	B
Manganese	7439-96-5	6020	mg/Kg	**540**		**600**		**600**		**500**	B	**540**	B	**560**	B
Mercury	7439-97-6	7471A	mg/Kg	**0.077**		**0.085**		**0.069**		**0.054**		**0.1**		**0.062**	
Nickel	7440-02-0	6020	mg/Kg	**16**		**14**		**17**		**14**		**13**		**13**	
Potassium	9/7/7440	6020	mg/Kg	**1500**		**1500**		**1800**		**1500**		**1400**		**1400**	
Selenium	7782-49-2	6020	mg/Kg	**0.51**		**0.48**		**0.55**		**0.43**		**0.47**		**0.4**	J
Silver	7440-22-4	6020	mg/Kg	**0.14**		**0.11**		**0.12**		**0.085**		**0.094**		**0.084**	J
Sodium	7440-23-5	6020	mg/Kg	**170**		**170**		**180**		**150**		**140**		**180**	
Thallium	7440-28-0	6020	mg/Kg	**0.31**		**0.3**		**0.3**		**0.25**		**0.25**		**0.26**	
Vanadium	7440-62-2	6020	mg/Kg	**21**	B	**20**	B	**21**	B	**19**	B	**18**	B	**18**	B
Zinc	7440-66-6	6020	mg/Kg	**96**		**85**		**87**		**69**		**73**		**76**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -4: Elutriate Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #1							
	Sample ID			CH-2011-MU1-COMP		CH-2011-MU1-GNU		CH-2011-MU1-GNL		CH-2011-MU1-GS	
	Lab ID			180-5172-9		180-5219-15		180-5219-16		180-5219-9	
	Date Collected			10/22/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units								
Antimony	7440-36-0	6020	ug/L	**0.3**	J B	**0.36**	J	**0.98**	J	**0.26**	J
Arsenic	7440-38-2	6020	ug/L	**4.6**		**2.7**		**6.1**		**3.7**	
Barium	7440-39-3	6020	ug/L	**40**		**59**		**65**		**45**	
Beryllium	7440-41-7	6020	ug/L	<0.037		<0.037		<0.037		<0.037	
Boron	7440-42-8	6020	ug/L	**63**		**55**	B	**120**	B	**34**	B
Cadmium	7440-43-9	6020	ug/L	**0.21**	J	<0.11		<0.11		<0.11	
Calcium	7440-70-2	6020	ug/L	**32000**	B	**33000**		**29000**		**36000**	
Chromium	7440-47-3	6020	ug/L	**5.2**	B	**1.8**	J	**2.9**		**1.7**	J
Cobalt	7440-48-4	6020	ug/L	**0.42**	J	**0.37**	J	**0.3**	J	**0.24**	J
Copper	7440-50-8	6020	ug/L	**2**	B	**0.54**	J	**1.2**	J	**1.3**	J
Cr (VI)	18540-29-9	7196A	mg/L	<0.0017		<0.0017		<0.0017		<0.0017	
Cyanide, Amenable	NA	9012A	mg/L	<0.01		<0.01		<0.01		<0.01	
Iron	7439-89-6	6020	ug/L	**360**	B	**70**		**86**		**440**	
Lead	7439-92-1	6020	ug/L	**0.49**	J B	**0.21**	J B	**0.82**	J B	***0.4***	J B
Magnesium	7439-95-4	6020	ug/L	**8600**	B	**10000**		**11000**		**9100**	
Manganese	7439-96-5	6020	ug/L	**290**	B	**250**		**100**		**260**	
Mercury	7439-97-6	7470A	ug/L	<0.038		<0.038		<0.038		<0.038	
Nickel	7440-02-0	6020	ug/L	**0.69**	J	**0.53**	J	**1.1**		**0.46**	J
Potassium	9/7/7440	6020	ug/L	**1700**		**2900**	B	**5500**	B	**1800**	B
Selenium	7782-49-2	6020	ug/L	<0.42		<0.42		<0.42		<0.42	
Silver	7440-22-4	6020	ug/L	<0.036		<0.036		<0.036		<0.036	
Sodium	7440-23-5	6020	ug/L	**12000**		**8000**		**9800**		**7600**	
Thallium	7440-28-0	6020	ug/L	**0.062**	J	<0.015		<0.015		<0.015	
Vanadium	7440-62-2	6020	ug/L	**3.9**	B	**0.7**	J B	**1.1**	B	**0.47**	J B
Zinc	7440-66-6	6020	ug/L	**4.5**	J	**3.2**	J	**5.5**		**7**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -4: Elutriate Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #2					
	Sample ID			CH-2011-MU2-COMP		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-10		180-5219-10		180-5219-11	
	Date Collected			10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units						
Antimony	7440-36-0	6020	ug/L	**0.37**	J B	**0.22**	J	**0.33**	J
Arsenic	7440-38-2	6020	ug/L	**4.5**		**3.8**		**3**	
Barium	7440-39-3	6020	ug/L	**39**		**48**		**45**	
Beryllium	7440-41-7	6020	ug/L	<0.037		<0.037		<0.037	
Boron	7440-42-8	6020	ug/L	**25**		**35**	B	**33**	B
Cadmium	7440-43-9	6020	ug/L	<0.11		<0.11		<0.11	
Calcium	7440-70-2	6020	ug/L	**32000**	B	**36000**		**37000**	
Chromium	7440-47-3	6020	ug/L	**5**	B	**4**		**1.7**	J
Cobalt	7440-48-4	6020	ug/L	**0.3**	J	**0.39**	J	**0.24**	J
Copper	7440-50-8	6020	ug/L	**0.98**	J B	**1.1**	J	**1.3**	J
Cr (VI)	18540-29-9	7196A	mg/L	<0.0017		<0.0017		<0.0017	
Cyanide, Amenable	NA	9012A	mg/L	<0.01		<0.01		<0.01	
Iron	7439-89-6	6020	ug/L	***18***	J B	**160**		**16**	J
Lead	7439-92-1	6020	ug/L	***0.11***	J B	**0.22**	J B	**0.17**	J B
Magnesium	7439-95-4	6020	ug/L	**8600**	B	**10000**		**9400**	
Manganese	7439-96-5	6020	ug/L	**240**	B	**390**		**190**	
Mercury	7439-97-6	7470A	ug/L	<0.038		<0.038		<0.038	
Nickel	7440-02-0	6020	ug/L	**0.46**	J	**0.8**	J	**0.54**	J
Potassium	9/7/7440	6020	ug/L	**1500**		**2100**	B	**1700**	B
Selenium	7782-49-2	6020	ug/L	<0.42		<0.42		<0.42	
Silver	7440-22-4	6020	ug/L	<0.036		<0.036		<0.036	
Sodium	7440-23-5	6020	ug/L	**6200**		**8000**		**7500**	
Thallium	7440-28-0	6020	ug/L	<0.015		<0.015		<0.015	
Vanadium	7440-62-2	6020	ug/L	**4.5**	B	**1.1**	B	**0.79**	J B
Zinc	7440-66-6	6020	ug/L	**4.1**	J	**6.7**		**6.3**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -4: Elutriate Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-COMP		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-6		180-5219-12		180-5219-13		180-5219-14	
	Date Collected			10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units								
Antimony	7440-36-0	6020	ug/L	**0.41**	J B	**0.31**	J	**1.5**	J	**0.54**	J
Arsenic	7440-38-2	6020	ug/L	**4.1**		**2.2**		**3.4**		**2.5**	
Barium	7440-39-3	6020	ug/L	**36**		**41**		**42**		**43**	
Beryllium	7440-41-7	6020	ug/L	<0.037		<0.037		<0.037		<0.037	
Boron	7440-42-8	6020	ug/L	**30**		**28**	B	**28**	B	**29**	B
Cadmium	7440-43-9	6020	ug/L	<0.11		<0.11		<0.11		<0.11	
Calcium	7440-70-2	6020	ug/L	**30000**	B	**35000**		**36000**		**35000**	
Chromium	7440-47-3	6020	ug/L	**5**	B	**1.9**	J	**1.4**	J	**1.6**	J
Cobalt	7440-48-4	6020	ug/L	**0.2**	J	**0.14**	J	**0.15**	J	**0.17**	J
Copper	7440-50-8	6020	ug/L	**3.7**	B	**0.65**	J	**1.1**	J	**0.76**	J
Cr (VI)	18540-29-9	7196A	mg/L	<0.0017		<0.0017		<0.0017		<0.0017	
Cyanide, Amenable	NA	9012A	mg/L	<0.01		<0.01		<0.01		<0.01	
Iron	7439-89-6	6020	ug/L	**170**	B	**9.3**	J	**62**		**220**	
Lead	7439-92-1	6020	ug/L	**0.15**	J B	**0.15**	J B	**0.13**	J B	**0.061**	J B
Magnesium	7439-95-4	6020	ug/L	**8200**	B	**9600**		**9600**		**9700**	
Manganese	7439-96-5	6020	ug/L	**200**	B	**220**		**220**		**220**	
Mercury	7439-97-6	7470A	ug/L	<0.038		<0.038		<0.038		<0.038	
Nickel	7440-02-0	6020	ug/L	**0.53**	J	**0.27**	J	**0.35**	J	**0.32**	J
Potassium	9/7/7440	6020	ug/L	**1500**		**1800**	B	**1700**	B	**1700**	B
Selenium	7782-49-2	6020	ug/L	<0.42		<0.42		<0.42		<0.42	
Silver	7440-22-4	6020	ug/L	<0.036		<0.036		<0.036		<0.036	
Sodium	7440-23-5	6020	ug/L	**6500**		**7300**		**7600**		**7600**	
Thallium	7440-28-0	6020	ug/L	**0.2**	J	<0.015		<0.015		<0.015	
Vanadium	7440-62-2	6020	ug/L	**4.2**	B	<0.082		**0.59**	J B	**0.16**	J B
Zinc	7440-66-6	6020	ug/L	**5.1**		**5.2**		**6.2**		**7.6**	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -5: SPLP Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #1									
	Sample ID			CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS		CH-2011-MU1-COMP	
	Lab ID			180-5172-3		180-5219-8		180-5219-7		180-5219-1		180-5172-4	
	Date Collected			10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/201	Qualifier	10/21/2011	Qualifier
	CAS#	Analysis Method	Units										
Metals (ICP/MS)													
Antimony	7440-36-0	6010B	mg/L	<0.01		**0.0034**	J	<0.0013		<0.0013		<0.0013	
Arsenic	7440-38-2	6010B	mg/L	**0.0033**	J	**0.023**		**0.005**	J	<0.0027		**0.0035**	J
Barium	7440-39-3	6010B	mg/L	**0.014**	J	**0.024**	J	**0.016**	J	**0.0092**	J	**0.014**	J
Beryllium	7440-41-7	6010B	mg/L	<0.004		<0.00023		<0.00023		<0.00023		<0.00023	
Boron	7440-42-8	6010B	mg/L	**0.28**		**0.51**		**0.33**		**0.23**		**0.31**	
Cadmium	7440-43-9	6010B	mg/L	<0.005		**0.00043**	J	**0.00021**	J	<0.00013		<0.00023	
Calcium	7440-70-2	6010B	mg/L	**22**	B	**16**	B	**20**	B	**21**	B	**22**	B
Chromium	7440-47-3	6010B	mg/L	**0.0027**	J B	**0.0074**	B	**0.006**	B	**0.0025**	J B	**0.0032**	J B
Cobalt	7440-48-4	6010B	mg/L	**0.00051**	J B	**0.0024**	J B	**0.0014**	J B	**0.00047**	J B	**0.0012**	J B
Copper	7440-50-8	6010B	mg/L	<0.025		**0.011**	J	**0.0056**	J	**0.0027**	J	<0.0027	
Cr (VI)	18540-29-9	7196A	mg/L	<0.0017		<0.0017		<0.0017		<0.0017		<0.0017	
Cyanide, Amenable	NA	9012A	mg/L	<0.01		<0.01		<0.01		<0.01		<0.01	
Iron	7439-89-6	6010B	mg/L	**0.89**		**7.3**		**2**		**0.82**		**0.93**	
Lead	7439-92-1	6010B	mg/L	**0.0028**	J	**0.057**		**0.012**		**0.0027**	J	**0.0026**	J
Magnesium	7439-95-4	6010B	mg/L	**2.3**	J	**3**	J	**3**	J	**2.1**	J	**2.5**	J
Manganese	7439-96-5	6010B	mg/L	**0.0081**	J	**0.15**		**0.026**		**0.011**	J	**0.009**	J
Mercury	7439-97-6	7470A	mg/L	<0.000038		<0.000038		<0.000038		<0.000038		<0.000038	
Nickel	7440-02-0	6010B	mg/L	<0.04		**0.0049**	J	**0.0023**	J	<0.0016		<0.0016	
Potassium	9/7/7440	6010B	mg/L	**0.98**	J	**2.6**	J	**1.6**	J	<0.75		**1.1**	J
Selenium	7782-49-2	6010B	mg/L	<0.005		<0.003		<0.003		<0.003		<0.003	
Silver	7440-22-4	6010B	mg/L	<0.005		<0.00068		<0.00068		<0.00068		<0.00068	
Sodium	7440-23-5	6010B	mg/L	**19**		**22**		**19**		**18**		**18**	
Thallium	7440-28-0	6010B	mg/L	<0.01		<0.0024		<0.0024		<0.0024		<0.0024	
Vanadium	7440-62-2	6010B	mg/L	**0.0035**	J	**0.0086**	J	**0.0062**	J	**0.003**	J	**0.0031**	J
Zinc	7440-66-6	6010B	mg/L	**0.0094**	J B	**0.11**	B	**0.027**	B	**0.0073**	J B	**0.0081**	J B

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -5: SPLP Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #2							
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU2-COMP	
	Lab ID			180-5172-5		180-5219-2		180-5219-3/180-5172-6		180-5172-3	
	Date Collected			10/21/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/21/2011	Qualifier
	CAS#	Analysis Method	Units								
Metals (ICP/MS)											
Antimony	**7440-36-0**	**6010B**	**mg/L**	<0.0013		<0.0013		<0.0013		<0.0013	
Arsenic	**7440-38-2**	**6010B**	**mg/L**	**0.0031**	J	**0.003**	J	<0.0027		**0.0032**	J
Barium	**7440-39-3**	**6010B**	**mg/L**	**0.0093**	J	**0.0095**	J	**0.01**	J	**0.012**	J
Beryllium	**7440-41-7**	**6010B**	**mg/L**	<0.0013		<0.00023		<0.00023		<0.0013	
Boron	**7440-42-8**	**6010B**	**mg/L**	**0.25**		**0.27**		**0.28**		**0.34**	
Cadmium	**7440-43-9**	**6010B**	**mg/L**	<0.0013		<0.00013		<0.00013		<0.0013	
Calcium	**7440-70-2**	**6010B**	**mg/L**	**19**	B	**21**	B	**17**	B	**19**	B
Chromium	**7440-47-3**	**6010B**	**mg/L**	**0.0036**	J B	**0.0035**	J B	**0.0041**	J B	**0.0048**	J B
Cobalt	**7440-48-4**	**6010B**	**mg/L**	**0.00078**	J B	**0.0011**	J B	**0.0015**	J B	**0.0012**	J B
Copper	**7440-50-8**	**6010B**	**mg/L**	**0.0034**	J	**0.0036**	J	**0.0049**	J	**0.0035**	J
Cr (VI)	**18540-29-9**	**7196A**	**mg/L**	<0.0017		<0.0017		<0.0017		<0.0017	
Cyanide, Amenable	**NA**	**9012A**	**mg/L**	<0.01		<0.01		<0.01		<0.01	
Iron	**7439-89-6**	**6010B**	**mg/L**	**1.1**		**1.1**		**1.5**		**1.4**	
Lead	**7439-92-1**	**6010B**	**mg/L**	**0.0056**		**0.0066**		**0.006**		**0.0052**	
Magnesium	**7439-95-4**	**6010B**	**mg/L**	**2.3**	J	**2.6**	J	**2**	J	**2.4**	J
Manganese	**7439-96-5**	**6010B**	**mg/L**	**0.013**	J	**0.019**		**0.02**		**0.016**	
Mercury	**7439-97-6**	**7470A**	**mg/L**	<0.000038		<0.000038		<0.000038		<0.000038	
Nickel	**7440-02-0**	**6010B**	**mg/L**	**0.0023**	J	**0.0017**	J	**0.0023**	J	**0.0019**	J
Potassium	**9/7/7440**	**6010B**	**mg/L**	**0.85**	J	**0.92**	J	**0.9**	J	**1**	J
Selenium	**7782-49-2**	**6010B**	**mg/L**	<0.003		<0.003		<0.003		<0.003	
Silver	**7440-22-4**	**6010B**	**mg/L**	<0.00068		<0.00068		<0.00068		<0.00068	
Sodium	**7440-23-5**	**6010B**	**mg/L**	**18**		**19**		**19**		**20**	
Thallium	**7440-28-0**	**6010B**	**mg/L**	<0.0024		<0.0024		<0.0024		<0.0024	
Vanadium	**7440-62-2**	**6010B**	**mg/L**	**0.0051**	J	**0.0033**	J	**0.004**	J	**0.0057**	J
Zinc	**7440-66-6**	**6010B**	**mg/L**	**0.012**	J B	**0.016**	J B	**0.012**	J B	**0.014**	J B

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table -5: SPLP Analytical Results - Metals and Amenable Cyanide

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)		CH-2011-MU3-COMP	
	Lab ID			180-5219-4		180-5219-5		180-5219-6		180-5048-3	
	Date Collected			10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
	CAS#	Analysis Method	Units								
Metals (ICP/MS)											
Antimony	**7440-36-0**	**6010B**	**mg/L**	<0.0013		<0.0013		<0.0013		<0.0013	
Arsenic	**7440-38-2**	**6010B**	**mg/L**	**0.0036**	J	**0.0027**	J	<0.0027		<0.0027	
Barium	**7440-39-3**	**6010B**	**mg/L**	**0.014**	J	**0.015**	J	**0.012**	J	**0.015**	J
Beryllium	**7440-41-7**	**6010B**	**mg/L**	<0.00023		<0.00023		<0.00023		<0.00023	
Boron	**7440-42-8**	**6010B**	**mg/L**	**0.27**		**0.25**		**0.28**		**0.25**	
Cadmium	**7440-43-9**	**6010B**	**mg/L**	<0.00013		<0.00013		<0.00013		<0.00013	
Calcium	**7440-70-2**	**6010B**	**mg/L**	**17**	B	**19**	B	**21**	B	**17**	B
Chromium	**7440-47-3**	**6010B**	**mg/L**	**0.0051**	B	**0.005**	B	**0.0033**	J B	**0.005**	B
Cobalt	**7440-48-4**	**6010B**	**mg/L**	**0.0016**	J B	**0.0015**	J B	**0.00047**	J B	***0.0013***	J B
Copper	**7440-50-8**	**6010B**	**mg/L**	**0.0047**	J	**0.0044**	J	<0.0027		**0.0045**	J
Cr (VI)	**18540-29-9**	**7196A**	**mg/L**	<0.0017		<0.0017		<0.0017		<0.0017	
Cyanide, Amenable	**NA**	**9012A**	**mg/L**	<0.01		<0.01		<0.01		<0.01	
Iron	**7439-89-6**	**6010B**	**mg/L**	**2.2**		**1.8**		**0.9**		**1.9**	
Lead	**7439-92-1**	**6010B**	**mg/L**	**0.0063**		**0.0039**		**0.0021**	J	**0.0049**	
Magnesium	**7439-95-4**	**6010B**	**mg/L**	**2.5**	J	**2.4**	J	**2.3**	J	**2.5**	J
Manganese	**7439-96-5**	**6010B**	**mg/L**	**0.023**		**0.018**		**0.0082**	J	**0.021**	
Mercury	**7439-97-6**	**7470A**	**mg/L**	<0.000038		<0.000038		<0.000038		<0.000038	
Nickel	**7440-02-0**	**6010B**	**mg/L**	**0.0027**	J	**0.003**	J	<0.0016		**0.0018**	J
Potassium	**9/7/7440**	**6010B**	**mg/L**	**1.3**	J	**1.4**	J	**0.94**	J	**1.3**	J
Selenium	**7782-49-2**	**6010B**	**mg/L**	<0.003		<0.003		<0.003		<0.003	
Silver	**7440-22-4**	**6010B**	**mg/L**	<0.00068		<0.00068		<0.00068		<0.00068	
Sodium	**7440-23-5**	**6010B**	**mg/L**	**18**		**18**		**18**		**18**	
Thallium	**7440-28-0**	**6010B**	**mg/L**	<0.0024		<0.0024		<0.0024		<0.0024	
Vanadium	**7440-62-2**	**6010B**	**mg/L**	**0.007**	J	**0.0065**	J	**0.004**	J	**0.0065**	J
Zinc	**7440-66-6**	**6010B**	**mg/L**	**0.014**	J B	**0.011**	J B	**0.0064**	J B	**0.012**	J B

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate
B - Compound was found in the blank and sample.
NA - Not Applicable
< - Not detected

APPENDIX B

Table - 6: Sediment Analytical Results - PCBs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units												
PCBs															
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8082	ug/Kg	**23**		**23**		**24**		**18**		**22**		**19**	
PCB-1016	12674-11-2	8082	ug/Kg	**21**		**24**		**29**		<1.7		**48**		**14**	
PCB-1221	11104-28-2	8082	ug/Kg	<3.3		<3.2		<3.1		<2.2		<2.7		<2.6	
PCB-1232	11141-16-5	8082	ug/Kg	<2.9		<2.9		<2.8		**27**		**290**		**77**	
PCB-1242	53469-21-9	8082	ug/Kg	<2.8		<2.7		<2.6		<1.9		<2.3		<2.2	
PCB-1248	12672-29-6	8082	ug/Kg	<1.6		<1.6		**1.5**		<1.1		<1.3		**40**	
PCB-1254	11097-69-1	8082	ug/Kg	**67**		**64**		**70**		**16**		**250**		**19**	
PCB-1260	11096-82-5	8082	ug/Kg	<3.8		<2.4		<2.3		<1.7		<2		<1.9	
Polychlorinated biphenyls, Total	1336-36-3	8082	ug/Kg	**88**		**88**		**99**		**43**		**590**		**150**	
Tetrachloro-m-xylene	877-09-8	8082	ug/Kg	**16**		**17**		**18**		**11**		**14**		**14**	
Nonhalogenated Organic															
* Bis (2-ethoxyethyl) ether (Surr)	112-36-7	8015C	mg/Kg	**330**		**310**		**310**		**230**		**290**		**280**	
Ethylene glycol	107-21-1	8015C	mg/Kg	<210		<200		<190		<140		<170		<170	

Bold - Analysis is above detection limit

< - Not detected

Table - 6: Sediment Analytical Results - PCBs

Parameter	Matrix			Management Unit #2											
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU3-G1	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3		180-5048-1	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
	CAS#	Analysis Method	Units												
PCBs															
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8082	ug/Kg	**23**		**19**		**18**		**27**		**19**		**22**	
PCB-1016	12674-11-2	8082	ug/Kg	**19**		**22**		**9.3**	J	**24**		**14**		**19**	
PCB-1221	11104-28-2	8082	ug/Kg	<3		<2.4		<2.4		<3.4		<2.4		<2.9	
PCB-1232	11141-16-5	8082	ug/Kg	<2.7		<2.2		<2.1		<3		<2.2		<2.6	
PCB-1242	53469-21-9	8082	ug/Kg	<2.6		<2.1		<2		<2.9		<2.1		<2.5	
PCB-1248	12672-29-6	8082	ug/Kg	<1.5		<1.2		<1.2		<1.7		<1.2		<1.4	
PCB-1254	11097-69-1	8082	ug/Kg	**40**		**30**		**14**		**69**		**25**		**38**	
PCB-1260	11096-82-5	8082	ug/Kg	<2.2		<1.8		<1.8		<2.5		<1.8		<2.1	
Polychlorinated biphenyls, Total	1336-36-3	8082	ug/Kg	**59**		**52**		**23**		**93**		**39**		**57**	
Tetrachloro-m-xylene	877-09-8	8082	ug/Kg	**17**		**13**		**13**		**17**		**14**		**15**	
Nonhalogenated Organic															
* Bis (2-ethoxyethyl) ether (Surr)	112-36-7	8015C	mg/Kg	**280**		**260**		**220**		**360**		**240**		**210**	
Ethylene glycol	107-21-1	8015C	mg/Kg	<190		<160		<150		<210		<150		<180	

Bold - Analysis is above detection limit

< - Not detected

APPENDIX B

Table - 6: Sediment Analytical Results - PCBs

Parameter	Matrix			Management Unit #3									
	Sample ID			CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	Date Collected			10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units										
PCBs													
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8082	ug/Kg	**19**		**25**		**21**		**21**		**23**	
PCB-1016	12674-11-2	8082	ug/Kg	**22**		**29**		**14**		**21**		**16**	
PCB-1221	11104-28-2	8082	ug/Kg	<2.8		<3.3		<2.7		<2.8		<2.7	
PCB-1232	11141-16-5	8082	ug/Kg	<2.5		<3		<2.4		<2.5		<2.5	
PCB-1242	53469-21-9	8082	ug/Kg	<2.3		<2.8		<2.3		<2.4		<1.5	
PCB-1248	12672-29-6	8082	ug/Kg	<1.4		<1.6		49		<1.4		<2.2	
PCB-1254	11097-69-1	8082	ug/Kg	**31**		**28**		**26**		**27**		**24**	
PCB-1260	11096-82-5	8082	ug/Kg	<2		<2.5		<2		<2.1		<3.4	
Polychlorinated biphenyls, Total	1336-36-3	8082	ug/Kg	**53**		**57**		**89**		**48**		**40**	
Tetrachloro-m-xylene	877-09-8	8082	ug/Kg	**13**		**18**		**14**		**14**		**15**	
Nonhalogenated Organic													
* Bis (2-ethoxyethyl) ether (Surr)	112-36-7	8015C	mg/Kg	**240**		**270**		**280**		**270**		**290**	
Ethylene glycol	107-21-1	8015C	mg/Kg	<180		<180		<170		<180		<190	

Bold - Analysis is above detection limit

< - Not detected

APPENDIX B

Table - 7: Elutriate Analytical Results - PCBs

Parameter	Matrix			Management Unit #1							
	Sample ID			CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS		CH-2011-MU1-COMP	
	Lab ID			180-5219-16		180-5219-15		180-5219-9		180-5172-9	
	Date Collected			10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units								
PCBs											
*** DCB Decachlorobiphenyl (Surr)**	**2051-24-3**	**8082A**	**ug/L**	**0.019**		**0.019**		**0.015**		**0.015**	
PCB-1016	**12674-11-2**	**8082A**	**ug/L**	<0.012		<0.012		<0.0024		<0.0024	
PCB-1221	**11104-28-2**	**8082A**	**ug/L**	<0.012		<0.012		<0.0023		<0.0023	
PCB-1232	**11141-16-5**	**8082A**	**ug/L**	<0.014		<0.014		<0.0028		<0.0028	
PCB-1242	**53469-21-9**	**8082A**	**ug/L**	<0.0088		<0.0088		<0.0018		<0.0018	
PCB-1248	**12672-29-6**	**8082A**	**ug/L**	<0.011		<0.011		<0.0021		<0.0021	
PCB-1254	**11097-69-1**	**8082A**	**ug/L**	<0.011		<0.011		<0.0022		<0.0022	
PCB-1260	**11096-82-5**	**8082A**	**ug/L**	<0.0065		<0.0065		<0.0013		<0.0013	
Polychlorinated biphenyls, Total	**1336-36-3**	**8082A**	**ug/L**	<0.014		<0.014		<0.0028		<0.0028	
Tetrachloro-m-xylene	**877-09-8**	**8082A**	**ug/L**	**0.02**		**0.018**		**0.016**		**0.016**	

Bold - Analysis is above detection limit

< - Not detected

***** Surrogate compound

APPENDIX B

Table - 7: Elutriate Analytical Results - PCBs

Parameter	Matrix			Management Unit #2					
	Sample ID			CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU2-COMP	
	Lab ID			180-5219-10		180-5219-11		180-5172-10	
	Date Collected			10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
	CAS#	Analysis Method	Units						
PCBs									
*** DCB Decachlorobiphenyl (Surr)**	**2051-24-3**	**8082A**	**ug/L**	**0.015**		**0.016**		**0.016**	
PCB-1016	**12674-11-2**	**8082A**	**ug/L**	<0.0024		<0.0024		<0.0024	
PCB-1221	**11104-28-2**	**8082A**	**ug/L**	<0.0023		<0.0023		<0.0023	
PCB-1232	**11141-16-5**	**8082A**	**ug/L**	<0.0028		<0.0028		<0.0028	
PCB-1242	**53469-21-9**	**8082A**	**ug/L**	<0.0018		<0.0018		<0.0018	
PCB-1248	**12672-29-6**	**8082A**	**ug/L**	<0.0021		<0.0021		<0.0021	
PCB-1254	**11097-69-1**	**8082A**	**ug/L**	<0.0022		<0.0022		<0.0022	
PCB-1260	**11096-82-5**	**8082A**	**ug/L**	<0.0013		<0.0013		<0.0013	
Polychlorinated biphenyls, Total	**1336-36-3**	**8082A**	**ug/L**	<0.0028		<0.0028		<0.0028	
Tetrachloro-m-xylene	**877-09-8**	**8082A**	**ug/L**	**0.015**		**0.016**		**0.015**	

Bold - Analysis is above detection limit

< - Not detected

***** Surrogate compound

APPENDIX B

Table - 7: Elutriate Analytical Results - PCBs

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)		CH-2011-MU3-COMP	
	Lab ID			180-5219-12		180-5219-13		180-5219-14		180-5048-6	
	Date Collected			10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
	CAS#	Analysis Method	Units								
PCBs											
*** DCB Decachlorobiphenyl (Surr)**	**2051-24-3**	**8082A**	**ug/L**	**0.02**		**0.02**		**0.019**		**0.016**	
PCB-1016	**12674-11-2**	**8082A**	**ug/L**	<0.012		<0.012		<0.012		<0.0024	
PCB-1221	**11104-28-2**	**8082A**	**ug/L**	<0.012		<0.012		<0.012		<0.0023	
PCB-1232	**11141-16-5**	**8082A**	**ug/L**	<0.014		<0.014		<0.014		<0.0028	
PCB-1242	**53469-21-9**	**8082A**	**ug/L**	<0.0088		<0.0088		<0.0088		<0.0018	
PCB-1248	**12672-29-6**	**8082A**	**ug/L**	<0.011		<0.011		<0.011		<0.0021	
PCB-1254	**11097-69-1**	**8082A**	**ug/L**	<0.011		<0.011		<0.011		<0.0022	
PCB-1260	**11096-82-5**	**8082A**	**ug/L**	<0.0065		<0.0065		<0.0065		<0.0013	
Polychlorinated biphenyls, Total	**1336-36-3**	**8082A**	**ug/L**	<0.014		<0.014		<0.014		<0.0028	
Tetrachloro-m-xylene	**877-09-8**	**8082A**	**ug/L**	**0.02**		**0.019**		**0.018**		**0.016**	

Bold - Analysis is above detection limit

< - Not detected

***** Surrogate compound

APPENDIX B

Table - 8: Sediment Analytical Results - Pesticides/Herbicides

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
Pesticides	**CAS#**	**Analysis Method**	**Units**												
2,4'-DDD	53-19-0	8081A	ug/kg	**6.8**		**5.6**		**7**		**1.2**		**21**		**2.2**	
2,4'-DDE	3424-82-6	8081A	ug/kg	<0.16		<0.16		<0.15		<0.11		<0.13		<0.13	
2,4'-DDT	789-02-6	8081A	ug/kg	<0.15		<0.15		<0.14		<0.1		<0.12		<0.12	
4,4'-DDD	72-54-8	8081A	ug/kg	**2.9**	p	**3.1**	p	**4.4**	p	<0.15		**3.2**	p	**1.7**	p
4,4'-DDE	72-55-9	8081A	ug/kg	**2.8**	p	**2.9**	p	**3.9**	p	**0.69**	J	**6**	p	**2.5**	
4,4'-DDT	50-29-3	8081A	ug/kg	**5.8**		**4.6**		**5.7**		**0.57**	J	**18**		**1.6**	
Aldrin	309-00-2	8081A	ug/kg	<0.31		<0.3		<0.29		<0.21		<0.25		**0.51**	J
alpha-BHC	319-84-6	8081A	ug/kg	<0.28		<0.27		<0.26		<0.19		<0.23		<0.22	
alpha-Chlordane	5103-71-9	8081A	ug/kg	<0.34		<0.33		<0.32		<0.23		<0.28		<0.27	
beta-BHC	319-85-7	8081A	ug/kg	<0.44		<0.44		<0.42		<0.3		<0.37		<0.35	
Chlordane (technical)	57-74-9	8081A	ug/kg	<0.75		<0.74		<0.71		<0.51		<0.63		<0.6	
* DCB Decachlorobiphenyl	2051-24-3	8081A	ug/kg	**21**		**21**		**22**		**15**		**18**		**17**	
* DCB Decachlorobiphenyl	2051-24-3	8081A	ug/kg	**21**		**22**		**22**		**14**		**17**		**17**	
Dieldrin	60-57-1	8081A	ug/kg	<0.29		<0.28		<0.27		<0.19		<0.24		<0.23	
Endosulfan I	959-98-8	8081A	ug/kg	<0.32		<0.32		<0.3		**0.45**	J	**1.2**	J	<0.26	
Endosulfan II	33213-65-9	8081A	ug/kg	<0.3		<0.3		<0.29		<0.21		<0.25		<0.24	
Endosulfan sulfate	1031-07-8	8081A	ug/kg	<0.18		<0.18		<0.17		<0.12		**0.64**	J p	<0.14	
Endrin	72-20-8	8081A	ug/kg	<0.33		<0.33		<0.31		<0.23		<0.28		<0.26	
Endrin aldehyde	7421-93-4	8081A	ug/kg	<0.33		<0.33		<0.31		<0.23		<0.28		<0.26	
Endrin ketone	53494-70-5	8081A	ug/kg	<0.27		<0.26		<0.25		<0.18		<0.22		<0.21	
gamma-BHC (Lindane)	58-89-9	8081A	ug/kg	**2.5**		**3.1**		**3.8**		**0.69**	J	<0.25		**2.1**	
gamma-Chlordane	5103-74-2	8081A	ug/kg	<0.34		<0.33		<0.32		0.23		0.28		0.27	
Heptachlor	76-44-8	8081A	ug/kg	<0.38		<0.37		<0.36		<0.26		<0.32		<0.3	
Heptachlor epoxide	1024-57-3	8081A	ug/kg	<0.33		<0.33		**0.49**	J p	<0.23		<0.28		<0.26	
Methoxychlor	72-43-5	8081A	ug/kg	<0.36		<0.35		<0.34		<0.24		<0.3		<0.28	
Tetrachloro-m-xylene	877-09-8	8081A	ug/kg	**16**		**16**		**18**		**10**		**14**		**13**	
Tetrachloro-m-xylene	877-09-8	8081A	ug/kg	**17**		**18**		**17**		**11**		**11**		**13**	
Toxaphene	8001-35-2	8081A	ug/kg	<11		<11		<11		<7.8		<9.5		<9.1	
Herbicides															
2,4,5-T	93-76-5	8151A	ug/kg	<5.2		<5.1		<4.9		<3.5		<4.3		<4.1	
2,4-D	94-75-7	8151A	ug/kg	<11		<11		<11		<7.7		<9.4		<9	
* 2,4-Dichlorophenylacetic acid	19719-28-9	8151A	ug/kg	**220**		**210**		**260**		**180**		**220**		**210**	
Dalapon	75-99-0	8151A	ug/kg	<15		<14		<14		<10		<12		<12	
Dinoseb	88-85-7	8151A	ug/kg	<9.4		<9.3		<8.8		<6.4		<7.8		<7.5	
Silvex (2,4,5-TP)	93-72-1	8151A	ug/kg	<4.3		<4.3		<4.1		<3		<3.6		<3.5	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
* Surrogate compound
< - Not detected
P - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

APPENDIX B

Table - 8: Sediment Analytical Results - Pesticides/Herbicides

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
Pesticides	**CAS#**	**Analysis Method**	**Units**										
2,4'-DDD	53-19-0	8081A	ug/kg	**3.6**		**2.5**		<0.075		**5.8**		**2.7**	
2,4'-DDE	3424-82-6	8081A	ug/kg	<0.15		<0.12		<0.12		**<0.16**		**<0.12**	
2,4'-DDT	789-02-6	8081A	ug/kg	<0.14		<0.11		<0.11		<0.15		<0.11	
4,4'-DDD	72-54-8	8081A	ug/kg	**3.7**	p	**2.3**	p	**1.7**	p	**3**	p	**2.4**	p
4,4'-DDE	72-55-9	8081A	ug/kg	**4.3**		**2.8**		**2.1**		**5.4**		**3.3**	
4,4'-DDT	50-29-3	8081A	ug/kg	**7.4**		**1.6**		**1.2**	J	**4.8**		**2.1**	
Aldrin	309-00-2	8081A	ug/kg	<0.28		<0.23		<0.22		<0.31		<0.23	
alpha-BHC	319-84-6	8081A	ug/kg	<0.26		<0.21		<0.2		<0.29		<0.21	
alpha-Chlordane	5103-71-9	8081A	ug/kg	<0.31		<0.25		<0.25		<0.35		<0.25	
beta-BHC	319-85-7	8081A	ug/kg	<0.41		<0.33		<0.32		<0.46		<0.33	
Chlordane (technical)	57-74-9	8081A	ug/kg	<0.69		<0.57		<0.55		<0.78		<0.56	
* DCB Decachlorobiphenyl	2051-24-3	8081A	ug/kg	**21**		**17**		**16**		**23**		**16**	
* DCB Decachlorobiphenyl	2051-24-3	8081A	ug/kg	**21**		**17**		**16**		**23**		**17**	
Dieldrin	60-57-1	8081A	ug/kg	<0.26		<0.21		<0.21		<0.29		<0.21	
Endosulfan I	959-98-8	8081A	ug/kg	<0.29		<0.24		<0.23		<0.33		<0.24	
Endosulfan II	33213-65-9	8081A	ug/kg	<0.28		<0.23		<0.22		<0.31		<0.22	
Endosulfan sulfate	1031-07-8	8081A	ug/kg	<0.16		<0.13		<0.13		<0.18		<0.13	
Endrin	72-20-8	8081A	ug/kg	<0.3		<0.25		<0.24		<0.34		<0.24	
Endrin aldehyde	7421-93-4	8081A	ug/kg	<0.3		<0.25		<0.24		<0.34		<0.25	
Endrin ketone	53494-70-5	8081A	ug/kg	<0.24		<0.2		<0.19		<0.27		<0.2	
gamma-BHC (Lindane)	58-89-9	8081A	ug/kg	**3.1**		**2.4**		**1.6**		<0.31		<0.22	
gamma-Chlordane	5103-74-2	8081A	ug/kg	<0.31		<0.25		<0.25		**0.35**		0.25	
Heptachlor	76-44-8	8081A	ug/kg	<0.35		<0.29		<0.28		<0.39		<0.28	
Heptachlor epoxide	1024-57-3	8081A	ug/kg	<0.31		<0.25		<0.24		<0.34		<0.25	
Methoxychlor	72-43-5	8081A	ug/kg	<0.33		<0.27		<0.26		<0.37		<0.26	
Tetrachloro-m-xylene	877-09-8	8081A	ug/kg	**18**		**14**		**12**		**16**		**13**	
Tetrachloro-m-xylene	877-09-8	8081A	ug/kg	**17**		**12**		**13**		**17**		**13**	
Toxaphene	8001-35-2	8081A	ug/kg	<10		<8.6		<8.3		<12		<8.4	
Herbicides													
2,4,5-T	93-76-5	8151A	ug/kg	<4.7		<3.9		<3.8		<5.3		<3.8	
2,4-D	94-75-7	8151A	ug/kg	<10		<8.5		<8.3		<12		<8.3	
* 2,4-Dichlorophenylacetic acid	19719-28-9	8151A	ug/kg	**160**		**170**		**170**		**320**		**210**	
Dalapon	75-99-0	8151A	ug/kg	<13		<11		<11		<15		<11	
Dinoseb	88-85-7	8151A	ug/kg	<8.5		<7.1		<6.9		<9.7		<6.9	
Silvex (2,4,5-TP)	93-72-1	8151A	ug/kg	<3.9		<3.3		<3.2		<4.5		<3.2	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
* Surrogate compound
< - Not detected
P - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

APPENDIX B

Table - 8: Sediment Analytical Results - Pesticides/Herbicides

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	Date Collected			10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
Pesticides	**CAS#**	**Analysis Method**	**Units**												
2,4'-DDD	53-19-0	8081A	ug/kg	**3.5**		<0.087		**2.6**		**2.1**		<0.088		**2.3**	
2,4'-DDE	3424-82-6	8081A	ug/kg	<0.14		<0.13		<0.16		<0.13		<0.14		<0.14	
2,4'-DDT	789-02-6	8081A	ug/kg	<0.13		<0.12		<0.15		<0.12		<0.13		<0.13	
4,4'-DDD	72-54-8	8081A	ug/kg	**3.1**	p	**2.3**	p	**1.6**	J p	**1.4**	p	**4.2**	p	**1.7**	p
4,4'-DDE	72-55-9	8081A	ug/kg	**4.4**		**3.9**		**3.3**		**2.9**		**19**		**3.4**	
4,4'-DDT	50-29-3	8081A	ug/kg	<0.23		**1**	J p	**1.8**		**1.5**		**38**		**1.4**	J
Aldrin	309-00-2	8081A	ug/kg	<0.27		<0.26		<0.31		<0.25		<0.26		<0.28	
alpha-BHC	319-84-6	8081A	ug/kg	<0.25		<0.23		<0.28		<0.23		<0.24		<0.25	
alpha-Chlordane	5103-71-9	8081A	ug/kg	<0.3		<0.29		<0.34		<0.28		<0.29		<0.31	
beta-BHC	319-85-7	8081A	ug/kg	<0.39		<0.37		<0.45		<0.37		<0.38		<0.4	
Chlordane (technical)	57-74-9	8081A	ug/kg	<0.67		<0.64		<0.77		<0.62		<0.64		<0.69	
* DCB Decachlorobiphenyl	2051-24-3	8081A	ug/kg	**20**		**18**		**22**		**17**		**17**		**19**	
* DCB Decachlorobiphenyl	2051-24-3	8081A	ug/kg	**20**		**18**		**22**		**17**		**17**		**19**	
Dieldrin	60-57-1	8081A	ug/kg	<0.25		**0.35**	J p	<0.29		<0.24		<0.24		<0.26	
Endosulfan I	959-98-8	8081A	ug/kg	<0.28		<0.27		<0.33		<0.27		<0.28		<0.29	
Endosulfan II	33213-65-9	8081A	ug/kg	<0.27		<0.25		<0.31		<0.25		<0.26		<0.27	
Endosulfan sulfate	1031-07-8	8081A	ug/kg	<0.16		<0.15		<0.18		<0.15		<0.15		<0.16	
Endrin	72-20-8	8081A	ug/kg	<0.29		<0.28		<0.34		<0.27		<0.28		<0.3	
Endrin aldehyde	7421-93-4	8081A	ug/kg	<0.29		<0.28		<0.34		<0.28		<0.28		<0.3	
Endrin ketone	53494-70-5	8081A	ug/kg	<0.23		<0.22		<0.27		<0.22		<0.23		<0.24	
gamma-BHC (Lindane)	58-89-9	8081A	ug/kg	**3**		**2.8**		**1.2**	J p	**0.57**	J p	<0.26		**3**	
gamma-Chlordane	5103-74-2	8081A	ug/kg	**0.3**		**0.28**		<0.34		**0.28**		**0.29**		**0.31**	
Heptachlor	76-44-8	8081A	ug/kg	<0.34		<0.32		<0.39		<0.32		<0.33		<0.35	
Heptachlor epoxide	1024-57-3	8081A	ug/kg	**0.38**	J p	<0.28		**<0.34**		<0.28		<0.29		<0.3	
Methoxychlor	72-43-5	8081A	ug/kg	**2.3**	J	**1.6**	J	<0.36		<0.3		**2.8**	J	<0.32	
Tetrachloro-m-xylene	877-09-8	8081A	ug/kg	**14**		**13**		**18**		**13**		**13**		**13**	
Tetrachloro-m-xylene	877-09-8	8081A	ug/kg	**15**		**14**		**17**		**11**		**12**		**15**	
Toxaphene	8001-35-2	8081A	ug/kg	<10		<9.6		<12		<9.5		<9.8		<10	
Herbicides															
2,4,5-T	93-76-5	8151A	ug/kg	<37		<4.4		<5.3		**200**		<4.4		<4.7	
2,4-D	94-75-7	8151A	ug/kg	<150		<9.6		<12		<4.3		<9.7		<10	
* 2,4-Dichlorophenylacetic acid	19719-28-9	8151A	ug/kg	**210**		**240**		**260**		<9.4		**250**		**210**	
Dalapon	75-99-0	8151A	ug/kg	<160		<12		<15		<12		<13		<13	
Dinoseb	88-85-7	8151A	ug/kg	<22		<8		<9.6		<7.8		<8		<8.6	
Silvex (2,4,5-TP)	93-72-1	8151A	ug/kg	<37		<3.7		<4.4		<3.6		<3.7		<4	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
* Surrogate compound
< - Not detected
P - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

APPENDIX B

Table - 9: Sediment Analytical Results - Extended Pesticides/Herbicides

Parameter	Matrix			Management Unit #1		Management Unit #2		Management Unit #3	
	Sample ID			CH-2011-MU1-COMP		CH-2011-MU2-COMP		CH-2011-MU3-COMP	
	Sediment Lab ID			A114302-02		A114302-01		A114210-01	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/18/2011	Qualifier
Solid	CAS#	Analysis Method	Units						
% Solids		SM 2540B	% by Weight	54.7		64.6		52.3	
Organochlorine Pesticides by EPA Method 8081A									
4,4´-DDD	72-54-8	EPA 8081A	ug/kg	**11**		**8.9**		7.6	J
4,4´-DDE	72-55-9	EPA 8081A	ug/kg	**5.7**	J	**4.3**	J	<0.75	
4,4´-DDT	50-29-3	EPA 8081A	ug/kg	<1.2	LC	<1.0	LC	<1.2	LC
Aldrin	309-00-2	EPA 8081A	ug/kg	<0.40		<0.34		<0.42	
alpha-BHC	319-84-6	EPA 8081A	ug/kg	<0.40		<0.34		<0.42	
alpha-Chlordane	5103-71-9	EPA 8081A	ug/kg	<0.27		<0.23		<0.29	
beta-BHC	319-85-7	EPA 8081A	ug/kg	<0.46		<0.39		<0.48	
Chlordane (tech)	57-74-9	EPA 8081A	ug/kg	<8.0		<6.8		<8.4	
* Decachlorobiphenyl	2051-24-3	EPA 8081A	ug/kg	**237**		**175**		**232**	
delta-BHC	319-86-8	EPA 8081A	ug/kg	<1.5		<1.2		<1.5	
Dieldrin	60-57-1	EPA 8081A	ug/kg	<0.91		<0.77		<0.96	
Endosulfan I	959-98-8	EPA 8081A	ug/kg	<0.37		<0.31		<0.38	
Endosulfan II	33213-65-9	EPA 8081A	ug/kg	<0.71		<0.60		<0.75	
Endosulfan sulfate	1031-07-8	EPA 8081A	ug/kg	<1.2		<1.0		<1.3	
Endrin	72-20-8	EPA 8081A	ug/kg	<1.0		<0.87		<1.1	
Endrin aldehyde	7421-93-4	EPA 8081A	ug/kg	<1.7		<1.4		<1.7	
Endrin ketone	53494-70-5	EPA 8081A	ug/kg	<0.82		<0.70		<0.86	
gamma-BHC (Lindane)	58-89-9	EPA 8081A	ug/kg	<0.37		<0.31		<0.38	
gamma-Chlordane	5566-34-7	EPA 8081A	ug/kg	<0.35		<0.29		<0.36	
Heptachlor	76-44-8	EPA 8081A	ug/kg	<2.4		<2.0		<2.5	
Heptachlor epoxide	1024-57-3	EPA 8081A	ug/kg	<0.40		<0.34		<0.42	
Methoxychlor	72-43-5	EPA 8081A	ug/kg	<4.4	LC	<3.7	LC	<4.6	LC
* Tetrachloro-meta-xylene	877-09-8	EPA 8081A	ug/kg	**209**		**154**		**191**	
Toxaphene	8001-35-2	EPA 8081A	ug/kg	<0.091		<0.077		<0.096	
Acide Herbicides									
2,4,5-T	93-76-5	EPA 8151A	ug/kg	<33		<28		<34	
2,4,5-TP (Silvex)	93-72-1	EPA 8151A	ug/kg	<10		<8.5		<11	
2,4-D	94-75-7	EPA 8151A	ug/kg	<26		<22		<27	
2,4-DB	94-82-6	EPA 8151A	ug/kg	<26		<22		<27	
* 2,4-D-d5	352438-69-8	EPA 8151A	ug/kg	**808**		**735**		**923**	
Acifluorfen	50594-66-6	EPA 8151A	ug/kg	<35		<29		<36	
Bentazon	25057-89-0	EPA 8151A	ug/kg	<11		<9.0		<11	
Bromoxynil	1689-84-5	EPA 8151A	ug/kg	<6.2		<5.3		<6.5	
Dacthal	2136-79-0	EPA 8151A	ug/kg	<7.9		<6.7		<8.2	
Dalapon	75-99-0	EPA 8151A	ug/kg	<82		<70		<86	
Dicamba	1918-00-9	EPA 8151A	ug/kg	<14		<12		<15	
Dichlorprop	120-36-5	EPA 8151A	ug/kg	<14		<12		<15	
Dinoseb	88-85-7	EPA 8151A	ug/kg	<12		<11		<13	
MCPA	94-74-6	EPA 8151A	ug/kg	<9.3		<7.9		<9.8	
MCPP	7085-19-0	EPA 8151A	ug/kg	<17		<14		<18	
Pentachlorophenol	87-86-5	EPA 8151A	ug/kg	<15		<13		<16	
Picloram	001918-02-1	EPA 8151A	ug/kg	<12		<9.8		<12	
Triclopyr	55335-06-3	EPA 8151A	ug/kg	<12		<10		<13	

APPENDIX B

Table - 9: Sediment Analytical Results - Extended Pesticides/Herbicides

Parameter	Matrix			Management Unit #1		Management Unit #2		Management Unit #3	
	Sample ID			CH-2011-MU1-COMP		CH-2011-MU2-COMP		CH-2011-MU3-COMP	
	Sediment Lab ID			A114302-02		A114302-01		A114210-01	
	Date Collected			10/21/2011	Qualifier	10/21/2011	Qualifier	10/18/2011	Qualifier
Base Neutral Pesticides									
Acetochlor	**34256-82-1**	**EPA 8270**	**ug/kg**	<18		<15		<19	
Alachlor	**15972-60-8**	**EPA 8270**	**ug/kg**	<18		<15		<19	
Atrazine	**1912-24-9**	**EPA 8270**	**ug/kg**	<9.5		<8.1		<9.9	
* Atrazine-d5	**NA**	**EPA 8270**	**ug/kg**	**316**		**288**		**343**	
Butylate	**2008-41-5**	**EPA 8270**	**ug/kg**	<18		<15		<19	
Chlorpyrifos	**2921-88-2**	**EPA 8270**	**ug/kg**	<7.3		<6.2		<7.7	
Cyanazine	**21725-46-2**	**EPA 8270**	**ug/kg**	<27		<23		<29	
Deisopropylatrazine	**1007-28-9**	**EPA 8270**	**ug/kg**	<24		<20		<25	
Desethylatrazine	**6190-65-4**	**EPA 8270**	**ug/kg**	<14		<11		<14	
Dimethenamid	**87674-68-8**	**EPA 8270**	**ug/kg**	<7.7		<6.5		<8.0	
EPTC	**759-94-4**	**EPA 8270**	**ug/kg**	<9.5		<8.1		<9.9	
Metolachlor	**51218-45-2**	**EPA 8270**	**ug/kg**	<5.5		<4.6		<5.7	
Metribuzin	**21087-64-9**	**EPA 8270**	**ug/kg**	<10		<8.8		<11	
* Parathion-d10	**350820-04-1**	**EPA 8270**	**ug/kg**	**490**		**398**		**494**	
Pendimethalin	**40487-42-1**	**EPA 8270**	**ug/kg**	<7.1		<6.0		<7.5	
Prometon	**1610-18-0**	**EPA 8270**	**ug/kg**	<22		<19		<23	
Propazine	**139-40-2**	**EPA 8270**	**ug/kg**	<10		<8.8		<11	
Simazine	**122-34-9**	**EPA 8270**	**ug/kg**	<14		<12		<15	
Trifluralin	**1582-09-8**	**EPA 8270**	**ug/kg**	<7.3		<6.2		<7.7	
*** Triphenyl phosphate**	**115-86-6**	**EPA 8270**	**ug/kg**	**454**		**359**		**481**	
N-Methyl Carbmate Pesticide									
3-Hydroxycarbofuran	**16655-82-6**	**EPA 8318**	**ug/kg**	<7.9		<6.7		<8.2	
Aldicarb	**116-06-3**	**EPA 8318**	**ug/kg**	<7.3	LC	<6.2	LC	<7.7	LC
Aldicarb sulfone	**1646-88-4**	**EPA 8318**	**ug/kg**	<7.1		<6.0		<7.5	
Aldicarb sulfoxide	**1646-87-3**	**EPA 8318**	**ug/kg**	<6.9		<5.9		<7.3	
Carbaryl	**63-25-2**	**EPA 8318**	**ug/kg**	<6.9	LC	<5.9	LC	<7.3	LC
Carbofuran	**1563-66-2**	**EPA 8318**	**ug/kg**	<7.7		<6.5		<8.0	
Methiocarb	**2032-65-7**	**EPA 8318**	**ug/kg**	<8.0	LC	<6.8	LC	<8.4	LC
Methomyl	**16752-77-5**	**EPA 8318**	**ug/kg**	<6.8	LC	<5.7	LC	<7.1	LC
Oxamyl	**23135-22-0**	**EPA 8318**	**ug/kg**	<6.8		<5.7		<7.1	
*** Promecarb**	**2631-37-0**	**EPA 8318**	**ug/kg**	**137**		**160**		**171**	
Propoxur	**114-26-1**	**EPA 8318**	**ug/kg**	<6.8	LC	<5.7	LC	<7.1	LC

Bold - Analysis is above detection limit
LC - Resuts may be biased low because of low continuing calibration verification (CCV).
* Surrogate compound
J - Analyte was detected but is below the reporting limit. The concentration is estimated.
< - Not detected

APPENDIX B

Table -10 : Elutriate Analytical Results - Pesticides/Herbicides

Parameter	Matrix			Management Unit #1							
	Sample ID			CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS		CH-2011-MU1-COMP	
	Lab ID			180-5219-16		180-5219-15		180-5219-9		180-5172-9	
	CAS#	Date Collected		10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier	10/21/2011	Qualifier
Pesticide		Analysis Method	Units								
alpha-Chlordane	5103-71-9	8081A	ug/L	<0.0047		<0.0046		<0.00092		<0.00092	
Chlordane (technical)	57-74-9	8081A	ug/L	<0.0079		<0.0078		<0.0016		<0.0016	
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8081A	ug/L	**0.0089**		**0.0086**		**0.015**		**0.016**	
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8081A	ug/L	**0.0082**		**0.0084**		**0.015**		**0.015**	
Endrin	72-20-8	8081A	ug/L	<0.0046		<0.0045		<0.00091		<0.00091	
gamma-BHC (Lindane)	58-89-9	8081A	ug/L	<0.0038		<0.0038		0.0025		**0.0029**	
gamma-Chlordane	5103-74-2	8081A	ug/L	<0.0046		<0.0045		<0.00091		<0.00091	
Heptachlor	76-44-8	8081A	ug/L	<0.0047		<0.0047		<0.00093		<0.00093	
Heptachlor epoxide	1024-57-3	8081A	ug/L	<0.0046		<0.0046		<0.00092		<0.00092	
Methoxychlor	72-43-5	8081A	ug/L	<0.0043		<0.0043		<0.00086		<0.00086	
* Tetrachloro-m-xylene	877-09-8	8081A	ug/L	**0.011**		**0.016**		**0.016**		**0.016**	
* Tetrachloro-m-xylene	877-09-8	8081A	ug/L	**0.016**		**0.01**		**0.019**		**0.015**	
Toxaphene	8001-35-2	8081A	ug/L	<0.089		<0.088		<0.018		<0.018	
Herbicides											
2,4-D	94-75-7	8151A	ug/L	<0.43		<0.43		<0.43		<0.43	
* 2,4-Dichlorophenylacetic acid	19719-28-9	8151A	ug/L	**5.1**		**3.1**		**4.5**		**6.5**	
Dalapon	75-99-0	8151A	ug/L	<0.65		<0.65		<0.65		<0.65	
Dinoseb	88-85-7	8151A	ug/L	<0.12		<0.12		<0.12		<0.12	
Silvex (2,4,5-TP)	93-72-1	8151A	ug/L	<0.1		<0.1		<0.1		<0.1	

Bold - Analysis is above detection limit
< - Not detected
* Surrogate compound

APPENDIX B

Table -10 : Elutriate Analytical Results - Pesticides/Herbicides

Parameter	Matrix			Management Unit #2					
	Sample ID			CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU2-COMP	
	Lab ID			180-5219-10		180-5219-11		180-5172-10	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/21/2011	Qualifier
Pesticide		Analysis Method	Units						
alpha-Chlordane	5103-71-9	8081A	ug/L	<0.00092		<0.00092		<0.00092	
Chlordane (technical)	57-74-9	8081A	ug/L	<0.0016		<0.0016		<0.0016	
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8081A	ug/L	**0.015**		**0.015**		**0.015**	
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8081A	ug/L	**0.014**		**0.015**		**0.016**	
Endrin	72-20-8	8081A	ug/L	<0.00091		<0.00091		<0.00091	
gamma-BHC (Lindane)	58-89-9	8081A	ug/L	0.0026		0.0027		**0.0017**	
gamma-Chlordane	5103-74-2	8081A	ug/L	<0.00091		<0.00091		<0.00091	
Heptachlor	76-44-8	8081A	ug/L	<0.00093		<0.00093		<0.00093	
Heptachlor epoxide	1024-57-3	8081A	ug/L	<0.00092		<0.00092		<0.00092	
Methoxychlor	72-43-5	8081A	ug/L	<0.00086		<0.00086		<0.00086	
* Tetrachloro-m-xylene	877-09-8	8081A	ug/L	**0.016**		**0.015**		**0.015**	
* Tetrachloro-m-xylene	877-09-8	8081A	ug/L	**0.014**		**0.015**		**0.014**	
Toxaphene	8001-35-2	8081A	ug/L	<0.018		<0.018		<0.018	
Herbicides									
2,4-D	94-75-7	8151A	ug/L	<0.43		<0.43		<0.43	
* 2,4-Dichlorophenylacetic acid	19719-28-9	8151A	ug/L	**4.4**		**3.4**		**5.1**	
Dalapon	75-99-0	8151A	ug/L	<0.65		<0.65		<0.65	
Dinoseb	88-85-7	8151A	ug/L	<0.12		<0.12		<0.12	
Silvex (2,4,5-TP)	93-72-1	8151A	ug/L	<0.1		<0.1		<0.1	

Bold - Analysis is above detection limit
< - Not detected
* Surrogate compound

APPENDIX B

Table -10 : Elutriate Analytical Results - Pesticides/Herbicides

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)		CH-2011-MU3-COMP	
	Lab ID			180-5219-12		180-5219-13		180-5219-14		180-5048-6	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
Pesticide		Analysis Method	Units								
alpha-Chlordane	5103-71-9	8081A	ug/L	<0.0047		<0.0047		<0.0046		<0.00092	
Chlordane (technical)	57-74-9	8081A	ug/L	<0.0079		<0.0079		<0.0078		<0.0016	
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8081A	ug/L	**0.009**		**0.0088**		**0.0077**		**0.016**	
* DCB Decachlorobiphenyl (Surr)	2051-24-3	8081A	ug/L	**0.0085**		**0.0098**		**0.0088**		**0.015**	
Endrin	72-20-8	8081A	ug/L	<0.0046		<0.0046		<0.0045		<0.00091	
gamma-BHC (Lindane)	58-89-9	8081A	ug/L	<0.0038		<0.0038		**0.0049**	J	**0.0019**	
gamma-Chlordane	5103-74-2	8081A	ug/L	<0.0046		<0.0046		<0.0045		<0.00091	
Heptachlor	76-44-8	8081A	ug/L	<0.0047		<0.0047		<0.0047		<0.00093	
Heptachlor epoxide	1024-57-3	8081A	ug/L	<0.0046		<0.0046		<0.0046		<0.00092	
Methoxychlor	72-43-5	8081A	ug/L	<0.0043		<0.0043		<0.0043		<0.00086	
* Tetrachloro-m-xylene	877-09-8	8081A	ug/L	**0.016**		**0.018**		**0.015**		**0.019**	
* Tetrachloro-m-xylene	877-09-8	8081A	ug/L	**0.011**		**0.017**		**0.013**		**0.015**	
Toxaphene	8001-35-2	8081A	ug/L	<0.089		<0.089		<0.088		<0.018	
Herbicides											
2,4-D	94-75-7	8151A	ug/L	<0.43		<0.43		<0.43		<0.43	
* 2,4-Dichlorophenylacetic acid	19719-28-9	8151A	ug/L	**3.9**		**3.7**		**3.9**		**6.9**	
Dalapon	75-99-0	8151A	ug/L	<0.65		<0.65		<0.65		<0.65	
Dinoseb	88-85-7	8151A	ug/L	<0.12		<0.12		<0.12		<0.12	
Silvex (2,4,5-TP)	93-72-1	8151A	ug/L	<0.1		<0.1		<0.1		<0.1	

Bold - Analysis is above detection limit
< - Not detected
* Surrogate compound

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	CAS#	Date Collected		10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units												
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ug/Kg	<1.3		<0.81		<1.4		<0.94		<1.1		<1.2	
1,1,1-Trichloroethane	71-55-6	8260B	ug/Kg	<0.84		<0.53		<0.94		<0.61		<0.7		<0.78	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ug/Kg	<1.2		<0.78		<1.4		<0.91		<1		<1.1	
1,1,2-Trichloroethane	79-00-5	8260B	ug/Kg	<1.4		<0.91		<1.6		<1		<1.2		<1.3	
1,1-Dichloroethane	75-34-3	8260B	ug/Kg	<0.99		<0.63		<1.1		<0.73		<0.83		<0.92	
1,1-Dichloroethene	75-35-4	8260B	ug/Kg	<1.5		<0.92		<1.6		<1.1		<1.2		<1.4	
1,2,4-Trichlorobenzene	120-82-1	8260B	ug/Kg	<1.5		<0.96		<1.7		<1.1		<1.3		<1.4	
1,2,4-Trimethylbenzene	95-63-6	8260B	ug/Kg	<1.1		<0.71		<1.3		<0.82		<0.94		<1	
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	ug/Kg	<1.3		<0.82		<1.4		<0.94		<1.1		<1.2	
1,2-Dibromoethane	106-93-4	8260B	ug/Kg	<1.5		<0.94		<1.7		<1.1		<1.2		<1.4	
1,2-Dichlorobenzene	95-50-1	8260B	ug/Kg	<1.4		<0.87		<1.5		<1		<1.2		<1.3	
1,2-Dichloroethane	107-06-2	8260B	ug/Kg	<1.1		<0.67		<1.2		<0.77		<0.89		<0.98	
* 1,2-Dichloroethane-d4 (Surr)	17060-07-0	8260B	ug/Kg	**54**		**36**		**63**		**48**		**54**		**56**	
1,2-Dichloropropane	78-87-5	8260B	ug/Kg	<0.93		<0.59		<1.1		<0.68		<0.79		<0.87	
1,3,5-Trimethylbenzene	108-67-8	8260B	ug/Kg	<1.1		<0.73		<1.3		<0.84		<0.97		<1.1	
1,3-Dichlorobenzene	541-73-1	8260B	ug/Kg	<1.1		<0.71		<1.3		<0.83		<0.95		<1	
1,4-Dichlorobenzene	106-46-7	8260B	ug/Kg	<1.1		<0.69		<1.2		<0.8		<0.92		<1	
2-Butanone (MEK)	78-93-3	8260B	ug/Kg	<1.5		<0.96		<1.7		<1.1		<1.3		<1.4	
* 4-Bromofluorobenzene (Surr)	460-00-4	8260B	ug/Kg	**67**		**38**		**71**		**49**		**57**		**62**	
4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	ug/Kg	<1.1		<0.71		<1.3		<0.82		<0.94		<1	

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	CAS#	Date Collected		10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units												
Acetone	67-64-1	8260B	ug/Kg	<8.6		**13**	J	**24**	J	**20**	J	**28**	J	**15**	J
Acrolein	107-02-8	8260B	ug/Kg	<12		<7.7		<14		<8.9		<10		<11	
Benzene	71-43-2	8260B	ug/Kg	<1.2		<0.74		<1.3		<0.85		<0.98		<1.1	
Bromodichloromethane	75-27-4	8260B	ug/Kg	<0.97		<0.61		<1.1		<0.71		<0.81		<0.9	
Bromoform	75-25-2	8260B	ug/Kg	<0.76		<0.48		<0.86		<0.56		<0.64		<0.71	
Bromomethane	74-83-9	8260B	ug/Kg	<1.3		<0.8		<1.4		<0.93		<1.1		<1.2	
Carbon disulfide	75-15-0	8260B	ug/Kg	<0.88		<0.56		<0.99		<0.65		<0.74		<0.82	
Carbon tetrachloride	56-23-5	8260B	ug/Kg	<0.77		<0.49		<0.86		<0.56		<0.65		<0.71	
Chlorobenzene	108-90-7	8260B	ug/Kg	<1.3		<0.83		<1.5		<0.96		<1.1		<1.2	
Chloroethane	75-00-3	8260B	ug/Kg	<2.7		<1.7		<3		<2		<2.2		<2.5	
Chloroform	67-66-3	8260B	ug/Kg	<1		<0.64		<1.1		<0.74		<0.85		<0.93	
cis-1,2-Dichloroethene	156-59-2	8260B	ug/Kg	<1.2		<0.77		<1.4		<0.89		<1		<1.1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ug/Kg	<1.2		<0.74		<1.3		<0.85		<0.98		<1.1	
Cyclohexane	110-82-7	8260B	ug/Kg	<0.64		<0.4		<0.72		<0.47		<0.54		<0.59	
Dibromochloromethane	124-48-1	8260B	ug/Kg	<1.2		<0.77		<1.4		<0.9		<1		<1.1	
* Dibromofluoromethane (Surr)	1868-53-7	8260B	ug/Kg	**75**		**47**		**85**		**60**		**66**		**73**	
Ethylbenzene	100-41-4	8260B	ug/Kg	<1.1		<0.7		<1.2		<0.81		<0.93		<1	
Hexachlorobutadiene	87-68-3	8260B	ug/Kg	<1.9		<1.2		<2.2		<1.4		<1.6		<1.8	
Hexane	110-54-3	8260B	ug/Kg	**3.2**	J B	**1.1**	J B	<1.9		<1.3		<1.5		**2.6**	J
Isopropylbenzene	98-82-8	8260B	ug/Kg	<1.2		<0.74		<1.3		<0.86		<0.98		<1.1	

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	CAS#	Date Collected		10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units												
Methyl tert-butyl ether	1634-04-4	8260B	ug/Kg	<1.3		<0.81		<1.4		<0.94		<1.1		<1.2	
Methylene Chloride	75-09-2	8260B	ug/Kg	<1.2		<0.73		<1.3		<0.85		<0.97		<1.1	
m-Xylene & p-Xylene	179601-23-1	8260B	ug/Kg	<2.5		<1.6		<2.8		<1.9		<2.1		<2.3	
n-Butyl alcohol	71-36-3	8260B	ug/Kg	<57		<36		<64		<41		<48		<53	
N-Propylbenzene	103-65-1	8260B	ug/Kg	<1.3		<0.83		<1.5		<0.96		<1.1		<1.2	
o-Xylene	95-47-6	8260B	ug/Kg	<1.3		<0.85		<1.5		<0.98		<1.1		<1.2	
Styrene	100-42-5	8260B	ug/Kg	<1.2		<0.77		<1.4		<0.89		<1		<1.1	
Tetrachloroethene	127-18-4	8260B	ug/Kg	<1.2		<0.74		<1.3		<0.86		<0.98		<1.1	
Toluene	108-88-3	8260B	ug/Kg	<1.3		<0.79		<1.4		<0.92		<1.1		<1.2	
Toluene-d8 (Surr)	2037-26-5	8260B	ug/Kg	**94**		**67**		**120**		**79**		**87**		**91**	
trans-1,2-Dichloroethene	156-60-5	8260B	ug/Kg	<1		<0.65		<1.2		<0.75		<0.86		<0.95	
trans-1,3-Dichloropropene	10061-02-6	8260B	ug/Kg	<1		<0.65		<1.2		<0.75		<0.86		<0.95	
Trichloroethene	79-01-6	8260B	ug/Kg	<1.1		<0.72		<1.3		<0.83		<0.95		<1.1	
Trichlorofluoromethane	75-69-4	8260B	ug/Kg	<1.6		<1		<1.8		<1.2		<1.3		<1.5	
Vinyl acetate	108-05-4	8260B	ug/Kg	<0.61		<0.39		<0.68		<0.45		<0.51		<0.56	
Vinyl chloride	75-01-4	8260B	ug/Kg	<0.81		<0.51		<0.91		<0.59		<0.68		<0.75	
Xylenes, Total	1330-20-7	8260B	ug/Kg	<3.9		<2.4		<4.3		<2.8		<3.2		<3.6	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal
B - Compound was found in the blank and sample.
< - Not detected
* Surrogate compound

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units										
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ug/Kg	<1.2		<1.1		<1.6		<1.9		<0.94	
1,1,1-Trichloroethane	71-55-6	8260B	ug/Kg	<0.78		<0.7		<1		<1.2		<0.61	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ug/Kg	<1.1		<1		<1.5		<1.8		<0.91	
1,1,2-Trichloroethane	79-00-5	8260B	ug/Kg	<1.3		<1.2		<1.8		<2.1		<2.1	
1,1-Dichloroethane	75-34-3	8260B	ug/Kg	<0.92		<0.83		<1.2		<1.5		<0.73	
1,1-Dichloroethene	75-35-4	8260B	ug/Kg	<1.4		<1.2		<1.8		<2.2		<1.1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ug/Kg	<1.4		<1.3		<1.9		<2.2		<1.1	
1,2,4-Trimethylbenzene	95-63-6	8260B	ug/Kg	<1.1		<0.94		<1.4		<1.7		<0.82	
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	ug/Kg	<1.2		<1.1		<1.6		<1.9		<0.94	
1,2-Dibromoethane	106-93-4	8260B	ug/Kg	<1.4		<1.2		<1.8		<2.2		<1.1	
1,2-Dichlorobenzene	95-50-1	8260B	ug/Kg	<1.3		<1.2		<1.7		<2		<1	
1,2-Dichloroethane	107-06-2	8260B	ug/Kg	<1		<0.89		<1.3		<1.6		<0.77	
* 1,2-Dichloroethane-d4 (Surr)	17060-07-0	8260B	ug/Kg	**54**		**47**		**73**		**100**		**66**	
1,2-Dichloropropane	78-87-5	8260B	ug/Kg	<0.89		<0.79		<1.2		<1.4		<0.68	
1,3,5-Trimethylbenzene	108-67-8	8260B	ug/Kg	<1.1		<0.97		<1.4		<1.7		<0.84	
1,3-Dichlorobenzene	541-73-1	8260B	ug/Kg	<1		<0.95		<1.4		<1.7		<0.83	
1,4-Dichlorobenzene	106-46-7	8260B	ug/Kg	<1		<0.92		<1.4		<1.6		<0.8	
2-Butanone (MEK)	78-93-3	8260B	ug/Kg	<1.4		<1.3		<1.9		<2.2		<1.1	
* 4-Bromofluorobenzene (Surr)	460-00-4	8260B	ug/Kg	**60**		**51**		**81**		**110**		**62**	
4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	ug/Kg	<0.94		<0.95		<1.4		<1.7		<0.82	

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units										
Acetone	67-64-1	8260B	ug/Kg	**19**	J	**17**	J	***25***	J	<13		<6.3	
Acrolein	107-02-8	8260B	ug/Kg	<11		<10		<15		<18		<8.9	
Benzene	71-43-2	8260B	ug/Kg	<1.1		<0.98		<1.4		<1.7		<0.85	
Bromodichloromethane	75-27-4	8260B	ug/Kg	<0.9		<0.81		<1.2		<1.4		<0.71	
Bromoform	75-25-2	8260B	ug/Kg	<0.71		<0.64		<0.94		<1.1		<0.56	
Bromomethane	74-83-9	8260B	ug/Kg	<1.2		<1.1		<1.6		<1.9		<0.93	
Carbon disulfide	75-15-0	8260B	ug/Kg	<0.82		<0.74		<1.1		<1.3		<0.65	
Carbon tetrachloride	56-23-5	8260B	ug/Kg	<0.71		<0.65		<0.95		<1.1		<0.56	
Chlorobenzene	108-90-7	8260B	ug/Kg	<1.2		<1.1		<1.6		<1.9		<0.96	
Chloroethane	75-00-3	8260B	ug/Kg	<2.5		<2.2		<3.3		<3.9		<2	
Chloroform	67-66-3	8260B	ug/Kg	<0.93		<0.85		<1.2		<1.5		<0.74	
cis-1,2-Dichloroethene	156-59-2	8260B	ug/Kg	<1.1		<1		<1.5		<1.8		<0.89	
cis-1,3-Dichloropropene	10061-01-5	8260B	ug/Kg	<1.1		<0.98		<1.4		<1.7		<0.85	
Cyclohexane	110-82-7	8260B	ug/Kg	<0.59		<0.54		<0.79		<0.95		<0.47	
Dibromochloromethane	124-48-1	8260B	ug/Kg	<1.1		<1		<1.5		<1.8		<0.89	
* Dibromofluoromethane (Surr)	1868-53-7	8260B	ug/Kg	**72**		**63**		**99**		**120**		**66**	
Ethylbenzene	100-41-4	8260B	ug/Kg	<1		<0.93		<1.4		<1.6		<0.81	
Hexachlorobutadiene	87-68-3	8260B	ug/Kg	<1.8		<1.6		<2.4		<2.9		<1.4	
Hexane	110-54-3	8260B	ug/Kg	<1.6		<1.5		<2.1		<2.6		<1.3	
Isopropylbenzene	98-82-8	8260B	ug/Kg	<1.1		<0.98		<1.4		<1.7		<0.86	

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units										
Methyl tert-butyl ether	1634-04-4	8260B	ug/Kg	<1.2		<1.1		<1.6		<1.9		<0.94	
Methylene Chloride	75-09-2	8260B	ug/Kg	<1.1		<0.97		<1.4		<1.7		**2.2**	J
m-Xylene & p-Xylene	179601-23-1	8260B	ug/Kg	<2.3		<2.1		<3.1		<3.7		<1.9	
n-Butyl alcohol	71-36-3	8260B	ug/Kg	<53		<48		<70		<84		<41	
N-Propylbenzene	103-65-1	8260B	ug/Kg	<1.2		<1.1		<1.6		<1.9		<0.96	
o-Xylene	95-47-6	8260B	ug/Kg	<1.2		<1.1		<1.7		<2		<0.98	
Styrene	100-42-5	8260B	ug/Kg	<1.1		<1		<1.5		<1.8		<0.89	
Tetrachloroethene	127-18-4	8260B	ug/Kg	<1.1		<0.98		<1.4		<1.7		<0.86	
Toluene	108-88-3	8260B	ug/Kg	<1.2		<1.1		<1.5		<1.9		<0.92	
Toluene-d8 (Surr)	2037-26-5	8260B	ug/Kg	**99**		**81**		**130**		**130**		**62**	
trans-1,2-Dichloroethene	156-60-5	8260B	ug/Kg	<0.95		<0.87		<1.3		<1.5		<0.75	
trans-1,3-Dichloropropene	10061-02-6	8260B	ug/Kg	<0.95		<0.87		<1.3		<1.5		<0.75	
Trichloroethene	79-01-6	8260B	ug/Kg	<1.1		<0.96		<1.4		<1.7		<0.83	
Trichlorofluoromethane	75-69-4	8260B	ug/Kg	<1.5		<1.3		<2		<2.3		<1.2	
Vinyl acetate	108-05-4	8260B	ug/Kg	<0.56		<0.51		<0.75		<0.9		<0.45	
Vinyl chloride	75-01-4	8260B	ug/Kg	<0.75		<0.68		<1		<1.2		<0.59	
Xylenes, Total	1330-20-7	8260B	ug/Kg	<3.6		<3.3		<4.8		<5.7		<2.8	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal
B - Compound was found in the blank and sample.
< - Not detected
* Surrogate compound

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Date Collected		10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units												
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ug/Kg	<1.3		<1.3		<1.6		<1.2		<1.1		<1.1	
1,1,1-Trichloroethane	71-55-6	8260B	ug/Kg	<0.83		<0.86		<1		<0.77		<0.75		<0.71	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ug/Kg	<1.2		<1.3		<1.5		<1.1		<1.1		<1	
1,1,2-Trichloroethane	79-00-5	8260B	ug/Kg	<1.4		<1.5		<1.7		<1.3		<1.3		<1.2	
1,1-Dichloroethane	75-34-3	8260B	ug/Kg	<0.98		<1		<1.2		<0.92		<0.89		<0.84	
1,1-Dichloroethene	75-35-4	8260B	ug/Kg	<1.5		<1.5		<1.8		<1.4		<1.3		<1.2	
1,2,4-Trichlorobenzene	120-82-1	8260B	ug/Kg	<1.5		<1.6		<1.8		<1.4		<1.4		<1.3	
1,2,4-Trimethylbenzene	95-63-6	8260B	ug/Kg	<1.1		<1.1		<1.4		<1		<1		<0.95	
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	ug/Kg	<1.3		<1.3		<1.6		<1.2		<1.2		<1.1	
1,2-Dibromoethane	106-93-4	8260B	ug/Kg	<1.5		<1.5		<1.8		<1.4		<1.3		<1.3	
1,2-Dichlorobenzene	95-50-1	8260B	ug/Kg	<1.4		<1.4		<1.7		<1.3		<1.2		<1.2	
1,2-Dichloroethane	107-06-2	8260B	ug/Kg	<1		<1.1		<1.3		<0.98		<0.95		<0.9	
* 1,2-Dichloroethane-d4 (Surr)	17060-07-0	8260B	ug/Kg	**60**		**60**		**83**		**82**		**78**		**76**	
1,2-Dichloropropane	78-87-5	8260B	ug/Kg	<0.93		<0.96		<1.1		<0.86		<0.84		<0.79	
1,3,5-Trimethylbenzene	108-67-8	8260B	ug/Kg	<1.1		<1.2		<1.4		<1.1		<1		<0.98	
1,3-Dichlorobenzene	541-73-1	8260B	ug/Kg	<1.1		<1.2		<1.4		<1		<1		<0.96	
1,4-Dichlorobenzene	106-46-7	8260B	ug/Kg	<1.1		<1.1		<1.3		<1		<0.98		<0.93	
2-Butanone (MEK)	78-93-3	8260B	ug/Kg	<1.5		<1.6		<1.8		<1.4		<1.4		<1.3	
* 4-Bromofluorobenzene (Surr)	460-00-4	8260B	ug/Kg	**70**		**73**		**76**		**75**		**73**		**71**	
4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	ug/Kg	<1.1		<1.2		<1.4		<1		<1		<0.95	

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Date Collected		10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units												
Acetone	67-64-1	8260B	ug/Kg	<8.6		**18**	J	**20**	J	<8		<7.7		<7.3	
Acrolein	107-02-8	8260B	ug/Kg	<12		<12		<15		<11		<11		<10	
Benzene	71-43-2	8260B	ug/Kg	<1.2		<1.2		<1.4		<1.1		<1		<0.99	
Bromodichloromethane	75-27-4	8260B	ug/Kg	<0.96		<0.99		<1.2		<0.89		<0.87		<0.82	
Bromoform	75-25-2	8260B	ug/Kg	<0.76		<0.78		<0.93		<0.7		<0.68		<0.65	
Bromomethane	74-83-9	8260B	ug/Kg	<1.3		<1.3		<1.5		<1.2		<1.1		<1.1	
Carbon disulfide	75-15-0	8260B	ug/Kg	<0.88		<0.9		<1.1		<0.82		<0.79		<0.75	
Carbon tetrachloride	56-23-5	8260B	ug/Kg	<0.76		<0.79		<0.93		<0.71		<0.69		<0.65	
Chlorobenzene	108-90-7	8260B	ug/Kg	<1.3		<1.3		<1.6		<1.2		<1.2		<1.1	
Chloroethane	75-00-3	8260B	ug/Kg	<2.6		<2.7		<3.2		<2.5		<2.4		<2.3	
Chloroform	67-66-3	8260B	ug/Kg	<1		<1		<1.2		<0.93		<0.9		<0.85	
cis-1,2-Dichloroethene	156-59-2	8260B	ug/Kg	<1.2		<1.2		<1.5		<1.1		<1.1		<1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ug/Kg	<1.2		<1.2		<1.4		<1.1		<1		<0.99	
Cyclohexane	110-82-7	8260B	ug/Kg	<0.64		<0.66		<0.78		<0.59		<0.57		<0.54	
Dibromochloromethane	124-48-1	8260B	ug/Kg	<1.2		<1.3		<1.5		<1.1		<1.1		<1	
* Dibromofluoromethane (Surr)	1868-53-7	8260B	ug/Kg	**74**		**81**		**81**		**81**		**77**		**73**	
Ethylbenzene	100-41-4	8260B	ug/Kg	<1.1		<1.1		<1.3		<1		<0.99		<0.94	
Hexachlorobutadiene	87-68-3	8260B	ug/Kg	<1.9		<2		<2.4		<1.8		<1.7		<1.7	
Hexane	110-54-3	8260B	ug/Kg	<1.7		<1.8		<2.1		<1.6		<1.6		<1.5	
Isopropylbenzene	98-82-8	8260B	ug/Kg	<1.2		<1.2		<1.4		<1.1		<1		<0.99	

APPENDIX B

Table -11: Sediment Analytical Results - VOCs

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Date Collected		10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
VOCs		Analysis Method	Units												
Methyl tert-butyl ether	1634-04-4	8260B	ug/Kg	<1.3		<1.3		<1.6		<1.2		<1.2		<1.1	
Methylene Chloride	75-09-2	8260B	ug/Kg	<1.2		**4.5**	J B	**1.6**	J B	**3.4**	J	**2.8**	J	**2.4**	J
m-Xylene & p-Xylene	179601-23-1	8260B	ug/Kg	<2.5		<2.6		<3.1		<2.3		<2.3		<2.1	
n-Butyl alcohol	71-36-3	8260B	ug/Kg	<56		<58		<69		<52		<51		<48	
N-Propylbenzene	103-65-1	8260B	ug/Kg	<1.3		<1.4		<1.6		<1.2		<1.2		<1.1	
o-Xylene	95-47-6	8260B	ug/Kg	<1.3		<1.4		<1.6		<1.2		<1.2		<1.1	
Styrene	100-42-5	8260B	ug/Kg	<1.2		<1.2		<1.5		<1.1		<1.1		<1	
Tetrachloroethene	127-18-4	8260B	ug/Kg	<1.2		<1.2		<1.4		<1.1		<1		<0.99	
Toluene	108-88-3	8260B	ug/Kg	<1.2		<1.3		<1.5		<1.2		<1.1		<1.1	
Toluene-d8 (Surr)	2037-26-5	8260B	ug/Kg	**84**		**94**		**120**		**73**		**72**		**69**	
trans-1,2-Dichloroethene	156-60-5	8260B	ug/Kg	<1		<1.1		<1.2		<0.95		<0.92		<0.87	
trans-1,3-Dichloropropene	10061-02-6	8260B	ug/Kg	<1		<1.1		<1.3		<0.95		<0.92		<0.87	
Trichloroethene	79-01-6	8260B	ug/Kg	<1.1		<1.2		<1.4		<1		<1		<0.96	
Trichlorofluoromethane	75-69-4	8260B	ug/Kg	<1.6		<1.6		<1.9		<1.5		<1.4		<1.3	
Vinyl acetate	108-05-4	8260B	ug/Kg	<0.61		<0.62		<0.74		<0.56		<0.55		<0.52	
Vinyl chloride	75-01-4	8260B	ug/Kg	<0.8		<0.83		<0.98		<0.75		<0.72		<0.69	
Xylenes, Total	1330-20-7	8260B	ug/Kg	<3.8		<4		<4.7		<3.6		<3.5		<3.3	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal
B - Compound was found in the blank and sample.
< - Not detected
***** Surrogate compound

APPENDIX B

Table -12: Elutriate Analytical Results - VOCs

Parameter	Matrix			Management Unit #1							
	Sample ID			CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS		CH-2011-MU1-COMP	
	Lab ID			180-5219-16		180-5219-15		180-5219-9		180-5172-9	
	CAS#	Date Collected		10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
		Analysis Method	Units								
Total Dissolved Solids		SM 2540C	mg/L	**140**		**140**		**180**		**160**	
VOCs											
1,1,1-Trichloroethane	71-55-6	8260B	ug/L	<0.29		<0.29		<0.29		<0.29	
1,1,2-Trichloroethane	79-00-5	8260B	ug/L	<0.2		<0.2		<0.2		<0.2	
1,1-Dichloroethene	75-35-4	8260B	ug/L	<0.3		<0.3		<0.3		<0.3	
1,2,4-Trichlorobenzene	120-82-1	8260B	ug/L	<0.27		<0.27		<0.27		<0.27	
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
1,2-Dibromoethane	106-93-4	8260B	ug/L	<0.18		<0.18		<0.18		<0.18	
1,2-Dichlorobenzene	95-50-1	8260B	ug/L	<0.15		<0.15		<0.15		<0.15	
1,2-Dichloroethane	107-06-2	8260B	ug/L	<0.21		<0.21		<0.21		<0.21	
* 1,2-Dichloroethane-d4 (Surr)	17060-07-0	8260B	ug/L	**10**		**10**		**10**		**11**	
1,2-Dichloropropane	78-87-5	8260B	ug/L	<0.095		<0.095		<0.095		<0.095	
1,4-Dichlorobenzene	106-46-7	8260B	ug/L	<0.21		<0.21		<0.21		<0.21	
* 4-Bromofluorobenzene (Surr)	460-00-4	8260B	ug/L	**9.9**		**9.7**		**9.7**		**10**	
Benzene	71-43-2	8260B	ug/L	<0.11		<0.11		<0.11		<0.11	
Carbon tetrachloride	56-23-5	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
Chlorobenzene	108-90-7	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
cis-1,2-Dichloroethene	156-59-2	8260B	ug/L	<0.24		<0.24		<0.24		<0.24	
* Dibromofluoromethane (Surr)	1868-53-7	8260B	ug/L	**10**		**9.7**		**9.7**		**11**	

APPENDIX B

Table -12: Elutriate Analytical Results - VOCs

Parameter	Matrix			Management Unit #1							
	Sample ID			CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS		CH-2011-MU1-COMP	
	Lab ID			180-5219-16		180-5219-15		180-5219-9		180-5172-9	
	CAS#	Date Collected		10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
		Analysis Method	Units								
Ethylbenzene	100-41-4	8260B	ug/L	<0.23		<0.23		<0.23		<0.23	
Methyl tert-butyl ether	1634-04-4	8260B	ug/L	<0.18		<0.18		<0.18		<0.18	
Methylene Chloride	75-09-2	8260B	ug/L	**6.6**	B	**9.2**	B	**10**	B	**2.7**	
Styrene	100-42-5	8260B	ug/L	<0.097		<0.097		<0.097		<0.097	
Tetrachloroethene	127-18-4	8260B	ug/L	<0.15		<0.15		<0.15		<0.15	
Toluene	108-88-3	8260B	ug/L	<0.15		**0.25**	J	<0.15		**0.23**	J
* Toluene-d8 (Surr)	2037-26-5	8260B	ug/L	**9.9**		**9.8**		**9.6**		**9.8**	
trans-1,2-Dichloroethene	156-60-5	8260B	ug/L	<0.17		<0.17		<0.17		<0.17	
Trichloroethene	79-01-6	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
Vinyl chloride	75-01-4	8260B	ug/L	<0.23		<0.23		<0.23		<0.23	
Xylenes, Total	1330-20-7	8260B	ug/L	<0.49		<0.49		<0.49		<0.49	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
< - Not detected
* Surrogate compound

APPENDIX B

Table -12: Elutriate Analytical Results - VOCs

Parameter	Matrix			Management Unit #2					
	Sample ID			CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU2-COMP	
	Lab ID			180-5219-10		180-5219-11		180-5172-10	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
		Analysis Method	Units						
Total Dissolved Solids		SM 2540C	mg/L	**180**		**150**		**130**	
VOCs									
1,1,1-Trichloroethane	71-55-6	8260B	ug/L	<0.29		<0.29		<0.29	
1,1,2-Trichloroethane	79-00-5	8260B	ug/L	<0.2		<0.2		<0.2	
1,1-Dichloroethene	75-35-4	8260B	ug/L	<0.3		<0.3		<0.3	
1,2,4-Trichlorobenzene	120-82-1	8260B	ug/L	<0.27		<0.27		<0.27	
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	ug/L	<0.14		<0.14		<0.14	
1,2-Dibromoethane	106-93-4	8260B	ug/L	<0.18		<0.18		<0.18	
1,2-Dichlorobenzene	95-50-1	8260B	ug/L	<0.15		<0.15		<0.15	
1,2-Dichloroethane	107-06-2	8260B	ug/L	<0.21		<0.21		<0.21	
* 1,2-Dichloroethane-d4 (Surr)	17060-07-0	8260B	ug/L	**10**		**11**		**10**	
1,2-Dichloropropane	78-87-5	8260B	ug/L	<0.095		<0.095		<0.095	
1,4-Dichlorobenzene	106-46-7	8260B	ug/L	<0.21		<0.21		<0.21	
* 4-Bromofluorobenzene (Surr)	460-00-4	8260B	ug/L	**9.7**		**9.5**		**10**	
Benzene	71-43-2	8260B	ug/L	<0.11		<0.11		<0.11	
Carbon tetrachloride	56-23-5	8260B	ug/L	<0.14		<0.14		<0.14	
Chlorobenzene	108-90-7	8260B	ug/L	<0.14		<0.14		<0.14	
cis-1,2-Dichloroethene	156-59-2	8260B	ug/L	<0.24		<0.24		<0.24	
* Dibromofluoromethane (Surr)	1868-53-7	8260B	ug/L	**9.8**		**9.6**		**10**	

APPENDIX B

Table -12: Elutriate Analytical Results - VOCs

Parameter	Matrix			Management Unit #2					
	Sample ID			CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU2-COMP	
	Lab ID			180-5219-10		180-5219-11		180-5172-10	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
		Analysis Method	Units						
Ethylbenzene	100-41-4	8260B	ug/L	<0.23		<0.23		<0.23	
Methyl tert-butyl ether	1634-04-4	8260B	ug/L	<0.18		<0.18		<0.18	
Methylene Chloride	75-09-2	8260B	ug/L	**11**	B	**8.9**	B	**2.3**	
Styrene	100-42-5	8260B	ug/L	<0.097		<0.097		<0.097	
Tetrachloroethene	127-18-4	8260B	ug/L	<0.15		<0.15		<0.15	
Toluene	108-88-3	8260B	ug/L	<0.15		<0.15		**0.22**	J
* Toluene-d8 (Surr)	2037-26-5	8260B	ug/L	**9.9**		**9.5**		**9.6**	
trans-1,2-Dichloroethene	156-60-5	8260B	ug/L	<0.17		<0.17		<0.17	
Trichloroethene	79-01-6	8260B	ug/L	<0.14		<0.14		<0.14	
Vinyl chloride	75-01-4	8260B	ug/L	<0.23		<0.23		<0.23	
Xylenes, Total	1330-20-7	8260B	ug/L	<0.49		<0.49		<0.49	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
< - Not detected
* Surrogate compound

APPENDIX B

Table -12: Elutriate Analytical Results - VOCs

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)		CH-2011-MU3-COMP	
	Lab ID			180-5219-12		180-5219-13		180-5219-14		180-5048-6	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
		Analysis Method	Units								
Total Dissolved Solids		SM 2540C	mg/L	**190**		**140**		**150**		**130**	
VOCs											
1,1,1-Trichloroethane	71-55-6	8260B	ug/L	<0.29		<0.29		<0.29		<0.29	
1,1,2-Trichloroethane	79-00-5	8260B	ug/L	<0.2		<0.2		<0.2		<0.2	
1,1-Dichloroethene	75-35-4	8260B	ug/L	<0.3		<0.3		<0.3		<0.3	
1,2,4-Trichlorobenzene	120-82-1	8260B	ug/L	<0.27		<0.27		<0.27		<0.27	
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
1,2-Dibromoethane	106-93-4	8260B	ug/L	<0.18		<0.18		<0.18		<0.18	
1,2-Dichlorobenzene	95-50-1	8260B	ug/L	<0.15		<0.15		<0.15		<0.15	
1,2-Dichloroethane	107-06-2	8260B	ug/L	<0.21		<0.21		<0.21		<0.21	
* 1,2-Dichloroethane-d4 (Surr)	17060-07-0	8260B	ug/L	**11**		**10**		**11**		**9.6**	
1,2-Dichloropropane	78-87-5	8260B	ug/L	<0.095		<0.095		<0.095		<0.095	
1,4-Dichlorobenzene	106-46-7	8260B	ug/L	<0.21		<0.21		<0.21		<0.21	
* 4-Bromofluorobenzene (Surr)	460-00-4	8260B	ug/L	**9.9**		**9.6**		**10**		**10**	
Benzene	71-43-2	8260B	ug/L	<0.11		<0.11		<0.11		<0.11	
Carbon tetrachloride	56-23-5	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
Chlorobenzene	108-90-7	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
cis-1,2-Dichloroethene	156-59-2	8260B	ug/L	<0.24		<0.24		<0.24		<0.24	
* Dibromofluoromethane (Surr)	1868-53-7	8260B	ug/L	**9.7**		**9.9**		**9.7**		**11**	

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Table -12: Elutriate Analytical Results - VOCs

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)		CH-2011-MU3-COMP	
	Lab ID			180-5219-12		180-5219-13		180-5219-14		180-5048-6	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
		Analysis Method	Units								
Ethylbenzene	100-41-4	8260B	ug/L	<0.23		<0.23		<0.23		<0.23	
Methyl tert-butyl ether	1634-04-4	8260B	ug/L	<0.18		<0.18		<0.18		<0.18	
Methylene Chloride	75-09-2	8260B	ug/L	**6.3**		**8.8**	B	**8.8**	B	**3.2**	
Styrene	100-42-5	8260B	ug/L	<0.097		<0.097		<0.097		>0.097	
Tetrachloroethene	127-18-4	8260B	ug/L	<0.15		<0.15		<0.15		<0.15	
Toluene	108-88-3	8260B	ug/L	<0.15		<0.15		<0.15		**0.21**	J
* Toluene-d8 (Surr)	2037-26-5	8260B	ug/L	**9.7**		**9.6**		**9.7**		**10**	
trans-1,2-Dichloroethene	156-60-5	8260B	ug/L	<0.17		<0.17		<0.17		<0.17	
Trichloroethene	79-01-6	8260B	ug/L	<0.14		<0.14		<0.14		<0.14	
Vinyl chloride	75-01-4	8260B	ug/L	<0.23		<0.23		<0.23		<0.23	
Xylenes, Total	1330-20-7	8260B	ug/L	<0.49		<0.49		<0.49		<0.49	

Bold - Analysis is above detection limit
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
< - Not detected
* Surrogate compound

APPENDIX B

Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	CAS#	Date Collected		10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units												
2,2'-oxybis[1-chloropropane]	108-60-1	8270C LL	ug/Kg	<15		<15		<6.9		<2		<2.5		<2.9	
2,4,5-Trichlorophenol	95-95-4	8270C LL	ug/Kg	<73		<73		<34		<10		<12		<15	
* 2,4,6-Tribromophenol	118-79-6	8270C LL	ug/Kg	**580**	D	**730**	D	**520**		**500**		**760**		**450**	
2,4,6-Trichlorophenol	88-06-2	8270C LL	ug/Kg	<100		<100		<48		<14		<17		<20	
2,4-Dichlorophenol	120-83-2	8270C LL	ug/Kg	<14		<14		<6.5		<1.9		<2.3		<2.7	
2,4-Dimethylphenol	105-67-9	8270C LL	ug/Kg	<110		<110		<50		<15		<18		<21	
2,4-Dinitrophenol	51-28-5	8270C LL	ug/Kg	<820		<820		<380		<110		<140		<160	
2,4-Dinitrotoluene	121-14-2	8270C LL	ug/Kg	<55		<55		<26		<7.6		<9.2		<11	
2,6-Dinitrotoluene	606-20-2	8270C LL	ug/Kg	<71		<71		<33		<9.7		<12		<14	
2-Chloronaphthalene	91-58-7	8270C LL	ug/Kg	<14		<14		<6.7		<2		<2.4		<2.8	
2-Chlorophenol	95-57-8	8270C LL	ug/Kg	<56		<56		<26		<7.7		<9.4		<11	
* 2-Fluorobiphenyl	321-60-8	8270C LL	ug/Kg	**520**	D	**540**	D	**340**		**320**		**450**		**290**	
* 2-Fluorophenol	367-12-4	8270C LL	ug/Kg	**640**	D	**730**	D	**490**		**490**		**700**		**400**	
2-Methylnaphthalene	91-57-6	8270C LL	ug/Kg	**52**	J	**57**	J	**54**	J	**130**		**110**		**18**	J
2-Methylphenol	95-48-7	8270C LL	ug/Kg	<48		<48		<22		<6.6		<8		<9.5	
2-Nitroaniline	88-74-4	8270C LL	ug/Kg	<310		<310		<140		<42		<51		<61	
3,3'-Dichlorobenzidine	91-94-1	8270C LL	ug/Kg	<72		<72		<34		<9.9		<12		<14	
4-Chloroaniline	106-47-8	8270C LL	ug/Kg	<55		<55		<26		<7.5		<9.2		<11	
Acenaphthene	83-32-9	8270C LL	ug/Kg	**71**	J	**67**	J	**67**		**88**		**95**		**36**	
Acenaphthylene	208-96-8	8270C LL	ug/Kg	**36**	J	**51**	J	**50**	J	**88**		**81**		**21**	J
Anthracene	120-12-7	8270C LL	ug/Kg	**140**		**160**		**170**		**290**		**230**		**78**	
Atrazine	1912-24-9	8270C LL	ug/Kg	<67		<67		<31		<9.1		<11		<13	
Benzo[a]anthracene	56-55-3	8270C LL	ug/Kg	**340**		**430**		**440**		**570**		**510**		**190**	
Benzo[a]pyrene	50-32-8	8270C LL	ug/Kg	**330**		**450**		**550**		**470**		**610**		**210**	

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Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	CAS#	Date Collected		10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units												
Benzo[b]fluoranthene	205-99-2	8270C LL	ug/Kg	500		580		480		600		810		200	
Benzo[k]fluoranthene	207-08-9	8270C LL	ug/Kg	<28		<28		260		<3.8		<4.6		90	
Benzoic acid	65-85-0	8270C LL	ug/Kg	<280		<280		<130		<39		<47		<57	
Benzyl alcohol	100-51-6	8270C LL	ug/Kg	<83		<83		<39		<11		<14		<16	
Bis(2-chloroethyl)ether	111-44-4	8270C LL	ug/Kg	<18		<18		<8.6		<2.5		<3.1		<3.7	
Bis(2-ethylhexyl) phthalate	117-81-7	8270C LL	ug/Kg	110	J	120	J	130	J	24	J	230		46	J
Butyl benzyl phthalate	85-68-7	8270C LL	ug/Kg	<94		<94		<44		<13		<16		<19	
Carbazole	86-74-8	8270C LL	ug/Kg	26	J	28	J	28	J	32		40		17	J
Chrysene	218-01-9	8270C LL	ug/Kg	420		460		550		590		640		240	
Dibenz(a,h)anthracene	53-70-3	8270C LL	ug/Kg	44	J	63	J	68		61		110		15	J
Dibenzofuran	132-64-9	8270C LL	ug/Kg	<67		<67		48	J	63	J	71	J	19	J
Diethyl phthalate	84-66-2	8270C LL	ug/Kg	<75		<75		<35		<10		<13		<15	
Dimethyl phthalate	131-11-3	8270C LL	ug/Kg	<75		<75		<35		<10		<12		<15	
Di-n-butyl phthalate	84-74-2	8270C LL	ug/Kg	<86		<86		<40		<12		<14		<17	
Di-n-octyl phthalate	117-84-0	8270C LL	ug/Kg	<72		<72		<34		<9.9		<12		<14	
DMF	68-12-2	8270C LL	ug/Kg	0	J N	0	J N	0	J N	0	J N	0	J N	0	J N
Fluoranthene	206-44-0	8270C LL	ug/Kg	630		680		770		750		780		380	
Fluorene	86-73-7	8270C LL	ug/Kg	91	J	80	J	93		150		140		37	
Hexachlorobenzene	118-74-1	8270C LL	ug/Kg	<15		<15		<6.9		<2		<2.4		<2.9	
Hexachlorocyclopentadiene	77-47-4	8270C LL	ug/Kg	<74		<74		<35		<10		<12		<15	
Hexachloroethane	67-72-1	8270C LL	ug/Kg	<49		<49		<23		<6.7		<8.2		<9.8	
Indeno[1,2,3-cd]pyrene	193-39-5	8270C LL	ug/Kg	170		210		<6.6		200		310		120	
Isophorone	78-59-1	8270C LL	ug/Kg	<52		<52		<24		7.1		<8.6		<10	
Methylphenol, 3 & 4	106-44-5	8270C LL	ug/Kg	<67		<67		150	J	40	J	170		<13	
Naphthalene	91-20-3	8270C LL	ug/Kg	62	J	72	J	69		190		160		17	J

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Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #1											
	Sample ID			CH-2011-MU1-G1		CH-2011-MU1-G2		CH-2011-MU1-G3		CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS	
	Lab ID			180-5172-1		180-5172-2		180-5172-3		180-5219-8		180-5219-7		180-5219-1	
	CAS#	Date Collected		10/21/2011	Qualifier	10/21/2011	Qualifier	10/21/2011	Qualifier	10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units												
Nitrobenzene	98-95-3	8270C LL	ug/Kg	<57		<57		<27		<7.8		<9.5		<11	
* Nitrobenzene-d5	4165-60-0	8270C LL	ug/Kg	**480**	D	**550**	D	**360**		**340**		**460**		**300**	
N-Nitrosodi-n-propylamine	621-64-7	8270C LL	ug/Kg	<16		<16		<7.6		<2.2		<2.7		<3.2	
N-Nitrosodiphenylamine	86-30-6	8270C LL	ug/Kg	<63		<63		<30		<8.7		<11		<13	
Pentachlorophenol	87-86-5	8270C LL	ug/Kg	<61		<61		<29		<8.4		<10		<12	
Phenanthrene	85-01-8	8270C LL	ug/Kg	**510**		**500**		**580**		**800**		**770**		**270**	
Phenol	108-95-2	8270C LL	ug/Kg	<16		<16		<7.6		<2.2		<2.7		3.2	
* Phenol-d5	4165-62-2	8270C LL	ug/Kg	**750**	D	**870**	D	**580**		**530**		**730**		**380**	
Pyrene	129-00-0	8270C LL	ug/Kg	**650**		**750**		**920**		**810**		**1000**		**340**	
* Terphenyl-d14	1718-51-0	8270C LL	ug/Kg	**520**	D	**570**	D	**380**		**340**		**400**		**330**	

Bold - Analysis is above detection limit

D **-** Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

***** Surrogate compound
N - Presumptive evidence of material.
< - Not detected
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

APPENDIX B

Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units										
2,2'-oxybis[1-chloropropane]	108-60-1	8270C LL	ug/Kg	<6.8		<5.6		<5.4		<3.1		<2.2	
2,4,5-Trichlorophenol	95-95-4	8270C LL	ug/Kg	<33		<28		<27		<15		<11	
* 2,4,6-Tribromophenol	118-79-6	8270C LL	ug/Kg	**820**		**610**		**610**		**1000**		**670**	
2,4,6-Trichlorophenol	88-06-2	8270C LL	ug/Kg	<47		<39		<38		<21		<15	
2,4-Dichlorophenol	120-83-2	8270C LL	ug/Kg	<6.3		<5.2		<5		<2.8		<2	
2,4-Dimethylphenol	105-67-9	8270C LL	ug/Kg	<49		<41		<39		<22		<16	
2,4-Dinitrophenol	51-28-5	8270C LL	ug/Kg	<370		<310		<300		<170		<120	
2,4-Dinitrotoluene	121-14-2	8270C LL	ug/Kg	<25		<21		<20		<11		<8.2	
2,6-Dinitrotoluene	606-20-2	8270C LL	ug/Kg	<32		<27		<26		<15		<10	
2-Chloronaphthalene	91-58-7	8270C LL	ug/Kg	<6.5		<5.4		<5.2		<3		<2.1	
2-Chlorophenol	95-57-8	8270C LL	ug/Kg	<26		<21		<21		<12		<8.3	
* 2-Fluorobiphenyl	321-60-8	8270C LL	ug/Kg	**480**		**350**		**390**		**530**		**370**	
* 2-Fluorophenol	367-12-4	8270C LL	ug/Kg	**660**		**480**		**480**		**790**		**490**	
2-Methylnaphthalene	91-57-6	8270C LL	ug/Kg	**51**	J	**36**	J	**24**	J	**51**		**30**	
2-Methylphenol	95-48-7	8270C LL	ug/Kg	<22		<18		<18		<9.9		<7.1	
2-Nitroaniline	88-74-4	8270C LL	ug/Kg	<140		<120		<110		<63		<45	
3,3'-Dichlorobenzidine	91-94-1	8270C LL	ug/Kg	<33		<27		<27		<15		<11	
4-Chloroaniline	106-47-8	8270C LL	ug/Kg	<25		<21		<20		<11		<8.1	
Acenaphthene	83-32-9	8270C LL	ug/Kg	**59**	J	**63**		**42**	J	**60**		**42**	
Acenaphthylene	208-96-8	8270C LL	ug/Kg	**36**	J	**35**	J	**20**	J	**53**		**22**	
Anthracene	120-12-7	8270C LL	ug/Kg	**130**		**150**		**94**		**140**		**89**	
Atrazine	1912-24-9	8270C LL	ug/Kg	<31		<25		<24		<14		<9.9	
Benzo[a]anthracene	56-55-3	8270C LL	ug/Kg	**370**		**410**		**230**		**440**		**240**	
Benzo[a]pyrene	50-32-8	8270C LL	ug/Kg	**400**		**430**		**260**		**460**		**250**	

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Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units										
Benzo[b]fluoranthene	205-99-2	8270C LL	ug/Kg	**410**		**560**		**250**		**570**		**320**	
Benzo[k]fluoranthene	207-08-9	8270C LL	ug/Kg	150		<10		110		<5.7		<4.1	
Benzoic acid	65-85-0	8270C LL	ug/Kg	<130		<110		<100		<59		<42	
Benzyl alcohol	100-51-6	8270C LL	ug/Kg	<38		<31		<30		<17		<12	
Bis(2-chloroethyl)ether	111-44-4	8270C LL	ug/Kg	<8.4		<7		<6.7		<3.8		<2.7	
Bis(2-ethylhexyl) phthalate	117-81-7	8270C LL	ug/Kg	**140**	J	**71**	J	**79**	J	**170**	J	**54**	J
Butyl benzyl phthalate	85-68-7	8270C LL	ug/Kg	<43		<35		<34		<19		<14	
Carbazole	86-74-8	8270C LL	ug/Kg	**26**	J	**31**	J	**18**	J	**39**		**26**	
Chrysene	218-01-9	8270C LL	ug/Kg	**420**		**420**		**290**		**500**		**260**	
Dibenz(a,h)anthracene	53-70-3	8270C LL	ug/Kg	**64**		**67**		**43**	J	**100**		**52**	
Dibenzofuran	132-64-9	8270C LL	ug/Kg	**38**	J	**33**	J	**28**	J	**40**	J	**26**	J
Diethyl phthalate	84-66-2	8270C LL	ug/Kg	<34		<28		<27		<15		<11	
Dimethyl phthalate	131-11-3	8270C LL	ug/Kg	<34		<28		<27		<15		<11	
Di-n-butyl phthalate	84-74-2	8270C LL	ug/Kg	<39		<32		<31		<18		<13	
Di-n-octyl phthalate	117-84-0	8270C LL	ug/Kg	<33		<27		<26		<15		<11	
DMF	68-12-2	8270C LL	ug/Kg	**0**	J N	**0**	J N	**0**	J N	**0**	J N	**0**	J N
Fluoranthene	206-44-0	8270C LL	ug/Kg	**610**		**670**		**420**		**760**		**510**	
Fluorene	86-73-7	8270C LL	ug/Kg	**74**		**67**		**44**	J	**75**		**45**	
Hexachlorobenzene	118-74-1	8270C LL	ug/Kg	<6.7		<5.5		<5.3		<3		<2.2	
Hexachlorocyclopentadiene	77-47-4	8270C LL	ug/Kg	<34		<28		<27		<15		<11	
Hexachloroethane	67-72-1	8270C LL	ug/Kg	<23		<19		<18		<10		<7.3	
Indeno[1,2,3-cd]pyrene	193-39-5	8270C LL	ug/Kg	**210**		**230**		**130**		**2.9**		**150**	
Isophorone	78-59-1	8270C LL	ug/Kg	<24		<20		<19		<11		<7.6	
Methylphenol, 3 & 4	106-44-5	8270C LL	ug/Kg	**150**	J	**110**	J	**130**	J	**30**	J	<9.9	
Naphthalene	91-20-3	8270C LL	ug/Kg	**63**		**46**	J	**28**	J	**68**		**22**	

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Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #2									
	Sample ID			CH-2011-MU2-G1		CH-2011-MU2-G2		CH-2011-MU2-G3		CH-2011-MU2-GN		CH-2011-MU2-GS	
	Lab ID			180-5172-5		180-5172-6		180-5172-7		180-5219-2		180-5219-3	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units										
Nitrobenzene	98-95-3	8270C LL	ug/Kg	<26		<22		<21		<12		<8.4	
* Nitrobenzene-d5	4165-60-0	8270C LL	ug/Kg	**490**		**310**		**340**		**520**		**340**	
N-Nitrosodi-n-propylamine	621-64-7	8270C LL	ug/Kg	<7.4		<6.1		<5.9		<3.3		<2.4	
N-Nitrosodiphenylamine	86-30-6	8270C LL	ug/Kg	<29		<24		<23		<13		<9.4	
Pentachlorophenol	87-86-5	8270C LL	ug/Kg	<28		<23		<22		<13		<9.1	
Phenanthrene	85-01-8	8270C LL	ug/Kg	**470**		**510**		**340**		**540**		**350**	
Phenol	108-95-2	8270C LL	ug/Kg	<7.4		<6.1		<5.9		<3.4		<2.4	
* Phenol-d5	4165-62-2	8270C LL	ug/Kg	**770**		**610**		**580**		**850**		**530**	
Pyrene	129-00-0	8270C LL	ug/Kg	**660**		**750**		**520**		**690**		**480**	
* Terphenyl-d14	1718-51-0	8270C LL	ug/Kg	**520**		**430**		**460**		**540**		**380**	

Bold - Analysis is above detection limit

D **-** Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

***** Surrogate compound
N - Presumptive evidence of material.
< - Not detected
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Date Collected		10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units												
2,2'-oxybis[1-chloropropane]	108-60-1	8270C LL	ug/Kg	<6.6		<3.2		<3.8		<2.5		<2.5		<2.7	
2,4,5-Trichlorophenol	95-95-4	8270C LL	ug/Kg	<33		<16		<19		<12		<12		<13	
* 2,4,6-Tribromophenol	118-79-6	8270C LL	ug/Kg	**610**		**740**		**730**		**780**		**660**		**780**	
2,4,6-Trichlorophenol	88-06-2	8270C LL	ug/Kg	<46		<22		<26		<17		<18		<19	
2,4-Dichlorophenol	120-83-2	8270C LL	ug/Kg	<6.1		<2.9		<3.5		<2.3		<2.4		<2.5	
2,4-Dimethylphenol	105-67-9	8270C LL	ug/Kg	<48		<23		<27		<18		<18		<20	
2,4-Dinitrophenol	51-28-5	8270C LL	ug/Kg	<360		<170		<210		<140		<140		<150	
2,4-Dinitrotoluene	121-14-2	8270C LL	ug/Kg	<25		<12		<14		<9.2		<9.2		<10	
2,6-Dinitrotoluene	606-20-2	8270C LL	ug/Kg	<31		<15		<18		<12		<12		<13	
2-Chloronaphthalene	91-58-7	8270C LL	ug/Kg	<6.4		<3.1		<3.7		<2.4		<2.5		<2.6	
2-Chlorophenol	95-57-8	8270C LL	ug/Kg	<25		<12		<14		<9.4		<9.6		<10	
* 2-Fluorobiphenyl	321-60-8	8270C LL	ug/Kg	**310**		**410**		**460**		**400**		**360**		**420**	
* 2-Fluorophenol	367-12-4	8270C LL	ug/Kg	**420**		**630**		**740**		**540**		**500**		**610**	
2-Methylnaphthalene	91-57-6	8270C LL	ug/Kg	**57**	J	**34**		**39**		**27**		**37**		**36**	
2-Methylphenol	95-48-7	8270C LL	ug/Kg	<21		<10		<12		<8		<8.2		<8.8	
2-Nitroaniline	88-74-4	8270C LL	ug/Kg	<140		<65		<78		<51		<53		<56	
3,3'-Dichlorobenzidine	91-94-1	8270C LL	ug/Kg	<32		<15		<18		<12		<12		<13	
4-Chloroaniline	106-47-8	8270C LL	ug/Kg	<24		<12		<14		<9.2		<9.4		<10	
Acenaphthene	83-32-9	8270C LL	ug/Kg	**78**		**72**		**59**		**50**		**58**		**56**	
Acenaphthylene	208-96-8	8270C LL	ug/Kg	**47**	J	**42**		**38**		**33**		**29**		**29**	
Anthracene	120-12-7	8270C LL	ug/Kg	**190**		**140**		**100**		**120**		**140**		**130**	
Atrazine	1912-24-9	8270C LL	ug/Kg	<30		<14		<17		<11		<11		<12	
Benzo[a]anthracene	56-55-3	8270C LL	ug/Kg	**460**		**420**		**300**		**320**		**460**		**480**	
Benzo[a]pyrene	50-32-8	8270C LL	ug/Kg	**500**		**460**		**350**		**340**		**460**		**400**	

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Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Date Collected		10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units												
Benzo[b]fluoranthene	205-99-2	8270C LL	ug/Kg	480		420		380		340		630		560	
Benzo[k]fluoranthene	207-08-9	8270C LL	ug/Kg	250		250		150		130		<4.8		<5.1	
Benzoic acid	65-85-0	8270C LL	ug/Kg	<130		<61		<73		<48		<49		<52	
Benzyl alcohol	100-51-6	8270C LL	ug/Kg	<37		<18		<21		<14		<14		<15	
Bis(2-chloroethyl)ether	111-44-4	8270C LL	ug/Kg	<8.2		<3.9		<4.7		<3.1		<3.2		<3.4	
Bis(2-ethylhexyl) phthalate	117-81-7	8270C LL	ug/Kg	240	J	99	J	97	J	89	J	80	J	92	J
Butyl benzyl phthalate	85-68-7	8270C LL	ug/Kg	<42		<20		<24		<16		<16		<17	
Carbazole	86-74-8	8270C LL	ug/Kg	45	J	38		28	J	25		32		33	
Chrysene	218-01-9	8270C LL	ug/Kg	490		440		340		330		410		420	
Dibenz(a,h)anthracene	53-70-3	8270C LL	ug/Kg	81		84		63		68		78		76	
Dibenzofuran	132-64-9	8270C LL	ug/Kg	53	J	40	J	36	J	31	J	36	J	36	J
Diethyl phthalate	84-66-2	8270C LL	ug/Kg	<33		<16		<19		<13		<13		<14	
Dimethyl phthalate	131-11-3	8270C LL	ug/Kg	<33		<16		<19		<12		<13		<14	
Di-n-butyl phthalate	84-74-2	8270C LL	ug/Kg	<38		<18		<22		<14		<15		<16	
Di-n-octyl phthalate	117-84-0	8270C LL	ug/Kg	<32		<15		<18		<12		<12		<13	
DMF	68-12-2	8270C LL	ug/Kg	0		0		0		0	J N	0	J N	0	J N
Fluoranthene	206-44-0	8270C LL	ug/Kg	860		750		560		550		600		630	
Fluorene	86-73-7	8270C LL	ug/Kg	100		76		59		52		74		71	
Hexachlorobenzene	118-74-1	8270C LL	ug/Kg	<6.5		<3.1		<3.7		<2.4		<2.5		<2.7	
Hexachlorocyclopentadiene	77-47-4	8270C LL	ug/Kg	<33		<16		<19		<12		<13		<14	
Hexachloroethane	67-72-1	8270C LL	ug/Kg	<22		<11		<13		<8.2		<8.5		<9	
Indeno[1,2,3-cd]pyrene	193-39-5	8270C LL	ug/Kg	250		230		190		220		240		200	
Isophorone	78-59-1	8270C LL	ug/Kg	<23		<11		<13		<8.6		<8.9		<9.4	
Methylphenol, 3 & 4	106-44-5	8270C LL	ug/Kg	57	J	<14		25	J	13	J	14	J	20	J
Naphthalene	91-20-3	8270C LL	ug/Kg	*66*		45		48		31		41		39	

APPENDIX B

Table -13: Sediment Analytical Results - SVOCs

Parameter	Matrix			Management Unit #3											
	Sample ID			CH-2011-MU3-G1		CH-2011-MU3-G2		CH-2011-MU3-G3		CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)	
	Lab ID			180-5048-1		180-5048-2		180-5048-3		180-5219-4		180-5219-5		180-5219-6	
	CAS#	Date Collected		10/18/2011	Qualifier	10/18/2011	Qualifier	10/18/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units												
Nitrobenzene	98-95-3	8270C LL	ug/Kg	<25		<12		<15		<9.5		<9.8		<10	
* Nitrobenzene-d5	4165-60-0	8270C LL	ug/Kg	**310**		**390**		**490**		**410**		**340**		**410**	
N-Nitrosodi-n-propylamine	621-64-7	8270C LL	ug/Kg	<7.2		<3.4		<4.1		<2.7		<2.8		<2.9	
N-Nitrosodiphenylamine	86-30-6	8270C LL	ug/Kg	<28		<14		<16		<11		<11		<12	
Pentachlorophenol	87-86-5	8270C LL	ug/Kg	<27		<13		<16		<10		<11		<11	
Phenanthrene	85-01-8	8270C LL	ug/Kg	**590**		**530**		**390**		**380**		**580**		**540**	
Phenol	108-95-2	8270C LL	ug/Kg	<7.2		<3.5		<4.1		<2.7		<2.8		<3	
* Phenol-d5	4165-62-2	8270C LL	ug/Kg	**580**		**730**		**840**		**580**		**590**		**690**	
Pyrene	129-00-0	8270C LL	ug/Kg	**790**		**730**		**540**		**570**		**810**		**830**	
* Terphenyl-d14	1718-51-0	8270C LL	ug/Kg	**420**		**410**		**440**		**430**		**360**		**550**	

Bold - Analysis is above detection limit

D **-** Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

***** Surrogate compound
N - Presumptive evidence of material.
< - Not detected
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

APPENDIX B

Table -14: Elutriate Analytical Results - SVOCs

Parameter	Matrix			Management Unit #1							
	Sample ID			CH-2011-MU1-GNL		CH-2011-MU1-GNU		CH-2011-MU1-GS		CH-2011-MU1-COMP	
	Lab ID			180-5219-16		180-5219-15		180-5219-9		180-5172-9	
	CAS#	Date Collected		10/23/2011	Qualifier	10/23/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units								
* 2,4,6-Tribromophenol	118-79-6	8270C LL	ug/L	**24**		**21**		**18**		**10**	
* 2-Fluorobiphenyl	321-60-8	8270C LL	ug/L	**12**		**9.3**		**9**		**4.8**	
* 2-Fluorophenol	367-12-4	8270C LL	ug/L	**19**		**15**		**15**		**8.6**	
Atrazine	1912-24-9	8270C LL	ug/L	<0.96		<0.98		<0.086		<0.086	
Benzo[a]pyrene	50-32-8	8270C LL	ug/L	<0.19		<0.2		<0.013		<0.013	
Bis(2-ethylhexyl) phthalate	117-81-7	8270C LL	ug/L	<1.9		<2		<1.2		<1.2	
Hexachlorocyclopentadiene	77-47-4	8270C LL	ug/L	<0.96		<0.98		<0.05		<0.05	
* Nitrobenzene-d5	4165-60-0	8270C LL	ug/L	**14**		**10**		**10**		**5.9**	
Pentachlorophenol	87-86-5	8270C LL	ug/L	<0.96		<0.98		<0.064		<0.064	
Phenol	108-95-2	8270C LL	ug/L	<0.19		<0.2		<0.056		<0.056	
* Phenol-d5	4165-62-2	8270C LL	ug/L	**19**		**16**		**14**		**8.4**	
* Terphenyl-d14	1718-51-0	8270C LL	ug/L	**6**		**6.4**		**6.2**		**3.8**	

Bold - Analysis is above detection limit
* Surrogate compound
< - Not detected

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Table -14: Elutriate Analytical Results - SVOCs

Parameter	Matrix			Management Unit #2					
	Sample ID			CH-2011-MU2-GN		CH-2011-MU2-GS		CH-2011-MU2-COMP	
	Lab ID			180-5219-10		180-5219-11		180-5172-10	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier
SVOCs		Analysis Method	Units						
* 2,4,6-Tribromophenol	118-79-6	8270C LL	ug/L	**17**		**14**		**17**	
* 2-Fluorobiphenyl	321-60-8	8270C LL	ug/L	**7.2**		**6.9**		**8.9**	
* 2-Fluorophenol	367-12-4	8270C LL	ug/L	**11**		**12**		**14**	
Atrazine	1912-24-9	8270C LL	ug/L	<0.086		<0.086		<0.087	
Benzo[a]pyrene	50-32-8	8270C LL	ug/L	<0.013		<0.013		<0.013	
Bis(2-ethylhexyl) phthalate	117-81-7	8270C LL	ug/L	<1.2		<1.2		<1.2	
Hexachlorocyclopentadiene	77-47-4	8270C LL	ug/L	<0.05		<0.05		<0.05	
* Nitrobenzene-d5	4165-60-0	8270C LL	ug/L	**8.2**		**8.2**		**10**	
Pentachlorophenol	87-86-5	8270C LL	ug/L	<0.064		<0.064		<0.064	
Phenol	108-95-2	8270C LL	ug/L	<0.056		<0.056		<0.056	
* Phenol-d5	4165-62-2	8270C LL	ug/L	**11**		**12**		**14**	
* Terphenyl-d14	1718-51-0	8270C LL	ug/L	**6.2**		**5.6**		**6.7**	

Bold - Analysis is above detection limit
* Surrogate compound
< - Not detected

APPENDIX B

Table -14: Elutriate Analytical Results - SVOCs

Parameter	Matrix			Management Unit #3							
	Sample ID			CH-2011-MU3-GN		CH-2011-MU3-GS		CH-2011-MU3-GS(DUP)		CH-2011-MU3-COMP	
	Lab ID			180-5219-12		180-5219-13		180-5219-14		180-5048-6	
	CAS#	Date Collected		10/22/2011	Qualifier	10/22/2011	Qualifier	10/22/2011	Qualifier	10/18/2011	Qualifier
SVOCs		Analysis Method	Units								
* 2,4,6-Tribromophenol	118-79-6	8270C LL	ug/L	**20**		**18**		**23**		**18**	
* 2-Fluorobiphenyl	321-60-8	8270C LL	ug/L	**10**		**8.4**		**11**		**9.5**	
* 2-Fluorophenol	367-12-4	8270C LL	ug/L	**18**		**14**		**19**		**16**	
Atrazine	1912-24-9	8270C LL	ug/L	<0.087		<0.086		<0.087		<0.086	
Benzo[a]pyrene	50-32-8	8270C LL	ug/L	<0.013		<0.013		<0.013		<0.013	
Bis(2-ethylhexyl) phthalate	117-81-7	8270C LL	ug/L	<1.2		<1.2		<1.2		<1.2	
Hexachlorocyclopentadiene	77-47-4	8270C LL	ug/L	<0.05		<0.05		<0.05		<0.05	
* Nitrobenzene-d5	4165-60-0	8270C LL	ug/L	**12**		**9.3**		**12**		**11**	
Pentachlorophenol	87-86-5	8270C LL	ug/L	<0.064		<0.064		<0.064		<0.064	
Phenol	108-95-2	8270C LL	ug/L	<0.056		<0.056		<0.056		<0.056	
* Phenol-d5	4165-62-2	8270C LL	ug/L	**18**		**15**		**19**		**16**	
* Terphenyl-d14	1718-51-0	8270C LL	ug/L	**7.3**		**7.4**		**9.2**		**6.6**	

Bold - Analysis is above detection limit
* Surrogate compound
< - Not detected

APPENDIX B

Table - 15: Sediment Asbestos Analytical Results

Parameter		Sample ID			CH-2011-MU1-G1	CH-2011-MU1-G2	CH-2011-MU1-GNU	CH-2011-MU1-GS	CH-2011-MU2-G1	CH-2011-MU2-G2	CH-2011-MU2-GN	CH-2011-MU2-GS	CH-2011-MU3-G1	CH-2011-MU3-G2	CH-2011-MU3-GN	CH-2011-MU3-GS
		Lab ID			041128659-0013	041128659-0014	041128659-0015	041128659-0017	041131565-0002	041128659-0018	041128659-0019	041128659-0020	041128659-0021	041128659-0022	041128659-0023	041128659-0024
		Date Collected			10/21/2011	10/21/2011	10/23/2011	10/22/2011	10/21/2011	10/21/2011	10/22/2011	10/22/2011	10/18/2011	10/18/2011	10/22/2011	10/22/2011
		Sample Thickness (ft)			2.0	2.0	3.3	2.7	2.0	2.0	3.0	3.0	1.5	1.8	3.5	3.0
		Analysis Method	Units	Rang												
Chrysotile					Asbestos Structures											
Asbestos Structures	CD	EPA-540-R97-028	um	>5 um, ≤ 10 um	0	0	0	0	0	0	0	0	0	0	0	0
Asbestos Structures	CD	EPA-540-R97-028	um	>10 um	0	0	0	0	0	0	0	0	0	0	0	0
Protocol Asbestos Structures	CD	EPA-540-R97-028			0	0	0	0	0	0	0	0	0	0	0	0
Amphibole					Asbestos Structures											
Asbestos Structures	ADX	EPA-540-R97-028	um	>5 um, ≤ 10 um	0	0	0	0	0	0	0	0	0	0	0	0
Asbestos Structures	ADX	EPA-540-R97-028	um	>10 um	0	0	0	0	0	0	0	0	0	0	0	0
Protocol Asbestos Structures	ADX	EPA-540-R97-028			0	0	0	0	0	0	0	0	0	0	0	0
Chrysotile/Amphibole					Asbestos Structures											
Asbestos Structures	CD/ADX	EPA-540-R97-028	um	>5 um, ≤ 10 um	0	0	0	0	0	0	0	0	0	0	0	0
Asbestos Structures	CD/ADX	EPA-540-R97-028	um	>10 um	0	0	0	0	0	0	0	0	0	0	0	0
Total Protocol Asbestos Structures	CD/ADX	EPA-540-R97-028			0	0	0	0	0	0	0	0	0	0	0	0
Total Protocol Non Asbestos Structures			NAM		0	0	0	0	0	0	0	0	0	0	0	0

Bold - Analysis is above detection limit

APPENDIX B

Table - 16: Sediment Grain Size Analysis

Sample ID	Lab Sample ID	Analysis Method	Unit	Date Collected	Clay	Coarse Sand	Fine Sand	Gravel	Medium Sand	Silt
CH-2011-MU1-G1	180-5172-1	ASTM D422	%	10/21/2011	30.5	0	14.5	0	1	54
CH-2011-MU1-G2	180-5172-2	ASTM D422	%	10/21/2011	28.2	0.2	21.3	0	0.7	49.6
CH-2011-MU1-G3	180-5172-3	ASTM D422	%	10/21/2011	28.1	0.3	21.8	0	0.4	49.4
CH-2011-MU1-GNU	180-5219-7	ASTM D422	%	10/23/2011	25.7	0	25.5	0	0.3	48.5
CH-2011-MU1-GNL	180-5219-8	ASTM D422	%	10/23/2011	26.3	1.1	32.5	0.2	1.7	38.2
CH-2011-MU1-GS	180-5219-1	ASTM D422	%	10/22/2011	18	0.3	29.7	0.4	0.3	51.3
CH-2011-MU2-G1	180-5172-5	ASTM D422	%	10/21/2011	22.6	0	16.9	0	1	59.5
CH-2011-MU2-G2	180-5172-6	ASTM D422	%	10/21/2011	13.1	0	48.9	0	0.2	37.8
CH-2011-MU2-G3	180-5172-7	ASTM D422	%	10/21/2011	17.6	0.4	50.6	1.3	0.4	29.7
CH-2011-MU2-GN	180-5219-2	ASTM D422	%	10/22/2011	28.8	0	32.6	0	0.1	38.5
CH-2011-MU2-GS	180-5219-3	ASTM D422	%	10/22/2011	15.2	0.4	43.4	1.1	0.4	39.5
CH-2011-MU3-G1	180-5048-1	ASTM D422	%	10/18/2011	24.9	0.4	21	0	1	52.7
CH-2011-MU3-G2	180-5048-2	ASTM D422	%	10/18/2011	18.1	0	6	0	0.2	75.7
CH-2011-MU3-G3	180-5048-3	ASTM D422	%	10/18/2011	21.8	0	3.8	0	0.2	74.2
CH-2011-MU3-GN	180-5219-4	ASTM D422	%	10/22/2011	26.8	0	21.2	0	0.2	51.8
CH-2011-MU3-GS	180-5219-5	ASTM D422	%	10/22/2011	16.2	0	7	0	0.1	76.7

Note: See Appendix (F) for the complete Laboratory Grain Size Analysis Report

APPENDIX B

Table - 16: Sediment Grain Size Analysis

Sample ID	Lab Sample ID	Analysis Method	Unit	Date Collected	Sieve Size													
					#10	#100	#20	#200	#230	#4	#40	#60	#80	0.375 inch	0.75 inch	1 inch	1.5	2 inch
CH-2011-MU1-G1	180-5172-1	ASTM D422	%	10/21/2011	100	97.3	99.4	88.7	84.5	100	99	98.4	97.8	100	100	100	100	100
CH-2011-MU1-G2	180-5172-2	ASTM D422	%	10/21/2011	99.8	96.5	99.5	84	77.8	100	99.1	98.3	97.3	100	100	100	100	100
CH-2011-MU1-G3	180-5172-3	ASTM D422	%	10/21/2011	99.7	97.7	99.5	83.5	77.5	100	99.3	98.8	98.2	100	100	100	100	100
CH-2011-MU1-GNU	180-5219-7	ASTM D422	%	10/23/2011	100	97.2	99.9	81.3	74.2	100	99.7	99.2	98.1	100	100	100	100	100
CH-2011-MU1-GNL	180-5219-8	ASTM D422	%	10/23/2011	98.7	91.3	97.8	72.1	64.5	99.8	97	95.3	92.7	100	100	100	100	100
CH-2011-MU1-GS	180-5219-1	ASTM D422	%	10/22/2011	99.3	95.7	99.2	77.5	69.3	99.6	99	98.2	96.7	100	100	100	100	100
CH-2011-MU2-G1	180-5172-5	ASTM D422	%	10/21/2011	100	94.1	99.6	86.9	82.1	100	99	97.1	94.9	100	100	100	100	100
CH-2011-MU2-G2	180-5172-6	ASTM D422	%	10/21/2011	100	97.8	99.9	64.5	50.9	100	99.8	99.5	98.8	100	100	100	100	100
CH-2011-MU2-G3	180-5172-7	ASTM D422	%	10/21/2011	98.3	96	98	58.5	47.3	98.7	97.9	97.6	97	99.8	100	100	100	100
CH-2011-MU2-GN	180-5219-2	ASTM D422	%	10/22/2011	100	99	99.9	74.8	67.3	100	99.9	99.8	99.5	100	100	100	100	100
CH-2011-MU2-GS	180-5219-3	ASTM D422	%	10/22/2011	98.5	94.7	98.3	66	54.7	98.9	98.1	97.4	96	99.5	100	100	100	100
CH-2011-MU3-G1	180-5048-1	ASTM D422	%	10/18/2011	99.6	96.1	99.2	84	77.6	100	98.6	97.8	96.9	100	100	100	100	100
CH-2011-MU3-G2	180-5048-2	ASTM D422	%	10/18/2011	100	99.4	100	96.9	93.8	100	99.8	99.6	99.5	100	100	100	100	100
CH-2011-MU3-G3	180-5048-3	ASTM D422	%	10/18/2011	100	99.5	99.9	97.7	96	100	99.8	99.7	99.6	100	100	100	100	100
CH-2011-MU3-GN	180-5219-4	ASTM D422	%	10/22/2011	100	99	99.9	85.8	78.6	100	99.8	99.6	99.3	100	100	100	100	100
CH-2011-MU3-GS	180-5219-5	ASTM D422	%	10/22/2011	100	99.7	99.9	96.7	92.9	100	99.9	99.8	99.8	100	100	100	100	100

Note: See Appendix (F) for the complete Laboratory Grain Size Analysis l

Appendix C

Typed Field Log Form

APPENDIX C

Typed Field Log Form

Station ID#	Sample collection date	Actual water depth reading at the field (ft.)	Water Elevation Calumet Station, ID 9087044	* Elevation Top of Sediment (ft.)	Thickness of each core retrieved (ft.)	Elevation Bottom of Sediment Core (ft.)	Number of cores or grabs and attempts at each station	Sample ID#	A description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual-Manual Procedure)".	USCS Classification	Type of sampling equipment used	Latitude and Longitude of station locations	State Plane, NAD83 1201 - Illinois East, U.S. Feet	Time of sample collection
CH-2011-MU1-G1	10/21/2011	27.8	578.06	550.3	2	548.3	5	CH-2011-MU1-G1	gray, silty clay with sand, loose, trace of vegetative organic odor.	SC-SM	**`Gravity Core/Ponar	41 44.198 N 87 31.015 W	1847677.243 N 1207076.016 E	10:00 AM
CH-2011-MU1-G2	10/21/2011	28.1	578.08	550.0	2	548.0	4	CH-2011-MU1-G2	gray, silty clay with sand and lenses of clay, loose, trace of vegetative organic odor.	SC-SM	**`Gravity Core/Ponar	41 44.146 N 87 30.990 W	1847362.516 N 1207192.736 E	11:00 AM
CH-2011-MU1-G3	10/21/2011	27.9	578.02	550.1	2	548.1	4	CH-2011-MU1-G3	brown, silty clay with sand, loose, no organic odor.	SC-SM	**`Gravity Core/Ponar	41 44.092 N 87 30.869 W	1847039.794 N 1207746.280 E	11:30 AM
CH-2011-MU1-Comp	10/21/2011	NA	NA	NA	NA	NA	NA	CH-2011-MU1-Comp	Composite sample of sample CH-2011-MU1-C1, CH-2011-MU1-C2 and CH-2011-MU1-C3.	NA	NA	NA	NA	11:30 AM
CH-2011-MU1-GN	10/23/2011	23.3	578.05	554.8	3.3	551.5	3	CH-2011-MU1-GNU	0-2 ft, dark brown, silty clay with sand, low plasticity, trace of vegetative organic odor. 2-3.25 ft, brown, very fine sand with silt and clay, loose, no organic odor.	SC-SM	Hurricane Sampler/Split spoon	41 44.244 N 87 31.397 W	1847940.189 N 1205335.707 E	10:00 AM
				551.5	3	548.5	6	CH-2011-MU1-GNL	dark brown, silty clay with sand, low plasticity, no organic odor.	SC-SM	Hurricane Sampler/Macro core/Split spoon			11:15 AM
CH-2011-MU1-GS	10/22/2011	26.9	577.94	551.0	2.7	548.3	6	CH-2011-MU1-GS	dark brown to gray, silty clay with sand, loose, zebra mussel shells, trace of vegetative organic odor.	SC-SM	`Gravity Core	41 43.866 N 87 30.958 W	1845663.406 N 1207354.452 E	5:15 PM

APPENDIX C

Typed Field Log Form

Station ID#	Sample collection date	Actual water depth reading at the field (ft.)	Water Elevation Calumet Station, ID 9087044	* Elevation Top of Sediment (ft.)	Thickness of each core retrieved (ft.)	Elevation Bottom of Sediment Core (ft.)	Number of cores or grabs and attempts at each station	Sample ID#	A description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual-Manual Procedure)".	USCS Classification	Type of sampling equipment used	Latitude and Longitude of station locations	State Plane, NAD83 1201 - Illinois East, U.S. Feet	Time of sample collection
CH-2011-MU2-G1	10/21/2011	27.6	577.99	550.4	2	548.4	3	CH-2011-MU2-G1	brown, silty clay with sand, loose, no odor.	SC-SM	**`Gravity Core/Ponar	41 43.601 N 87 30.450 W	1844076.073 N 1209680.932 E	1:15 PM
CH-2011-MU2-G2	10/21/2011	27.9	577.94	550.0	2	548.0	3	CH-2011-MU2-G2	gray, fine sand with silt and clay, loose, trace of vegetative organic odor.	SC-SM	**`Gravity Core/Ponar	41 43.830 N 87 30.554 W	1845462.297 N 1209194.458 E	3:30 PM
CH-2011-MU2-G3	10/21/2011	27.8	577.79	550.0	2	548.0	3	CH-2011-MU2-G3	brown, fine sand with silty clay, zebra mussel shells, loose, no odor.	SC-SM	**`Gravity Core/Ponar	41 43.936 N 87 30.486 W	1846109.018 N 1209497.640 E	5:15 PM
CH-2011-MU2-Comp	10/21/2011	NA	NA	NA	NA	NA	NA	CH-2011-MU2-Comp	Composite sample of sample CH-2011-MU2-C1, CH-2011-MU2-C2 and CH-2011-MU2-C3.	NA	NA	NA	NA	5:15 AM
CH-2011-MU2-GN	10/22/2011	27.1	577.78	550.7	3	547.7	4	CH-2011-MU2-GN	brown, silty sandy clay, low plasticity, zebra mussel shells, no organic odor.	SC-SM	`Gravity Core	41 44.330 N 87 30.803 W	1848488.072 N 1208032.744 E	4:00 PM
CH-2011-MU2-GS	10/22/2011	26.9	577.94	551.0	3	548.0	5	CH-2011-MU2-GS	brown, silty sand at the top and silty clay at the bottom, medium plasticity, no organic odor.	SC-SM	**`Gravity Core/Ponar	41 43.766 N 87 30.784 W	1845063.618 N 1208151.816 E	1:15 PM

APPENDIX C

Typed Field Log Form

Station ID#	Sample collection date	Actual water depth reading at the field (ft.)	Water Elevation Calumet Station, ID 9087044	* Elevation Top of Sediment (ft.)	Thickness of each core retrieved (ft.)	Elevation Bottom of Sediment Core (ft.)	Number of cores or grabs and attempts at each station	Sample ID#	A description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual-Manual Procedure)".	USCS Classification	Type of sampling equipment used	Latitude and Longitude of station locations	State Plane, NAD83 1201 - Illinois East, U.S. Feet	Time of sample collection
CH-2011-MU3-G1	10/18/2011	27.7	577.8	550.1	1.5	548.6	4	CH-2011-MU3-G1	gray, silty clay with sand, medium plasticity, trace of vegetative organic odor.	SC-SM	**`Gravity Core/Ponar	41 43.759 N 87 30.212 W	1845046.049 N 1210754.486 E	12:00 PM
CH-2011-MU3-G2	10/18/2011	27.9	578.02	550.1	1.8	548.3	4	CH-2011-MU3-G2	gray, silty clay with sand, low plasticity, no organic odor.	SC-SM	**`Gravity Core/Ponar	41 43.288 N 87 30.111 W	1842190.016 N 1211241.608 E	3:00 PM
CH-2011-MU3-G3	10/18/2011	27.9	578.03	550.1	1.7	548.4	4	CH-2011-MU3-G3	gray, silty clay with sand, low plasticity, trace of vegetative organic odor.	SC-SM	**`Gravity Core/Ponar	41 43.379 N 87 30.363 W	1842731.628 N 1210089.704 E	4:00 PM
CH-2011-MU3-Comp	10/18/2011	NA	NA	NA	NA	NA	NA	CH-2011-MU3-Comp	Composite sample of sample CH-2011-MU3-C1, CH-2011-MU3-C2 and CH-2011-MU3-C3.	SC-SM	NA	NA	MA	4:00 PM
CH-2011-MU3-GN	10/22/2011	25.8	577.91	552.1	3.5	548.6	5	CH-2011-MU3-GN	0-2.5 ft, brown, silty sand with clay, low plasticity, no organic odor. 2.5 -3 .5 ft, dark brown, silty sand with clay, loose, zebra mussel shells, no organic odor.	SC-SM	`Gravity Core	41 43.984 N 87 30.320 W	1846407.784 N 1210250.004 E	9:00 AM
CH-2011-MU3-GS	10/22/2011	26.9	577.91	551.0	3	548.0	5	CH-2011-MU3-GS Duplicate	0-2.5 ft, brown, silty clay with some sand, low plasticity, no organic odor. 2.5 -3 ft, dark brown, silty clay with sand, loose, zebra mussel shells, no organic odor.	SC-SM	`Gravity Core	41 43.259 N 87 30.148 W	1842012.268 N 1211074.656 E	11:15 AM

* Elevation of top of sediment calculated based on water elevation reading from the nearest NONA station and the field measured depth of water.

Dredge depth elevation for Calumet Harbor samples is 28 feet below LWD (Required sample is depth 1 feet below the project depth)

** Gravity core were utilized to retrieve a full sediment column to the required depth to see if there is a significant change in lithology, color, or odor. If there was no significant change, ponar was utilized to collect volume sediment required to fill jars for chemical analysis

Appendix D

Sediment Boring Logs

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 21, 2011
DRILLING START TIME: 10:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 10:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU1-G1
NOAA STATION: 9087044
WATER ELEVATION: 578.06
SEDIMENT ELEVATION: 550.3 ft.
STATE PLANE COORDINATES: 1,207,076.02 ft. E
NAD83 1210 - Illinois East 1,847,677.24 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU1-G1	5			2.0	(SM-SC) gray, silty clay with sand, loose, trace of vegetative organic odor. Note: Ponar was used to collect volume sample	548.3	% COARSE SAND = 0 % MEDIUM SAND = 1 % FINE SAND = 14.5 % SILT = 54 % CLAY = 30.5

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 21, 2011
DRILLING START TIME: 11:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU1-G2
NOAA STATION: 9087044
WATER ELEVATION: 578.08
SEDIMENT ELEVATION: 550.0 ft.
STATE PLANE COORDINATES: 1,207,192.74 ft. E
NAD83 1210 - Illinois East 1,847,362.52 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU1-G2	4			2.0	(SC-SM) gray, silty clay with sand and lenses of clay, loose, trace of vegetative organic odor. Note: Ponar was used to collect volume sample	548.0	% COARSE SAND = 0.2 % MEDIUM SAND = 0.7 % FINE SAND = 21.3 % SILT = 49.6 % CLAY = 28.2

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 21, 2011
DRILLING START TIME: 11:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU1-G3
NOAA STATION: 9087044
WATER ELEVATION: 578.02
SEDIMENT ELEVATION: 550.1 ft.
STATE PLANE COORDINATES: 1,207,746.28 ft. E
NAD83 1210 - Illinois East 1,847,039.79 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU1-G3	4			2.0	(SC-SM) brown, silty clay with sand, loose, no organic odor.	548.1	% COARSE SAND = 0.3 % MEDIUM SAND = 0.4 % FINE SAND = 21.8 % SILT = 49.4 % CLAY = 28.1

Bottom of borehole at 2.0 feet.

U.S. Army Corps of Engineers, Chicago District
Contract No.: W912P6-10-D0003 Task Order # 0004
Calumet Harbor Sediment Sampling and Analysis-Chicago, IL
FNG Project No.: 11655-0004

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 23, 2011
DRILLING START TIME: 11:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:15
SAMPLING METHOD: Split Spoon

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU1-GN
NOAA STATION: 9087044
WATER ELEVATION: 578.05
SEDIMENT ELEVATION: 554.8 ft.
STATE PLANE COORDINATES: 1,205,335.71 ft. E
NAD83 1210 - Illinois East 1,847,940.19 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	SS CH-2011-MU1-GNU	3				(SC-SM) dark brown, silty clay with sand, low plasticity, trace of vegetative organic odor.		% MEDIUM SAND = 0.3 % FINE SAND = 25.5 % SILT = 48.5 % CLAY = 25.7
					2.0		552.8	
2.5						(SC-SM) brown, very fine sand with silt and clay, loose, no organic odor.		
					3.3		551.6	
5.0	MC CH-2011-MU1-GNL	6				(SC-SM) dark brown, silty clay with sand, low plasticity, no organic odor.		% GRAVEL = % COARSE SAND = 1.1 % MEDIUM SAND = 1.7 % FINE SAND = 32.5 % SILT = 38.2 % CLAY = 26.3
					6.3		548.6	

Bottom of borehole at 6.3 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 22, 2011
DRILLING START TIME: 17:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 17:15
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU1-GS
NOAA STATION: 9087044
WATER ELEVATION: 577.94
SEDIMENT ELEVATION: 551.0 ft.
STATE PLANE COORDINATES: 1,207,354.45 ft. E
NAD83 1210 - Illinois East 1,845,663.41 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU1-GS	6				(SM-SC) dark brown to gray, silty clay with sand, loose, zebra mussel shells, trace of vegetative organic odor.		% GRAVEL = % COARSE SAND = 0.3 % MEDIUM SAND = 0.3 % FINE SAND = 29.7 % SILT = 51.3 % CLAY = 18
2.5					2.7		548.3	

Bottom of borehole at 2.7 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 21, 2011
DRILLING START TIME: 13:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 13:15
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU2-G1
NOAA STATION: 9087044
WATER ELEVATION: 577.99
SEDIMENT ELEVATION: 550.4 ft.
STATE PLANE COORDINATES: 1,209,680.93 ft. E
NAD83 1210 - Illinois East 1,844,076.07 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU2-G1	3			2.0	(SC-SM) brown, silty clay with sand, loose,, no odor. Note: Ponar was used to collect volume sample	548.4	% MEDIUM SAND = 1 % FINE SAND = 16.9 % SILT = 59.5 % CLAY = 22.6

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 21, 2011
DRILLING START TIME: 15:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 15:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU2-G2
NOAA STATION: 9087044
WATER ELEVATION: 577.94
SEDIMENT ELEVATION: 550.0 ft.
STATE PLANE COORDINATES: 1,209,194.46 ft. E
NAD83 1210 - Illinois East 1,845,462.30 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU2-G2	3			2.0	(SC-SM) gray, fine sand with silt and clay, loose, trace of vegetative organic odor. Note: Ponar was used to collect volume sample	548.0	% MEDIUM SAND = 0.2 % FINE SAND = 48.9 % SILT = 37.8 % CLAY = 13.1

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 21, 2011
DRILLING START TIME: 17:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 17:15
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU2-G3
NOAA STATION: 9087044
WATER ELEVATION: 577.79
SEDIMENT ELEVATION: 550.0 ft.
STATE PLANE COORDINATES: 1,209,497.64 ft. E
NAD83 1210 - Illinois East 1,846,109.02 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU2-G3	3			2.0	(SC-SM) brown, fine sand with silty clay, zebra mussel shells, loose, no odor. Note: Ponar was used to collect volume sample	548.0	% GRAVEL = % COARSE SAND = 0.4 % MEDIUM SAND = 0.4 % FINE SAND = 50.6 % SILT = 29.7 % CLAY = 17.6

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 22, 2011
DRILLING START TIME: 16:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU2-GN
NOAA STATION: 9087044
WATER ELEVATION: 577.78
SEDIMENT ELEVATION: 550.7 ft.
STATE PLANE COORDINATES: 1,208,032.74 ft. E
NAD83 1210 - Illinois East 1,848,488.07 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU2-GN	4				(SC-SM) brown, silty sandy clay, low plasticity, zebra mussel shells, no organic odor. Note: Ponar was used to collect volume sample		% MEDIUM SAND = 0.1 % FINE SAND = 32.6 % SILT = 38.5 % CLAY = 28.8
2.5					3.0		547.7	

Bottom of borehole at 3.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 22, 2011
DRILLING START TIME: 13:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 13:15
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU2-GS
NOAA STATION: 9087044
WATER ELEVATION: 577.94
SEDIMENT ELEVATION: 551.0 ft.
STATE PLANE COORDINATES: 1,208,151.82 ft. E
NAD83 1210 - Illinois East 1,845,063.62 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU2-GS	5			3.0	(SC-SM) brown, silty sand at the top and silty clay at the bottom, medium plasticity, no organic odor. Note: Ponar was used to collect volume sample	548.0	% GRAVEL = % COARSE SAND = 0.4 % MEDIUM SAND = 0.4 % FINE SAND = 43.4 % SILT = 39.5 % CLAY = 15.2
2.5								

Bottom of borehole at 3.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 18, 2011
DRILLING START TIME: 12:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU3-G1
NOAA STATION: 9087044
WATER ELEVATION: 577.8
SEDIMENT ELEVATION: 550.1 ft.
STATE PLANE COORDINATES: 1,210,754.49 ft. E
NAD83 1210 - Illinois East 1,845,046.05 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU3-G1	4			1.5	(SC-SM) gray, silty clay with sand, medium plasticity, trace of vegetative organic odor. Note: Ponar was used to collect volume sample	548.6	% GRAVEL = % COARSE SAND = 0.4 % MEDIUM SAND = 1 % FINE SAND = 21 % SILT = 52.7 % CLAY = 24.9

Bottom of borehole at 1.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 18, 2011
DRILLING START TIME: 15:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 15:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU3-G2
NOAA STATION: 9087044
WATER ELEVATION: 578.02
SEDIMENT ELEVATION: 550.1 ft.
STATE PLANE COORDINATES: 1,211,241.61 ft. E
NAD83 1210 - Illinois East 1,842,190.02 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU3-G2	4			1.8	(SC-SM) gray, silty clay with sand, low plasticity, no organic odor. Note: Ponar was used to collect volume sample	548.3	% MEDIUM SAND = 0.2 % FINE SAND = 6 % SILT = 75.7 % CLAY = 18.1

Bottom of borehole at 1.8 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 18, 2011
DRILLING START TIME: 16:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU3-G3
NOAA STATION: 9087044
WATER ELEVATION: 578.03
SEDIMENT ELEVATION: 550.1 ft.
STATE PLANE COORDINATES: 1,210,089.70 ft. E
NAD83 1210 - Illinois East 1,842,731.63 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU3-G3	4			1.7	(SC-SM) gray, silty clay with sand, low plasticity, trace of vegetative organic odor. Note: Ponar was used to collect volume sample	548.4	% MEDIUM SAND = 0.2 % FINE SAND = 3.8 % SILT = 74.2 % CLAY = 21.8

Bottom of borehole at 1.7 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 22, 2011
DRILLING START TIME: 09:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 09:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU3-GN
NOAA STATION: 9087044
WATER ELEVATION: 577.91
SEDIMENT ELEVATION: 552.1 ft.
STATE PLANE COORDINATES: 1,210,250.00 ft. E
NAD83 1210 - Illinois East 1,846,407.78 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU3-GN	5				(SC-SM) brown, silty sand with clay, low plasticity, no organic odor.		% MEDIUM SAND = 0.2 % FINE SAND = 21.2 % SILT = 51.8 % CLAY = 26.8
2.5					2.5		549.6	
						(SC-SM) dark brown, silty sand with clay, loose, zebra mussel shells, no organic odor.		
					3.5		548.6	

Bottom of borehole at 3.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Chicago District
PROJECT NAME: Calumet Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Chicago, IL
DRILLING DATE: October 22, 2011
DRILLING START TIME: 11:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:15
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11655-0004
BORING NUMBER: CH-2011-MU3-GS
NOAA STATION: 9087044
WATER ELEVATION: 577.91
SEDIMENT ELEVATION: 551.0 ft.
STATE PLANE COORDINATES: 1,211,074.66 ft. E
NAD83 1210 - Illinois East 1,842,012.27 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0.0	GC CH-2011-MU3-GS Duplicate	5				(SC-SM) brown, silty clay with some sand, low plasticity, no organic odor. Note: Ponar was used to collect volume sample		% MEDIUM SAND = 0.1 % FINE SAND = 7 % SILT = 76.7 % CLAY = 16.2
2.5					2.5		548.5	
						(SC-SM) dark brown, silty clay with sand, loose, zebra mussel shells, no organic odor.		
					3.0		548.0	

Bottom of borehole at 3.0 feet.

Appendix E

Sample and Station Photographs

APPENDIX E

Sample and Station Photographs

CH-2011-MU1-G1

Photo 1 – Sample location CH-2011-MU1-G1, looking northwest.

CH-2011-MU1-G1

Photo 2 – Sample CH-2011-MU1-G1, gray, silty clay with trace sand, loose, trace of vegetative organic odor.

CH-2011-MU1-G2

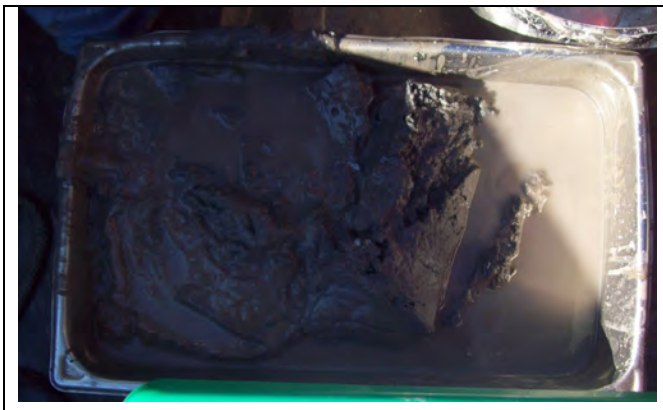
Photo 3 – Sample location CH-2011-MU1-G2, looking northeast.

CH-2011-MU1-G2

Photo 4 – Sample location CH-2011-MU1-G2, looking southwest

APPENDIX E

Sample and Station Photographs



CH-2011-MU1-G2

Photo 5 – Sample CH-2011-MU1-G2, gray, silty clay with trace sand and lenses of clay, loose, trace of vegetative organic odor.

CH-2011-MU1-G3

Photo 6 – Sample location CH-2011-MU1-G3, looking east.

CH-2011-MU1-G3

Photo 7 – Sample CH-2011-MU1-G3, brown, silty sandy clay, loose, saturated, no organic odor.

CH-2011-MU1-GN

Photo 8 – Sample location CH-2011-MU1-GN, looking southwest.

APPENDIX E

Sample and Station Photographs

CH-2011-MU1-CNU

Photo 9 – Sample CH-2011-MU1-GNU, 0-2 ft., dark brown, silty clay, low plasticity, saturated, trace of vegetative organic odor.
2-3.25 ft., brown, very fine sand with silt, loose, saturated, no organic odor.

CH-2011-MU1-GNL

Photo 10 – Sample CH-2011-MU1-GNL, dark brown, silty sandy clay, low plasticity, saturated no organic odor.

CH-2011-MU1-GS

Photo 11 – Sample location CH-2011-MU1-GS, looking west.

CH-2011-MU1-GS

Photo 12 – Sample CH-2011-MU1-GS, dark brown to gray, silty sandy clay, loose, zebra mussels shells, trace of vegetative organic odor.

APPENDIX E

Sample and Station Photographs

Photo 13 – Sample location CH-2011-MU2-G1, looking west.

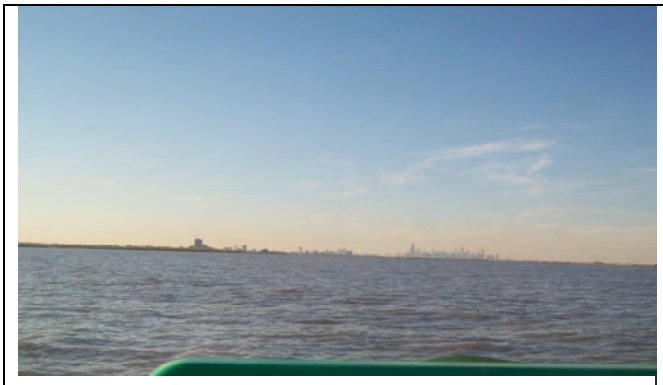
Photo 14 – Sample CH-2011-MU2-G1, gray, silty clay with trace sand and lenses of clay, loose, trace of vegetative organic odor.

Photo 15 – Sample location CH-2011-MU2-G2, looking south.

Photo 16 – Sample CH-2011-MU2-G2, gray, silty clay with trace sand and lenses of clay, loose, trace of vegetative organic odor.

APPENDIX E

Sample and Station Photographs

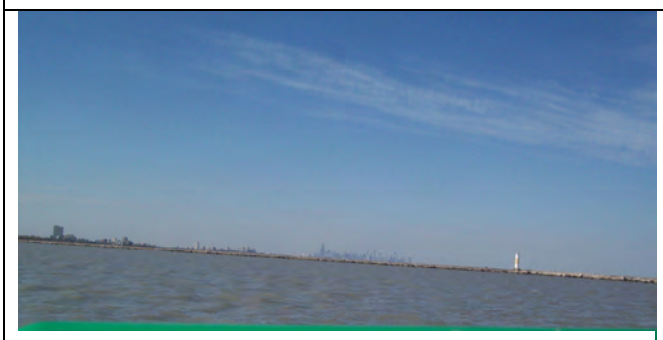


CH-2011-MU2-G3

Photo 17 – Sample location CH-2011-MU2-G3, looking north – northwest.

CH-2011-MU2-G3

Photo 18 – Sample CH-2011-MU2-G3, brown, silty sandy clay, zebra mussel shells, saturated, loose, no odor.



CH-2011-MU2-GN

Photo 19 – Sample location CH-2011-MU2-GN, looking northwest.

CH-2011-MU2-GN

Photo 20 – Sample CH-2011-MU2-GN, brown, silty sandy clay, low plasticity, zebra mussels shells, no organic odor.

APPENDIX E

Sample and Station Photographs

CH-2011-MU2-GS

Photo 21 – Sample location CH-2011-MU2-GS, looking northwest.

CH-2011-MU2-GS

Photo 22 – Sample CH-2011-MU2-GS, brown, silty sand at the top and silty clay at the bottom, medium plasticity, no organic odor.

CH-2011-MU3-G1

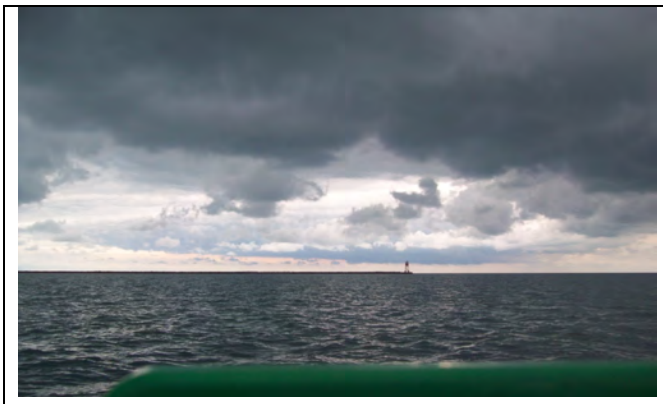
Photo 23 – Sample location CH-2011-MU3-G1, looking southeast.

CH-2011-MU3-G1

Photo 24 – Sample CH-2011-MU3-G1, gray, silty clay, medium plasticity, saturated, trace of vegetative organic odor.

APPENDIX E

Sample and Station Photographs



CH-2011-MU3-G2

Photo 25 – Sample location CH-2011-MU3-G2, looking southeast.

CH-2011-MU3-G2

Photo 26 – Sample CH-2011-MU3-G2, gray, silty clay, medium plasticity, saturated, no organic odor.

CH-2011-MU3-G3

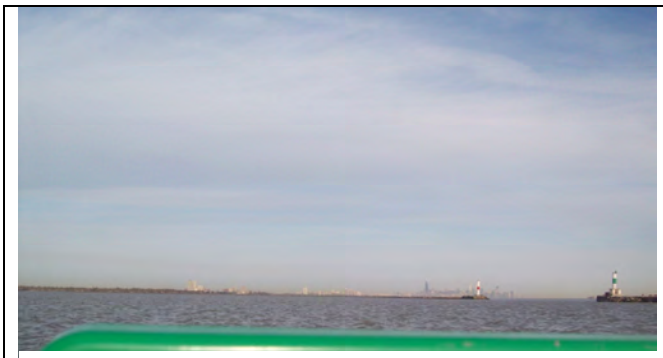
Photo 27 – Sample location CH-2011-MU3-G3, looking south.

CH-2011-MU3-G3

Photo 28 – Sample CH-2011-MU3-G3, gray, silty sandy clay, medium plasticity, saturated, trace of vegetative organic odor.

APPENDIX E

Sample and Station Photographs



CH-2011-MU3-GN

Photo 29 – Sample location CH-2011-MU3-GN, looking east.

CH-2011-MU3-GN

Photo 30 – Sample CH-2011-MU3-GN, 0-2.5 ft., brown, silty sandy clay, low plasticity, saturated no organic odor.
2.5 -3 .5 ft., dark brown, silty sand, loose, zebra mussels shell, no organic odor.

CH-2011-MU3-GS

Photo 31 – Sample location CH-2011-MU3-GS, looking west.

CH-2011-MU3-GS

Photo 32 – Sample CH-2011-MU3-GS, 0-2.5 ft., brown, silty sandy clay, low plasticity, saturated no organic odor.
2.5 -3 ft., dark brown, silty sand, loose, zebra mussels shell, no organic odor.

Appendix F

Test America Laboratory Analytical Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-5219-1
Client Project/Site: Calument Harbor
Revision: 2

For:
FutureNet Group, Inc
12801 Auburn Street
Detroit, Michigan 48223

Attn: Jim Finetti

Authorized for release by:
5/15/2012 4:19:12 PM

Carrie Gamber
Customer Service Manager
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 180-5219-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-5219-1 Revised

NOTE: This report is revised to report all the fractions of amended cyanide.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method(s) 8260B: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 19093 exceeded control limits for the following analytes: Trans 1,3 Dichloropropene.

GC/MS Semi VOA
The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 19662 exceeded control limits for the following analytes: Atrazine. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Many samples were analyzed at a dilution due to the sample matrix.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries outside QC limits for several compounds.

GC Semi VOA
The following samples was diluted due to the nature of the sample matrix for pesticides : CH-2011-MU1-GNL (180-5219-16), CH-2011-MU1-GNU (180-5219-15), CH-2011-MU3-GN (180-5219-12), CH-2011-MU3-GS (180-5219-13), CH-2011-MU3-GS(DUP) (180-5219-14). Elevated reporting limits (RLs) are provided.

The RPD was outside QC limits for the LCS and LCSD for dalapon.

Metals
Method 6020: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 18829 were outside control limits for antimony: CH-2011-MU1-GS (180-5219-1).

Method 6020: Due to the high concentration of several analytes, the matrix spike / matrix spike duplicate (MS/MSD) for batch 18829 could not be evaluated for accuracy and precision. These results are marked with a "4" qualifier.

The following samples were diluted due to the abundance of iron: CH-2011-MU1-GNL (180-5219-8), CH-2011-MU1-GNU (180-5219-7). Elevated reporting limits (RLs) are provided.

General Chemistry
Several samples were analyzed at ad dilution for total phosphorus.

The following samples were diluted due to the abundance of ammonia: CH-2011-MU1-GNL (180-5219-16), CH-2011-MU1-GNU (180-5219-15). Elevated reporting limits (RLs) are provided.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for phosphorus batch 21316 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

The matrix spikes for the non-amenable cyanide recovered outside QC limits.

Geotechnical
No analytical or quality issues were noted.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
B	Compound was found in the blank and sample.
F	RPD of the MS and MSD exceeds the control limits
F	MS or MSD exceeds the control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
F	MS or MSD exceeds the control limits

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
HF	Field parameter with a holding time of 15 minutes
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	RPD of the MS and MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
TestAmerica Pittsburgh	California	NELAC	9	4224CA
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	L-A-B	DoD ELAP		L2314
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAC	1	203011
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	New York	NELAC	2	11182
TestAmerica Pittsburgh	North Carolina DENR	State Program	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	Federal		P330-10-00139
TestAmerica Pittsburgh	USDA	Federal		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia DEP	State Program	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sample Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-5219-1	CH-2011-MU1-GS	Sediment	10/22/11 05:15	10/25/11 10:00
180-5219-2	CH-2011-MU2-GN	Sediment	10/22/11 04:00	10/25/11 10:00
180-5219-3	CH-2011-MU2-GS	Sediment	10/22/11 01:15	10/25/11 10:00
180-5219-4	CH-2011-MU3-GN	Sediment	10/22/11 09:00	10/25/11 10:00
180-5219-5	CH-2011-MU3-GS	Sediment	10/22/11 11:15	10/25/11 10:00
180-5219-6	CH-2011-MU3-GS(DUP)	Sediment	10/22/11 11:15	10/25/11 10:00
180-5219-7	CH-2011-MU1-GNU	Sediment	10/23/11 10:00	10/25/11 10:00
180-5219-8	CH-2011-MU1-GNL	Sediment	10/23/11 11:15	10/25/11 10:00
180-5219-9	CH-2011-MU1-GS	SET, Dissolved	10/27/11 13:30	10/27/11 12:15
180-5219-10	CH-2011-MU2-GN	SET, Dissolved	10/27/11 13:45	10/27/11 12:15
180-5219-11	CH-2011-MU2-GS	SET, Dissolved	10/27/11 14:00	10/27/11 12:15
180-5219-12	CH-2011-MU3-GN	SET, Dissolved	10/27/11 15:00	10/27/11 12:15
180-5219-13	CH-2011-MU3-GS	SET, Dissolved	10/28/11 14:00	10/28/11 14:45
180-5219-14	CH-2011-MU3-GS(DUP)	SET, Dissolved	10/28/11 14:10	10/28/11 14:45
180-5219-15	CH-2011-MU1-GNU	SET, Dissolved	10/28/11 14:20	10/28/11 14:45
180-5219-16	CH-2011-MU1-GNL	SET, Dissolved	10/28/11 14:30	10/28/11 14:45

Method Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL PIT
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	TAL PIT
8081A	Organochlorine Pesticides (GC)	SW846	TAL PIT
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
8151A	Herbicides (GC)	SW846	TAL PIT
6010B	Metals (ICP)	SW846	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
7471A	Mercury (CVAA)	SW846	TAL PIT
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
335.1	Cyanide, Amenable	MCAWW	TAL NC
350.1	Nitrogen, Ammonia	MCAWW	TAL PIT
365.1	Phosphorus, Total	EPA	TAL NC
7196A	Chromium, Hexavalent	SW846	TAL PIT
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9012A	Cyanide, Amenable	SW846	TAL NC
9040B	pH	SW846	TAL PIT
Moisture	Percent Moisture	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
35 ILL C-395	Illinois Elutriate Test	ILL-EPA	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

ILL-EPA = Illinois Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Date Collected: 10/22/11 05:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-1

Matrix: Sediment
Percent Solids: 60.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		8.0	0.75	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Bromomethane	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Chloroethane	ND		8.0	2.5	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Trichlorofluoromethane	ND		8.0	1.5	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,1-Dichloroethene	ND		8.0	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Acetone	**15**	**J**	32	8.0	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Carbon disulfide	ND		8.0	0.82	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Methylene Chloride	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
trans-1,2-Dichloroethene	ND		8.0	0.95	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Methyl tert-butyl ether	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,1-Dichloroethane	ND		8.0	0.92	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
cis-1,2-Dichloroethene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
cis-1,3-Dichloropropene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
2-Butanone (MEK)	ND		8.0	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Chloroform	ND		8.0	0.93	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,1,1-Trichloroethane	ND		8.0	0.78	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Carbon tetrachloride	ND		8.0	0.71	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Benzene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
trans-1,3-Dichloropropene	ND	*	8.0	0.95	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2-Dichloroethane	ND		8.0	0.98	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Trichloroethene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2-Dichloropropane	ND		8.0	0.87	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Bromodichloromethane	ND		8.0	0.90	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
4-Methyl-2-pentanone (MIBK)	ND		8.0	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Toluene	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,1,2-Trichloroethane	ND		8.0	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Tetrachloroethene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Dibromochloromethane	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2-Dibromoethane	ND		8.0	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Chlorobenzene	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,1,1,2-Tetrachloroethane	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Ethylbenzene	ND		8.0	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
m-Xylene & p-Xylene	ND		16	2.3	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
o-Xylene	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Xylenes, Total	ND		24	3.6	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Styrene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Bromoform	ND		8.0	0.71	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Isopropylbenzene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
N-Propylbenzene	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,1,2,2-Tetrachloroethane	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,3,5-Trimethylbenzene	ND		8.0	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2,4-Trimethylbenzene	ND		8.0	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,3-Dichlorobenzene	ND		8.0	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,4-Dichlorobenzene	ND		8.0	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2-Dichlorobenzene	ND		8.0	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2-Dibromo-3-Chloropropane	ND		8.0	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
1,2,4-Trichlorobenzene	ND		8.0	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Hexachlorobutadiene	ND		8.0	1.8	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Cyclohexane	ND		8.0	0.59	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Acrolein	ND		160	11	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Vinyl acetate	ND		8.0	0.56	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Date Collected: 10/22/11 05:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-1

Matrix: Sediment
Percent Solids: 60.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butyl alcohol	ND		320	53	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1
Hexane	**2.6**	**J**	8.0	1.6	ug/Kg	☼	10/31/11 04:09	10/31/11 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*70*		*52 - 124*	*10/31/11 04:09*	*10/31/11 11:50*	*1*
Toluene-d8 (Surr)	*114*		*72 - 127*	*10/31/11 04:09*	*10/31/11 11:50*	*1*
4-Bromofluorobenzene (Surr)	*77*		*63 - 120*	*10/31/11 04:09*	*10/31/11 11:50*	*1*
Dibromofluoromethane (Surr)	*91*		*68 - 121*	*10/31/11 04:09*	*10/31/11 11:50*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**36**		27	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Acenaphthylene	**21**	**J**	27	3.1	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Anthracene	**78**		27	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Atrazine	ND	*	130	13	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Benzo[a]anthracene	**190**		27	3.4	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Benzo[b]fluoranthene	**200**		27	4.3	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Benzo[k]fluoranthene	**90**		27	5.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Benzo[a]pyrene	**210**		27	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Bis(2-chloroethyl)ether	ND		27	3.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Bis(2-ethylhexyl) phthalate	**46**	**J**	270	22	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Butyl benzyl phthalate	ND		130	19	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Carbazole	**17**	**J**	27	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Chrysene	**240**		27	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2-Chloronaphthalene	ND		27	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2-Chlorophenol	ND		130	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,4-Dichlorophenol	ND		27	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,4-Dimethylphenol	ND		130	21	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,4-Dinitrophenol	ND		690	160	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,4-Dinitrotoluene	ND		130	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,6-Dinitrotoluene	ND		130	14	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2-Methylnaphthalene	**18**	**J**	27	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2-Methylphenol	ND		130	9.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2-Nitroaniline	ND		690	61	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,2'-oxybis[1-chloropropane]	ND		27	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,4,5-Trichlorophenol	ND		130	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
2,4,6-Trichlorophenol	ND		130	20	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Methylphenol, 3 & 4	ND		130	13	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
4-Chloroaniline	ND		130	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Dibenz(a,h)anthracene	**15**	**J**	27	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Dibenzofuran	**19**	**J**	130	13	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Di-n-butyl phthalate	ND		130	17	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Diethyl phthalate	ND		130	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Dimethyl phthalate	ND		130	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Di-n-octyl phthalate	ND		130	14	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
3,3'-Dichlorobenzidine	ND		130	14	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Fluoranthene	**380**		27	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Fluorene	**37**		27	3.6	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Hexachlorobenzene	ND		27	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Hexachlorocyclopentadiene	ND		130	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Hexachloroethane	ND		130	9.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Date Collected: 10/22/11 05:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-1

Matrix: Sediment
Percent Solids: 60.6

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**120**		27	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Isophorone	ND		130	10	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Naphthalene	**17**	**J**	27	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Nitrobenzene	ND		270	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
N-Nitrosodiphenylamine	ND		130	13	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
N-Nitrosodi-n-propylamine	ND		27	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Pyrene	**340**		27	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Phenol	ND		27	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Phenanthrene	**270**		27	4.3	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Pentachlorophenol	ND		130	12	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Benzyl alcohol	ND		130	16	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5
Benzoic acid	ND		690	57	ug/Kg	☼	11/04/11 02:45	11/04/11 21:27	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 21:27*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*56*		*21 - 116*	*11/04/11 02:45*	*11/04/11 21:27*	*5*
2-Fluorophenol	*49*		*28 - 107*	*11/04/11 02:45*	*11/04/11 21:27*	*5*
Phenol-d5	*47*		*30 - 112*	*11/04/11 02:45*	*11/04/11 21:27*	*5*
Nitrobenzene-d5	*55*		*27 - 110*	*11/04/11 02:45*	*11/04/11 21:27*	*5*
2-Fluorobiphenyl	*53*		*28 - 108*	*11/04/11 02:45*	*11/04/11 21:27*	*5*
Terphenyl-d14	*61*		*21 - 130*	*11/04/11 02:45*	*11/04/11 21:27*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		170	170	mg/Kg	☼	10/30/11 13:42	10/30/11 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*84*		*40 - 140*	*10/30/11 13:42*	*10/30/11 18:15*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	**0.51**	**J**	1.4	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
alpha-BHC	ND		1.4	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
alpha-Chlordane	ND		1.4	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
beta-BHC	ND		1.4	0.35	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
2,4'-DDD	**2.2**		1.4	0.081	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
2,4'-DDE	ND		1.4	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
2,4'-DDT	ND		1.4	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
4,4'-DDD	**1.7**	**p**	1.4	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
4,4'-DDE	**2.5**		1.4	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
4,4'-DDT	**1.6**		1.4	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Chlordane (technical)	ND		14	0.60	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Dieldrin	ND		1.4	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Endosulfan I	ND		1.4	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Endosulfan II	ND		1.4	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Endosulfan sulfate	ND		1.4	0.14	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Endrin	ND		1.4	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Endrin aldehyde	ND		1.4	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Endrin ketone	ND		1.4	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
gamma-BHC (Lindane)	**2.1**		1.4	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Date Collected: 10/22/11 05:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-1

Matrix: Sediment
Percent Solids: 60.6

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		1.4	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Heptachlor	ND		1.4	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Heptachlor epoxide	ND		1.4	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Methoxychlor	ND		2.7	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1
Toxaphene	ND		55	9.1	ug/Kg	☼	10/31/11 04:38	11/03/11 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*76*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:43*	*1*
DCB Decachlorobiphenyl (Surr)	*78*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:43*	*1*
Tetrachloro-m-xylene	*58*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:43*	*1*
Tetrachloro-m-xylene	*61*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:43*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**14**		14	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
PCB-1221	ND		14	2.6	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
PCB-1232	**77**		14	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
PCB-1242	ND		14	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
PCB-1248	**40**		14	1.3	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
PCB-1254	**19**		14	1.9	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
PCB-1260	ND		14	1.9	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1
Polychlorinated biphenyls, Total	**150**		14	3.0	ug/Kg	☼	10/31/11 04:38	11/09/11 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*35 - 140*	*10/31/11 04:38*	*11/09/11 04:55*	*1*
DCB Decachlorobiphenyl (Surr)	*89*		*35 - 140*	*10/31/11 04:38*	*11/09/11 04:55*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		33	4.1	ug/Kg	☼	11/03/11 04:08	11/09/11 15:09	20
2,4-D	ND		130	9.0	ug/Kg	☼	11/03/11 04:08	11/09/11 15:09	20
Dalapon	ND		150	12	ug/Kg	☼	11/03/11 04:08	11/09/11 15:09	20
Dinoseb	ND		20	7.5	ug/Kg	☼	11/03/11 04:08	11/09/11 15:09	20
Silvex (2,4,5-TP)	ND		33	3.5	ug/Kg	☼	11/03/11 04:08	11/09/11 15:09	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*64*		*42 - 140*	*11/03/11 04:08*	*11/09/11 15:09*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 19:58	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 19:58	1
Boron	**0.23**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 19:58	1
Barium	**0.0092**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 19:58	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 19:58	1
Calcium	**21**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 19:58	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 19:58	1
Cobalt	**0.00047**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 19:58	1
Chromium	**0.0025**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 19:58	1
Copper	**0.0027**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 19:58	1
Iron	**0.82**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 19:58	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 19:58	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Date Collected: 10/22/11 05:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-1

Matrix: Sediment

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	2.1	J	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 19:58	1
Manganese	0.011	J	0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 19:58	1
Sodium	18		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 19:58	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 19:58	1
Lead	0.0027	J	0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 19:58	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 19:58	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 19:58	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 19:58	1
Vanadium	0.0030	J	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 19:58	1
Zinc	0.0073	J B	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 19:58	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.062	J	0.080	0.0031	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Arsenic	4.0		0.080	0.014	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Boron	9.5	B	0.40	0.030	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Barium	19		0.80	0.0085	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Beryllium	0.27		0.080	0.0060	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Calcium	62000	B	8.0	1.1	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Cadmium	0.30		0.080	0.0056	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Cobalt	4.9		0.040	0.0012	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Chromium	12	B	0.16	0.0049	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Copper	15		0.16	0.026	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Iron	12000	B	4.0	0.28	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Potassium	1000		8.0	1.1	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Magnesium	29000	B	8.0	0.15	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Manganese	380	B	0.40	0.0082	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Sodium	120		8.0	1.1	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Nickel	10		0.080	0.0090	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Lead	19	B	0.080	0.0030	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Antimony	0.16		0.16	0.0021	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Selenium	0.36	J	0.40	0.040	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Thallium	0.19		0.080	0.0016	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Vanadium	14	B	0.080	0.0063	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1
Zinc	60		0.40	0.052	mg/Kg	☼	10/27/11 15:40	11/08/11 23:07	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:01	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050		0.026	0.0087	mg/Kg	☼	11/04/11 13:24	11/04/11 18:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.85		0.82	0.16	mg/Kg	☼	10/28/11 15:49	10/28/11 18:15	1
Total Phosphate	310		79	0.79	mg/Kg	☼	10/31/11 09:00	10/31/11 16:44	5
Cr (VI)	ND		0.66	0.17	mg/Kg	☼	11/10/11 12:00	11/11/11 15:15	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 18:15	1
Cyanide, Total	0.22	J	0.85	0.17	mg/Kg	☼	10/28/11 13:05	10/28/11 14:14	1
Percent Moisture	39		0.10	0.10	%			10/26/11 09:46	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Lab Sample ID: 180-5219-1
Date Collected: 10/22/11 05:15
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 60.6

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.94		0.83	0.10	mg/Kg	☼		11/07/11 16:32	1
Fluoride	1.7		0.83	0.25	mg/Kg	☼		11/07/11 16:32	1
Chloride	17	B	17	3.6	mg/Kg	☼		11/07/11 16:32	1
Sulfate	240	B	17	1.9	mg/Kg	☼		11/07/11 16:32	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.075		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:23	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:37	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/27/11 12:08	1

Client Sample ID: CH-2011-MU2-GN

Lab Sample ID: 180-5219-2
Date Collected: 10/22/11 04:00
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 46.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		13	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Bromomethane	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Chloroethane	ND		13	3.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Trichlorofluoromethane	ND		13	2.3	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,1-Dichloroethene	ND		13	2.2	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Acetone	ND		51	13	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Carbon disulfide	ND		13	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Methylene Chloride	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
trans-1,2-Dichloroethene	ND		13	1.5	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Methyl tert-butyl ether	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,1-Dichloroethane	ND		13	1.5	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
cis-1,2-Dichloroethene	ND		13	1.8	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
cis-1,3-Dichloropropene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
2-Butanone (MEK)	ND		13	2.2	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Chloroform	ND		13	1.5	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,1,1-Trichloroethane	ND		13	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Carbon tetrachloride	ND		13	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Benzene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
trans-1,3-Dichloropropene	ND	*	13	1.5	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2-Dichloroethane	ND		13	1.6	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Trichloroethene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2-Dichloropropane	ND		13	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Bromodichloromethane	ND		13	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
4-Methyl-2-pentanone (MIBK)	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Toluene	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,1,2-Trichloroethane	ND		13	2.1	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Tetrachloroethene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GN

Date Collected: 10/22/11 04:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-2

Matrix: Sediment
Percent Solids: 46.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		13	1.8	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2-Dibromoethane	ND		13	2.2	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Chlorobenzene	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,1,1,2-Tetrachloroethane	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Ethylbenzene	ND		13	1.6	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
m-Xylene & p-Xylene	ND		25	3.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
o-Xylene	ND		13	2.0	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Xylenes, Total	ND		38	5.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Styrene	ND		13	1.8	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Bromoform	ND		13	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Isopropylbenzene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
N-Propylbenzene	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,1,2,2-Tetrachloroethane	ND		13	1.8	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,3,5-Trimethylbenzene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2,4-Trimethylbenzene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,3-Dichlorobenzene	ND		13	1.7	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,4-Dichlorobenzene	ND		13	1.6	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2-Dichlorobenzene	ND		13	2.0	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2-Dibromo-3-Chloropropane	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
1,2,4-Trichlorobenzene	ND		13	2.2	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Hexachlorobutadiene	ND		13	2.9	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Cyclohexane	ND		13	0.95	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Acrolein	ND		250	18	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Vinyl acetate	ND		13	0.90	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
n-Butyl alcohol	ND		510	84	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1
Hexane	ND		13	2.6	ug/Kg	☼	10/31/11 04:09	10/31/11 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*52 - 124*	*10/31/11 04:09*	*10/31/11 16:48*	*1*
Toluene-d8 (Surr)	*101*		*72 - 127*	*10/31/11 04:09*	*10/31/11 16:48*	*1*
4-Bromofluorobenzene (Surr)	*85*		*63 - 120*	*10/31/11 04:09*	*10/31/11 16:48*	*1*
Dibromofluoromethane (Surr)	*93*		*68 - 121*	*10/31/11 04:09*	*10/31/11 16:48*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**60**		28	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Acenaphthylene	**53**		28	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Anthracene	**140**		28	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Atrazine	ND	*	140	14	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Benzo[a]anthracene	**440**		28	3.6	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Benzo[b]fluoranthene	**570**		28	4.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Benzo[k]fluoranthene	ND		28	5.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Benzo[a]pyrene	**460**		28	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Bis(2-chloroethyl)ether	ND		28	3.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Bis(2-ethylhexyl) phthalate	**170**	**J**	280	23	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Butyl benzyl phthalate	ND		140	19	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Carbazole	**39**		28	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Chrysene	**500**		28	3.4	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2-Chloronaphthalene	ND		28	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2-Chlorophenol	ND		140	12	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,4-Dichlorophenol	ND		28	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GN

Date Collected: 10/22/11 04:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-2

Matrix: Sediment
Percent Solids: 46.7

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dimethylphenol	ND		140	22	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,4-Dinitrophenol	ND		720	170	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,4-Dinitrotoluene	ND		140	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,6-Dinitrotoluene	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2-Methylnaphthalene	**51**		28	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2-Methylphenol	ND		140	9.9	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2-Nitroaniline	ND		720	63	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,2'-oxybis[1-chloropropane]	ND		28	3.1	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,4,5-Trichlorophenol	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
2,4,6-Trichlorophenol	ND		140	21	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Methylphenol, 3 & 4	**30**	**J**	140	14	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
4-Chloroaniline	ND		140	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Dibenz(a,h)anthracene	**100**		28	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Dibenzofuran	**40**	**J**	140	14	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Di-n-butyl phthalate	ND		140	18	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Diethyl phthalate	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Dimethyl phthalate	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Di-n-octyl phthalate	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
3,3'-Dichlorobenzidine	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Fluoranthene	**760**		28	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Fluorene	**75**		28	3.7	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Hexachlorobenzene	ND		28	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Hexachlorocyclopentadiene	ND		140	15	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Hexachloroethane	ND		140	10	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Indeno[1,2,3-cd]pyrene	**320**		28	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Isophorone	ND		140	11	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Naphthalene	**68**		28	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Nitrobenzene	ND		280	12	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
N-Nitrosodiphenylamine	ND		140	13	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
N-Nitrosodi-n-propylamine	ND		28	3.3	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Pyrene	**690**		28	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Phenol	ND		28	3.4	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Phenanthrene	**540**		28	4.5	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Pentachlorophenol	ND		140	13	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Benzyl alcohol	ND		140	17	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4
Benzoic acid	ND		720	59	ug/Kg	☼	11/04/11 02:45	11/04/11 21:51	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 21:51*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*97*		*21 - 116*	*11/04/11 02:45*	*11/04/11 21:51*	*4*
2-Fluorophenol	*74*		*28 - 107*	*11/04/11 02:45*	*11/04/11 21:51*	*4*
Phenol-d5	*80*		*30 - 112*	*11/04/11 02:45*	*11/04/11 21:51*	*4*
Nitrobenzene-d5	*73*		*27 - 110*	*11/04/11 02:45*	*11/04/11 21:51*	*4*
2-Fluorobiphenyl	*75*		*28 - 108*	*11/04/11 02:45*	*11/04/11 21:51*	*4*
Terphenyl-d14	*76*		*21 - 130*	*11/04/11 02:45*	*11/04/11 21:51*	*4*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		210	210	mg/Kg	☼	10/30/11 13:42	10/30/11 18:39	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GN

Date Collected: 10/22/11 04:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-2

Matrix: Sediment
Percent Solids: 46.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	*83*		*40 - 140*	*10/30/11 13:42*	*10/30/11 18:39*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.8	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
alpha-BHC	ND		1.8	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
alpha-Chlordane	ND		1.8	0.35	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
beta-BHC	ND		1.8	0.46	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
2,4'-DDD	**5.8**		1.8	0.11	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
2,4'-DDE	ND		1.8	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
2,4'-DDT	ND		1.8	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
4,4'-DDD	**3.0**	**p**	1.8	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
4,4'-DDE	**5.4**		1.8	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
4,4'-DDT	**4.8**		1.8	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Chlordane (technical)	ND		18	0.78	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Dieldrin	ND		1.8	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Endosulfan I	ND		1.8	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Endosulfan II	ND		1.8	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Endosulfan sulfate	ND		1.8	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Endrin	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Endrin aldehyde	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Endrin ketone	ND		1.8	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
gamma-BHC (Lindane)	ND		1.8	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
gamma-Chlordane	ND		1.8	0.35	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Heptachlor	ND		1.8	0.39	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Heptachlor epoxide	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Methoxychlor	ND		3.5	0.37	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1
Toxaphene	ND		71	12	ug/Kg	☼	10/31/11 04:38	11/03/11 17:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:02*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:02*	*1*
Tetrachloro-m-xylene	*56*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:02*	*1*
Tetrachloro-m-xylene	*61*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:02*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**24**		18	2.6	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
PCB-1221	ND		18	3.4	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
PCB-1232	ND		18	3.0	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
PCB-1242	ND		18	2.9	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
PCB-1248	ND		18	1.7	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
PCB-1254	**69**		18	2.5	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
PCB-1260	ND		18	2.5	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1
Polychlorinated biphenyls, Total	**93**		18	3.9	ug/Kg	☼	10/31/11 04:38	11/09/11 05:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*62*		*35 - 140*	*10/31/11 04:38*	*11/09/11 05:23*	*1*
DCB Decachlorobiphenyl (Surr)	*96*		*35 - 140*	*10/31/11 04:38*	*11/09/11 05:23*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		43	5.3	ug/Kg	☼	11/03/11 04:08	11/09/11 15:34	20

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GN

Date Collected: 10/22/11 04:00
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Lab Sample ID: 180-5219-2

Matrix: Sediment
Percent Solids: 46.7

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		170	12	ug/Kg	☼	11/03/11 04:08	11/09/11 15:34	20
Dalapon	ND		190	15	ug/Kg	☼	11/03/11 04:08	11/09/11 15:34	20
Dinoseb	ND		26	9.7	ug/Kg	☼	11/03/11 04:08	11/09/11 15:34	20
Silvex (2,4,5-TP)	ND		43	4.5	ug/Kg	☼	11/03/11 04:08	11/09/11 15:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*75*		*42 - 140*	*11/03/11 04:08*	*11/09/11 15:34*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:17	1
Arsenic	**0.0030**	**J**	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:17	1
Boron	**0.27**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:17	1
Barium	**0.0095**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:17	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:17	1
Calcium	**21**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:17	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:17	1
Cobalt	**0.0011**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:17	1
Chromium	**0.0035**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:17	1
Copper	**0.0036**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:17	1
Iron	**1.1**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:17	1
Potassium	**0.92**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:17	1
Magnesium	**2.6**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:17	1
Manganese	**0.019**		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:17	1
Sodium	**19**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:17	1
Nickel	**0.0017**	**J**	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:17	1
Lead	**0.0066**		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:17	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:17	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:17	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:17	1
Vanadium	**0.0033**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:17	1
Zinc	**0.016**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:17	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.24**		0.11	0.0041	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Arsenic	**9.2**		0.11	0.019	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Boron	**16**	**B**	0.53	0.039	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Barium	**38**		1.1	0.011	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Beryllium	**0.59**		0.11	0.0079	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Calcium	**74000**	**B**	11	1.4	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Cadmium	**0.80**		0.11	0.0074	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Cobalt	**8.5**		0.053	0.0016	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Chromium	**32**	**B**	0.21	0.0064	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Copper	**34**		0.21	0.035	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Iron	**35000**	**B**	5.3	0.37	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Potassium	**1800**		11	1.4	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Magnesium	**36000**	**B**	11	0.20	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Manganese	**730**	**B**	0.53	0.011	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Sodium	**170**		11	1.4	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Nickel	**22**		0.11	0.012	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Lead	**79**	**B**	0.11	0.0040	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1

Client Sample ID: CH-2011-MU2-GN

Lab Sample ID: 180-5219-2

Date Collected: 10/22/11 04:00
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 46.7

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.50		0.21	0.0027	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Selenium	0.63		0.53	0.053	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Thallium	0.44		0.11	0.0021	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Vanadium	25	B	0.11	0.0083	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1
Zinc	180		0.53	0.068	mg/Kg	☼	10/27/11 15:40	11/08/11 23:39	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:03	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.034	0.011	mg/Kg	☼	11/04/11 13:24	11/04/11 18:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	2.1		1.0	0.21	mg/Kg	☼	10/28/11 15:49	10/28/11 18:15	1
Total Phosphate	300		99	0.98	mg/Kg	☼	10/31/11 09:00	10/31/11 16:46	5
Cr (VI)	ND		0.85	0.21	mg/Kg	☼	11/10/11 12:00	11/11/11 15:16	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 18:15	1
Cyanide, Total	ND		1.1	0.21	mg/Kg	☼	10/28/11 13:05	10/28/11 14:14	1
Percent Moisture	53		0.10	0.10	%			10/26/11 09:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.80	J	1.0	0.13	mg/Kg	☼		11/07/11 16:46	1
Fluoride	2.6		1.0	0.31	mg/Kg	☼		11/07/11 16:46	1
Chloride	25	B	20	4.5	mg/Kg	☼		11/07/11 16:46	1
Sulfate	170	B	20	2.4	mg/Kg	☼		11/07/11 16:46	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.11		0.050	0.025	mg/L		11/03/11 13:42	11/03/11 16:40	5
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:38	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/27/11 12:08	1

Client Sample ID: CH-2011-MU2-GS

Lab Sample ID: 180-5219-3

Date Collected: 10/22/11 01:15
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 65.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		6.3	0.59	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Bromomethane	ND		6.3	0.93	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Chloroethane	ND		6.3	2.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GS
Date Collected: 10/22/11 01:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-3
Matrix: Sediment
Percent Solids: 65.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		6.3	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,1-Dichloroethene	ND		6.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Acetone	ND		25	6.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Carbon disulfide	ND		6.3	0.65	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Methylene Chloride	**2.2**	**J**	6.3	0.85	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
trans-1,2-Dichloroethene	ND		6.3	0.75	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Methyl tert-butyl ether	ND		6.3	0.94	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,1-Dichloroethane	ND		6.3	0.73	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
cis-1,2-Dichloroethene	ND		6.3	0.89	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
cis-1,3-Dichloropropene	ND		6.3	0.85	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
2-Butanone (MEK)	ND		6.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Chloroform	ND		6.3	0.74	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,1,1-Trichloroethane	ND		6.3	0.61	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Carbon tetrachloride	ND		6.3	0.56	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Benzene	ND		6.3	0.85	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
trans-1,3-Dichloropropene	ND		6.3	0.75	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2-Dichloroethane	ND		6.3	0.77	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Trichloroethene	ND		6.3	0.83	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2-Dichloropropane	ND		6.3	0.68	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Bromodichloromethane	ND		6.3	0.71	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
4-Methyl-2-pentanone (MIBK)	ND		6.3	0.82	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Toluene	ND		6.3	0.92	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,1,2-Trichloroethane	ND		6.3	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Tetrachloroethene	ND		6.3	0.86	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Dibromochloromethane	ND		6.3	0.89	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2-Dibromoethane	ND		6.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Chlorobenzene	ND		6.3	0.96	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,1,1,2-Tetrachloroethane	ND		6.3	0.94	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Ethylbenzene	ND		6.3	0.81	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
m-Xylene & p-Xylene	ND		13	1.9	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
o-Xylene	ND		6.3	0.98	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Xylenes, Total	ND		19	2.8	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Styrene	ND		6.3	0.89	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Bromoform	ND		6.3	0.56	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Isopropylbenzene	ND		6.3	0.86	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
N-Propylbenzene	ND		6.3	0.96	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,1,2,2-Tetrachloroethane	ND		6.3	0.91	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,3,5-Trimethylbenzene	ND		6.3	0.84	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2,4-Trimethylbenzene	ND		6.3	0.82	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,3-Dichlorobenzene	ND		6.3	0.83	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,4-Dichlorobenzene	ND		6.3	0.80	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2-Dichlorobenzene	ND		6.3	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2-Dibromo-3-Chloropropane	ND		6.3	0.94	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
1,2,4-Trichlorobenzene	ND		6.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Hexachlorobutadiene	ND		6.3	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Cyclohexane	ND		6.3	0.47	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Acrolein	ND		130	8.9	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Vinyl acetate	ND		6.3	0.45	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
n-Butyl alcohol	ND		250	41	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1
Hexane	ND		6.3	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:14	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GS

Date Collected: 10/22/11 01:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-3

Matrix: Sediment
Percent Solids: 65.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*52 - 124*	*11/03/11 04:12*	*11/03/11 10:14*	*1*
Toluene-d8 (Surr)	*99*		*72 - 127*	*11/03/11 04:12*	*11/03/11 10:14*	*1*
4-Bromofluorobenzene (Surr)	*98*		*63 - 120*	*11/03/11 04:12*	*11/03/11 10:14*	*1*
Dibromofluoromethane (Surr)	*104*		*68 - 121*	*11/03/11 04:12*	*11/03/11 10:14*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**42**		20	1.9	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Acenaphthylene	**22**		20	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Anthracene	**89**		20	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Atrazine	ND	*	100	9.9	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Benzo[a]anthracene	**240**		20	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Benzo[b]fluoranthene	**320**		20	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Benzo[k]fluoranthene	ND		20	4.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Benzo[a]pyrene	**250**		20	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Bis(2-chloroethyl)ether	ND		20	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Bis(2-ethylhexyl) phthalate	**54**	**J**	200	16	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Butyl benzyl phthalate	ND		100	14	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Carbazole	**26**		20	1.9	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Chrysene	**260**		20	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2-Chloronaphthalene	ND		20	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2-Chlorophenol	ND		100	8.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,4-Dichlorophenol	ND		20	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,4-Dimethylphenol	ND		100	16	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,4-Dinitrophenol	ND		520	120	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,4-Dinitrotoluene	ND		100	8.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,6-Dinitrotoluene	ND		100	10	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2-Methylnaphthalene	**30**		20	1.8	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2-Methylphenol	ND		100	7.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2-Nitroaniline	ND		520	45	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,2'-oxybis[1-chloropropane]	ND		20	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,4,5-Trichlorophenol	ND		100	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
2,4,6-Trichlorophenol	ND		100	15	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Methylphenol, 3 & 4	ND		100	9.9	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
4-Chloroaniline	ND		100	8.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Dibenz(a,h)anthracene	**52**		20	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Dibenzofuran	**26**	**J**	100	10	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Di-n-butyl phthalate	ND		100	13	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Diethyl phthalate	ND		100	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Dimethyl phthalate	ND		100	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Di-n-octyl phthalate	ND		100	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
3,3'-Dichlorobenzidine	ND		100	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Fluoranthene	**510**		20	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Fluorene	**45**		20	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Hexachlorobenzene	ND		20	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Hexachlorocyclopentadiene	ND		100	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Hexachloroethane	ND		100	7.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Indeno[1,2,3-cd]pyrene	**150**		20	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Isophorone	ND		100	7.6	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Naphthalene	**22**		20	1.7	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Nitrobenzene	ND		200	8.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
N-Nitrosodiphenylamine	ND		100	9.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4

Client Sample ID: CH-2011-MU2-GS

Date Collected: 10/22/11 01:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-3

Matrix: Sediment
Percent Solids: 65.5

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		20	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Pyrene	**480**		20	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Phenol	ND		20	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Phenanthrene	**350**		20	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Pentachlorophenol	ND		100	9.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Benzyl alcohol	ND		100	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4
Benzoic acid	ND		520	42	ug/Kg	☼	11/04/11 02:45	11/04/11 22:15	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 22:15*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*88*		*21 - 116*	*11/04/11 02:45*	*11/04/11 22:15*	*4*
2-Fluorophenol	*64*		*28 - 107*	*11/04/11 02:45*	*11/04/11 22:15*	*4*
Phenol-d5	*69*		*30 - 112*	*11/04/11 02:45*	*11/04/11 22:15*	*4*
Nitrobenzene-d5	*67*		*27 - 110*	*11/04/11 02:45*	*11/04/11 22:15*	*4*
2-Fluorobiphenyl	*72*		*28 - 108*	*11/04/11 02:45*	*11/04/11 22:15*	*4*
Terphenyl-d14	*76*		*21 - 130*	*11/04/11 02:45*	*11/04/11 22:15*	*4*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		150	150	mg/Kg	☼	10/30/11 13:42	10/30/11 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*78*		*40 - 140*	*10/30/11 13:42*	*10/30/11 18:52*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.3	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
alpha-BHC	ND		1.3	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
alpha-Chlordane	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
beta-BHC	ND		1.3	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
2,4'-DDD	**2.7**		1.3	0.076	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
2,4'-DDE	ND		1.3	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
2,4'-DDT	ND		1.3	0.11	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
4,4'-DDD	**2.4**	**p**	1.3	0.17	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
4,4'-DDE	**3.3**		1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
4,4'-DDT	**2.1**		1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Chlordane (technical)	ND		13	0.56	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Dieldrin	ND		1.3	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Endosulfan I	ND		1.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Endosulfan II	ND		1.3	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Endosulfan sulfate	ND		1.3	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Endrin	ND		1.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Endrin aldehyde	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Endrin ketone	ND		1.3	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
gamma-BHC (Lindane)	ND		1.3	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
gamma-Chlordane	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Heptachlor	ND		1.3	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Heptachlor epoxide	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Methoxychlor	ND		2.5	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1
Toxaphene	ND		51	8.4	ug/Kg	☼	10/31/11 04:38	11/03/11 17:21	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GS

Date Collected: 10/22/11 01:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-3

Matrix: Sediment
Percent Solids: 65.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	85		45 - 130	10/31/11 04:38	11/03/11 17:21	1
DCB Decachlorobiphenyl (Surr)	81		45 - 130	10/31/11 04:38	11/03/11 17:21	1
Tetrachloro-m-xylene	62		45 - 130	10/31/11 04:38	11/03/11 17:21	1
Tetrachloro-m-xylene	67		45 - 130	10/31/11 04:38	11/03/11 17:21	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**14**		13	1.9	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
PCB-1221	ND		13	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
PCB-1232	ND		13	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
PCB-1242	ND		13	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
PCB-1248	ND		13	1.2	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
PCB-1254	**25**		13	1.8	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
PCB-1260	ND		13	1.8	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1
Polychlorinated biphenyls, Total	**39**		13	2.8	ug/Kg	☼	10/31/11 04:38	11/09/11 05:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		35 - 140	10/31/11 04:38	11/09/11 05:51	1
DCB Decachlorobiphenyl (Surr)	96		35 - 140	10/31/11 04:38	11/09/11 05:51	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		30	3.8	ug/Kg	☼	11/03/11 04:08	11/09/11 15:59	20
2,4-D	ND		120	8.3	ug/Kg	☼	11/03/11 04:08	11/09/11 15:59	20
Dalapon	ND		140	11	ug/Kg	☼	11/03/11 04:08	11/09/11 15:59	20
Dinoseb	ND		18	6.9	ug/Kg	☼	11/03/11 04:08	11/09/11 15:59	20
Silvex (2,4,5-TP)	ND		30	3.2	ug/Kg	☼	11/03/11 04:08	11/09/11 15:59	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	68		42 - 140	11/03/11 04:08	11/09/11 15:59	20

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:23	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:23	1
Boron	**0.28**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:23	1
Barium	**0.010**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:23	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:23	1
Calcium	**17**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:23	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:23	1
Cobalt	**0.0015**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:23	1
Chromium	**0.0041**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:23	1
Copper	**0.0049**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:23	1
Iron	**1.5**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:23	1
Potassium	**0.90**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:23	1
Magnesium	**2.0**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:23	1
Manganese	**0.020**		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:23	1
Sodium	**19**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:23	1
Nickel	**0.0023**	**J**	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:23	1
Lead	**0.0060**		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:23	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:23	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:23	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:23	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GS

Date Collected: 10/22/11 01:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-3

Matrix: Sediment

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	0.0040	J	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:23	1
Zinc	0.012	J B	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:23	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.052	J	0.074	0.0029	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Arsenic	3.9		0.074	0.013	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Boron	9.9	B	0.37	0.027	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Barium	20		0.74	0.0079	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Beryllium	0.29		0.074	0.0055	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Calcium	89000	B	7.4	0.98	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Cadmium	0.36		0.074	0.0052	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Cobalt	5.6		0.037	0.0011	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Chromium	12	B	0.15	0.0045	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Copper	13		0.15	0.024	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Iron	13000	B	3.7	0.26	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Potassium	1100		7.4	1.0	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Magnesium	41000	B	7.4	0.14	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Manganese	440	B	0.37	0.0076	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Sodium	170		7.4	1.0	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Nickel	12		0.074	0.0083	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Lead	20	B	0.074	0.0028	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Antimony	0.17		0.15	0.0019	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Selenium	0.27	J	0.37	0.037	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Thallium	0.24		0.074	0.0015	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Vanadium	16	B	0.074	0.0058	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1
Zinc	62		0.37	0.048	mg/Kg	☼	10/27/11 15:40	11/08/11 23:43	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:05	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.045		0.025	0.0083	mg/Kg	☼	11/04/11 13:24	11/04/11 18:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.83		0.73	0.15	mg/Kg	☼	10/28/11 15:49	10/28/11 18:15	1
Total Phosphate	280		71	0.70	mg/Kg	☼	10/31/11 09:00	10/31/11 16:46	5
Cr (VI)	ND		0.62	0.15	mg/Kg	☼	11/10/11 12:00	11/11/11 15:17	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 18:15	1
Cyanide, Total	ND		0.75	0.15	mg/Kg	☼	10/28/11 13:05	10/28/11 14:14	1
Percent Moisture	34		0.10	0.10	%			10/26/11 09:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.74	0.093	mg/Kg	☼		11/07/11 17:00	1
Fluoride	0.66	J	0.74	0.22	mg/Kg	☼		11/07/11 17:00	1
Chloride	15	B	15	3.3	mg/Kg	☼		11/07/11 17:00	1
Sulfate	88	B	15	1.7	mg/Kg	☼		11/07/11 17:00	1

Client Sample ID: CH-2011-MU2-GS

Lab Sample ID: 180-5219-3
Date Collected: 10/22/11 01:15
Matrix: Sediment
Date Received: 10/25/11 10:00

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.020**		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:42	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	**y**				ug/L			10/27/11 12:08	1

Client Sample ID: CH-2011-MU3-GN

Lab Sample ID: 180-5219-4
Date Collected: 10/22/11 09:00
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 58.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		8.0	0.75	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Bromomethane	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Chloroethane	ND		8.0	2.5	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Trichlorofluoromethane	ND		8.0	1.5	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,1-Dichloroethene	ND		8.0	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Acetone	ND		32	8.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Carbon disulfide	ND		8.0	0.82	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Methylene Chloride	**3.4**	**J**	8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
trans-1,2-Dichloroethene	ND		8.0	0.95	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Methyl tert-butyl ether	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,1-Dichloroethane	ND		8.0	0.92	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
cis-1,2-Dichloroethene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
cis-1,3-Dichloropropene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
2-Butanone (MEK)	ND		8.0	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Chloroform	ND		8.0	0.93	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,1,1-Trichloroethane	ND		8.0	0.77	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Carbon tetrachloride	ND		8.0	0.71	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Benzene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
trans-1,3-Dichloropropene	ND		8.0	0.95	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2-Dichloroethane	ND		8.0	0.98	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Trichloroethene	ND		8.0	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2-Dichloropropane	ND		8.0	0.86	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Bromodichloromethane	ND		8.0	0.89	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
4-Methyl-2-pentanone (MIBK)	ND		8.0	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Toluene	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,1,2-Trichloroethane	ND		8.0	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Tetrachloroethene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Dibromochloromethane	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2-Dibromoethane	ND		8.0	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Chlorobenzene	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,1,1,2-Tetrachloroethane	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Ethylbenzene	ND		8.0	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
m-Xylene & p-Xylene	ND		16	2.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
o-Xylene	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN
Date Collected: 10/22/11 09:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-4
Matrix: Sediment
Percent Solids: 58.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		24	3.6	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Styrene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Bromoform	ND		8.0	0.70	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Isopropylbenzene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
N-Propylbenzene	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,1,2,2-Tetrachloroethane	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,3,5-Trimethylbenzene	ND		8.0	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2,4-Trimethylbenzene	ND		8.0	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,3-Dichlorobenzene	ND		8.0	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,4-Dichlorobenzene	ND		8.0	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2-Dichlorobenzene	ND		8.0	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2-Dibromo-3-Chloropropane	ND		8.0	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
1,2,4-Trichlorobenzene	ND		8.0	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Hexachlorobutadiene	ND		8.0	1.8	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Cyclohexane	ND		8.0	0.59	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Acrolein	ND		160	11	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Vinyl acetate	ND		8.0	0.56	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
n-Butyl alcohol	ND		320	52	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1
Hexane	ND		8.0	1.6	ug/Kg	☼	11/03/11 04:12	11/03/11 10:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*52 - 124*	*11/03/11 04:12*	*11/03/11 10:37*	*1*
Toluene-d8 (Surr)	*92*		*72 - 127*	*11/03/11 04:12*	*11/03/11 10:37*	*1*
4-Bromofluorobenzene (Surr)	*94*		*63 - 120*	*11/03/11 04:12*	*11/03/11 10:37*	*1*
Dibromofluoromethane (Surr)	*102*		*68 - 121*	*11/03/11 04:12*	*11/03/11 10:37*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**50**		23	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Acenaphthylene	**33**		23	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Anthracene	**120**		23	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Atrazine	ND	*	110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Benzo[a]anthracene	**320**		23	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Benzo[b]fluoranthene	**340**		23	3.6	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Benzo[k]fluoranthene	**130**		23	4.6	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Benzo[a]pyrene	**340**		23	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Bis(2-chloroethyl)ether	ND		23	3.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Bis(2-ethylhexyl) phthalate	**89**	**J**	230	19	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Butyl benzyl phthalate	ND		110	16	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Carbazole	**25**		23	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Chrysene	**330**		23	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2-Chloronaphthalene	ND		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2-Chlorophenol	ND		110	9.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,4-Dichlorophenol	ND		23	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,4-Dimethylphenol	ND		110	18	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,4-Dinitrophenol	ND		580	140	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,4-Dinitrotoluene	ND		110	9.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,6-Dinitrotoluene	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2-Methylnaphthalene	**27**		23	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2-Methylphenol	ND		110	8.0	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2-Nitroaniline	ND		580	51	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN

Date Collected: 10/22/11 09:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-4

Matrix: Sediment
Percent Solids: 58.1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	ND		23	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,4,5-Trichlorophenol	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
2,4,6-Trichlorophenol	ND		110	17	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Methylphenol, 3 & 4	**13**	**J**	110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
4-Chloroaniline	ND		110	9.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Dibenz(a,h)anthracene	**68**		23	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Dibenzofuran	**31**	**J**	110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Di-n-butyl phthalate	ND		110	14	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Diethyl phthalate	ND		110	13	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Dimethyl phthalate	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Di-n-octyl phthalate	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
3,3'-Dichlorobenzidine	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Fluoranthene	**550**		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Fluorene	**52**		23	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Hexachlorobenzene	ND		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Hexachlorocyclopentadiene	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Hexachloroethane	ND		110	8.2	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Indeno[1,2,3-cd]pyrene	**220**		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Isophorone	ND		110	8.6	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Naphthalene	**31**		23	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Nitrobenzene	ND		230	9.5	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
N-Nitrosodiphenylamine	ND		110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
N-Nitrosodi-n-propylamine	ND		23	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Pyrene	**570**		23	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Phenol	ND		23	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Phenanthrene	**380**		23	3.6	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Pentachlorophenol	ND		110	10	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Benzyl alcohol	ND		110	14	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4
Benzoic acid	ND		580	48	ug/Kg	☼	11/04/11 02:45	11/04/11 22:39	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 22:39*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*21 - 116*	*11/04/11 02:45*	*11/04/11 22:39*	*4*
2-Fluorophenol	*63*		*28 - 107*	*11/04/11 02:45*	*11/04/11 22:39*	*4*
Phenol-d5	*67*		*30 - 112*	*11/04/11 02:45*	*11/04/11 22:39*	*4*
Nitrobenzene-d5	*72*		*27 - 110*	*11/04/11 02:45*	*11/04/11 22:39*	*4*
2-Fluorobiphenyl	*71*		*28 - 108*	*11/04/11 02:45*	*11/04/11 22:39*	*4*
Terphenyl-d14	*75*		*21 - 130*	*11/04/11 02:45*	*11/04/11 22:39*	*4*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		170	170	mg/Kg	☼	10/30/11 13:42	10/30/11 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*82*		*40 - 140*	*10/30/11 13:42*	*10/30/11 19:04*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.4	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
alpha-BHC	ND		1.4	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN

Date Collected: 10/22/11 09:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-4

Matrix: Sediment
Percent Solids: 58.1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		1.4	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
beta-BHC	ND		1.4	0.37	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
2,4'-DDD	**2.1**		1.4	0.085	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
2,4'-DDE	ND		1.4	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
2,4'-DDT	ND		1.4	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
4,4'-DDD	**1.4**	**p**	1.4	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
4,4'-DDE	**2.9**		1.4	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
4,4'-DDT	**1.5**		1.4	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Chlordane (technical)	ND		14	0.62	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Dieldrin	ND		1.4	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Endosulfan I	ND		1.4	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Endosulfan II	ND		1.4	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Endosulfan sulfate	ND		1.4	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Endrin	ND		1.4	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Endrin aldehyde	ND		1.4	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Endrin ketone	ND		1.4	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
gamma-BHC (Lindane)	**0.57**	**J p**	1.4	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
gamma-Chlordane	ND		1.4	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Heptachlor	ND		1.4	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Heptachlor epoxide	ND		1.4	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Methoxychlor	ND		2.8	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1
Toxaphene	ND		57	9.5	ug/Kg	☼	10/31/11 04:38	11/03/11 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*77*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:40*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:40*	*1*
Tetrachloro-m-xylene	*49*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:40*	*1*
Tetrachloro-m-xylene	*57*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:40*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**14**		14	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
PCB-1221	ND		14	2.7	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
PCB-1232	ND		14	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
PCB-1242	ND		14	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
PCB-1248	**49**		14	1.3	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
PCB-1254	**26**		14	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
PCB-1260	ND		14	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1
Polychlorinated biphenyls, Total	**89**		14	3.1	ug/Kg	☼	10/31/11 04:38	11/09/11 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*35 - 140*	*10/31/11 04:38*	*11/09/11 06:19*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 06:19*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		34	4.3	ug/Kg	☼	11/03/11 04:08	11/09/11 16:24	20
2,4-D	ND		140	9.4	ug/Kg	☼	11/03/11 04:08	11/09/11 16:24	20
Dalapon	ND		150	12	ug/Kg	☼	11/03/11 04:08	11/09/11 16:24	20
Dinoseb	ND		21	7.8	ug/Kg	☼	11/03/11 04:08	11/09/11 16:24	20
Silvex (2,4,5-TP)	ND		34	3.6	ug/Kg	☼	11/03/11 04:08	11/09/11 16:24	20

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN

Date Collected: 10/22/11 09:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-4

Matrix: Sediment
Percent Solids: 58.1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*57*		*42 - 140*	*11/03/11 04:08*	*11/09/11 15:59*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:29	1
Arsenic	**0.0036**	**J**	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:29	1
Boron	**0.27**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:29	1
Barium	**0.014**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:29	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:29	1
Calcium	**17**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:29	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:29	1
Cobalt	**0.0016**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:29	1
Chromium	**0.0051**	**B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:29	1
Copper	**0.0047**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:29	1
Iron	**2.2**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:29	1
Potassium	**1.3**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:29	1
Magnesium	**2.5**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:29	1
Manganese	**0.023**		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:29	1
Sodium	**18**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:29	1
Nickel	**0.0027**	**J**	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:29	1
Lead	**0.0063**		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:29	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:29	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:29	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:29	1
Vanadium	**0.0070**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:29	1
Zinc	**0.014**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:29	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.085**		0.084	0.0033	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Arsenic	**5.5**		0.084	0.015	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Boron	**13**	**B**	0.42	0.031	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Barium	**25**		0.84	0.0089	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Beryllium	**0.41**		0.084	0.0063	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Calcium	**78000**	**B**	8.4	1.1	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Cadmium	**0.37**		0.084	0.0059	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Cobalt	**6.5**		0.042	0.0013	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Chromium	**17**	**B**	0.17	0.0051	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Copper	**20**		0.17	0.028	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Iron	**16000**	**B**	4.2	0.30	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Potassium	**1500**		8.4	1.1	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Magnesium	**38000**	**B**	8.4	0.16	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Manganese	**500**	**B**	0.42	0.0086	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Sodium	**150**		8.4	1.1	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Nickel	**14**		0.084	0.0094	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Lead	**26**	**B**	0.084	0.0032	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Antimony	**0.21**		0.17	0.0022	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Selenium	**0.43**		0.42	0.042	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Thallium	**0.25**		0.084	0.0017	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Vanadium	**19**	**B**	0.084	0.0066	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1
Zinc	**69**		0.42	0.054	mg/Kg	☼	10/27/11 15:40	11/08/11 23:48	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN

Lab Sample ID: 180-5219-4
Date Collected: 10/22/11 09:00
Matrix: Sediment
Date Received: 10/25/11 10:00

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:07	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.054**		0.027	0.0088	mg/Kg	☼	11/04/11 13:24	11/04/11 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.96**		0.88	0.18	mg/Kg	☼	10/28/11 15:49	10/28/11 18:15	1
Total Phosphate	**300**		90	0.89	mg/Kg	☼	10/31/11 09:00	10/31/11 16:52	5
Cr (VI)	ND		0.68	0.17	mg/Kg	☼	11/10/11 12:00	11/11/11 15:20	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 18:15	1
Cyanide, Total	ND		0.89	0.18	mg/Kg	☼	10/28/11 13:05	10/28/11 14:14	1
Percent Moisture	**42**		0.10	0.10	%			10/26/11 09:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.56**	**J**	0.87	0.11	mg/Kg	☼		11/07/11 17:14	1
Fluoride	**2.2**		0.87	0.26	mg/Kg	☼		11/07/11 17:14	1
Chloride	**19**	**B**	17	3.8	mg/Kg	☼		11/07/11 17:14	1
Sulfate	**140**	**B**	17	2.0	mg/Kg	☼		11/07/11 17:14	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.047**		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:42	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	**y**				ug/L			10/27/11 12:08	1

Client Sample ID: CH-2011-MU3-GS

Lab Sample ID: 180-5219-5
Date Collected: 10/22/11 11:15
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 56.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		7.7	0.72	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Bromomethane	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Chloroethane	ND		7.7	2.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Trichlorofluoromethane	ND		7.7	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,1-Dichloroethene	ND		7.7	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Acetone	ND		31	7.7	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Carbon disulfide	ND		7.7	0.79	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Methylene Chloride	**2.8**	**J**	7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
trans-1,2-Dichloroethene	ND		7.7	0.92	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Methyl tert-butyl ether	ND		7.7	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,1-Dichloroethane	ND		7.7	0.89	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-5

Matrix: Sediment
Percent Solids: 56.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
cis-1,3-Dichloropropene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
2-Butanone (MEK)	ND		7.7	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Chloroform	ND		7.7	0.90	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,1,1-Trichloroethane	ND		7.7	0.75	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Carbon tetrachloride	ND		7.7	0.69	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Benzene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
trans-1,3-Dichloropropene	ND		7.7	0.92	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2-Dichloroethane	ND		7.7	0.95	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Trichloroethene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2-Dichloropropane	ND		7.7	0.84	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Bromodichloromethane	ND		7.7	0.87	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
4-Methyl-2-pentanone (MIBK)	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Toluene	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,1,2-Trichloroethane	ND		7.7	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Tetrachloroethene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Dibromochloromethane	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2-Dibromoethane	ND		7.7	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Chlorobenzene	ND		7.7	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,1,1,2-Tetrachloroethane	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Ethylbenzene	ND		7.7	0.99	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
m-Xylene & p-Xylene	ND		15	2.3	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
o-Xylene	ND		7.7	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Xylenes, Total	ND		23	3.5	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Styrene	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Bromoform	ND		7.7	0.68	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Isopropylbenzene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
N-Propylbenzene	ND		7.7	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,1,2,2-Tetrachloroethane	ND		7.7	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,3,5-Trimethylbenzene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2,4-Trimethylbenzene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,3-Dichlorobenzene	ND		7.7	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,4-Dichlorobenzene	ND		7.7	0.98	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2-Dichlorobenzene	ND		7.7	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2-Dibromo-3-Chloropropane	ND		7.7	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
1,2,4-Trichlorobenzene	ND		7.7	1.4	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Hexachlorobutadiene	ND		7.7	1.7	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Cyclohexane	ND		7.7	0.57	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Acrolein	ND		150	11	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Vinyl acetate	ND		7.7	0.55	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
n-Butyl alcohol	ND		310	51	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1
Hexane	ND		7.7	1.6	ug/Kg	☼	11/03/11 04:12	11/03/11 10:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*52 - 124*	*11/03/11 04:12*	*11/03/11 10:59*	*1*
Toluene-d8 (Surr)	*94*		*72 - 127*	*11/03/11 04:12*	*11/03/11 10:59*	*1*
4-Bromofluorobenzene (Surr)	*95*		*63 - 120*	*11/03/11 04:12*	*11/03/11 10:59*	*1*
Dibromofluoromethane (Surr)	*99*		*68 - 121*	*11/03/11 04:12*	*11/03/11 10:59*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-5

Matrix: Sediment
Percent Solids: 56.2

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**58**		24	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Acenaphthylene	**29**		24	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Anthracene	**140**		24	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Atrazine	ND	*	120	11	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Benzo[a]anthracene	**460**		24	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Benzo[b]fluoranthene	**630**		24	3.7	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Benzo[k]fluoranthene	ND		24	4.8	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Benzo[a]pyrene	**460**		24	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Bis(2-chloroethyl)ether	ND		24	3.2	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Bis(2-ethylhexyl) phthalate	**80**	**J**	240	19	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Butyl benzyl phthalate	ND		120	16	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Carbazole	**32**		24	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Chrysene	**410**		24	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2-Chloronaphthalene	ND		24	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2-Chlorophenol	ND		120	9.6	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,4-Dichlorophenol	ND		24	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,4-Dimethylphenol	ND		120	18	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,4-Dinitrophenol	ND		600	140	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,4-Dinitrotoluene	ND		120	9.5	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,6-Dinitrotoluene	ND		120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2-Methylnaphthalene	**37**		24	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2-Methylphenol	ND		120	8.2	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2-Nitroaniline	ND		600	53	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,2'-oxybis[1-chloropropane]	ND		24	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,4,5-Trichlorophenol	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
2,4,6-Trichlorophenol	ND		120	18	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Methylphenol, 3 & 4	**14**	**J**	120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
4-Chloroaniline	ND		120	9.4	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Dibenz(a,h)anthracene	**78**		24	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Dibenzofuran	**36**	**J**	120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Di-n-butyl phthalate	ND		120	15	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Diethyl phthalate	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Dimethyl phthalate	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Di-n-octyl phthalate	ND		120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
3,3'-Dichlorobenzidine	ND		120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Fluoranthene	**600**		24	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Fluorene	**74**		24	3.1	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Hexachlorobenzene	ND		24	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Hexachlorocyclopentadiene	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Hexachloroethane	ND		120	8.5	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Indeno[1,2,3-cd]pyrene	**240**		24	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Isophorone	ND		120	8.9	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Naphthalene	**41**		24	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Nitrobenzene	ND		240	9.8	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
N-Nitrosodiphenylamine	ND		120	11	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
N-Nitrosodi-n-propylamine	ND		24	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Pyrene	**810**		24	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Phenol	ND		24	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Phenanthrene	**580**		24	3.8	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Pentachlorophenol	ND		120	11	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4
Benzyl alcohol	ND		120	14	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-5

Matrix: Sediment
Percent Solids: 56.2

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzoic acid	ND		600	49	ug/Kg	☼	11/04/11 02:45	11/04/11 17:54	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 17:54*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*75*		*21 - 116*	*11/04/11 02:45*	*11/04/11 17:54*	*4*
2-Fluorophenol	*57*		*28 - 107*	*11/04/11 02:45*	*11/04/11 17:54*	*4*
Phenol-d5	*67*		*30 - 112*	*11/04/11 02:45*	*11/04/11 17:54*	*4*
Nitrobenzene-d5	*59*		*27 - 110*	*11/04/11 02:45*	*11/04/11 17:54*	*4*
2-Fluorobiphenyl	*62*		*28 - 108*	*11/04/11 02:45*	*11/04/11 17:54*	*4*
Terphenyl-d14	*61*		*21 - 130*	*11/04/11 02:45*	*11/04/11 17:54*	*4*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		180	180	mg/Kg	☼	10/30/11 13:42	10/30/11 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*76*		*40 - 140*	*10/30/11 13:42*	*10/30/11 19:16*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.5	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
alpha-BHC	ND		1.5	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
alpha-Chlordane	ND		1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
beta-BHC	ND		1.5	0.38	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
2,4'-DDD	ND		1.5	0.088	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
2,4'-DDE	ND		1.5	0.14	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
2,4'-DDT	ND		1.5	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
4,4'-DDD	**4.2**	**p**	1.5	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
4,4'-DDE	**19**		1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
4,4'-DDT	**38**		1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Chlordane (technical)	ND		15	0.64	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Dieldrin	ND		1.5	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Endosulfan I	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Endosulfan II	ND		1.5	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Endosulfan sulfate	ND		1.5	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Endrin	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Endrin aldehyde	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Endrin ketone	ND		1.5	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
gamma-BHC (Lindane)	ND		1.5	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
gamma-Chlordane	ND		1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Heptachlor	ND		1.5	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Heptachlor epoxide	ND		1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Methoxychlor	**2.8**	**J**	2.9	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1
Toxaphene	ND		59	9.8	ug/Kg	☼	10/31/11 04:38	11/03/11 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*74*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:59*	*1*
DCB Decachlorobiphenyl (Surr)	*73*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:59*	*1*
Tetrachloro-m-xylene	*50*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:59*	*1*
Tetrachloro-m-xylene	*57*		*45 - 130*	*10/31/11 04:38*	*11/03/11 17:59*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-5

Matrix: Sediment
Percent Solids: 56.2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**21**		15	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
PCB-1221	ND		15	2.8	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
PCB-1232	ND		15	2.5	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
PCB-1242	ND		15	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
PCB-1248	ND		15	1.4	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
PCB-1254	**27**		15	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
PCB-1260	ND		15	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1
Polychlorinated biphenyls, Total	**48**		15	3.2	ug/Kg	☼	10/31/11 04:38	11/09/11 06:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*35 - 140*	*10/31/11 04:38*	*11/09/11 06:47*	*1*
DCB Decachlorobiphenyl (Surr)	*91*		*35 - 140*	*10/31/11 04:38*	*11/09/11 06:47*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		35	4.4	ug/Kg	☼	11/03/11 04:08	11/09/11 16:48	20
2,4-D	ND		140	9.7	ug/Kg	☼	11/03/11 04:08	11/09/11 16:48	20
Dalapon	ND		160	13	ug/Kg	☼	11/03/11 04:08	11/09/11 16:48	20
Dinoseb	ND		21	8.0	ug/Kg	☼	11/03/11 04:08	11/09/11 16:48	20
Silvex (2,4,5-TP)	ND		35	3.7	ug/Kg	☼	11/03/11 04:08	11/09/11 16:48	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*70*		*42 - 140*	*11/03/11 04:08*	*11/09/11 16:48*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:35	1
Arsenic	**0.0027**	**J**	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:35	1
Boron	**0.25**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:35	1
Barium	**0.015**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:35	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:35	1
Calcium	**19**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:35	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:35	1
Cobalt	**0.0015**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:35	1
Chromium	**0.0050**	**B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:35	1
Copper	**0.0044**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:35	1
Iron	**1.8**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:35	1
Potassium	**1.4**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:35	1
Magnesium	**2.4**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:35	1
Manganese	**0.018**		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:35	1
Sodium	**18**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:35	1
Nickel	**0.0030**	**J**	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:35	1
Lead	**0.0039**		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:35	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:35	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:35	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:35	1
Vanadium	**0.0065**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:35	1
Zinc	**0.011**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:35	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.094**		0.087	0.0034	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-5

Matrix: Sediment
Percent Solids: 56.2

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.3		0.087	0.016	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Boron	12	B	0.44	0.032	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Barium	22		0.87	0.0093	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Beryllium	0.36		0.087	0.0065	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Calcium	79000	B	8.7	1.2	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Cadmium	0.39		0.087	0.0061	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Cobalt	5.8		0.044	0.0013	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Chromium	16	B	0.17	0.0053	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Copper	21		0.17	0.029	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Iron	15000	B	4.4	0.31	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Potassium	1400		8.7	1.2	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Magnesium	38000	B	8.7	0.16	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Manganese	540	B	0.44	0.0090	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Sodium	140		8.7	1.2	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Nickel	13		0.087	0.0099	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Lead	26	B	0.087	0.0033	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Antimony	0.21		0.17	0.0023	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Selenium	0.47		0.44	0.044	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Thallium	0.25		0.087	0.0017	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Vanadium	18	B	0.087	0.0069	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1
Zinc	73		0.44	0.057	mg/Kg	☼	10/27/11 15:40	11/08/11 23:52	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:09	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10		0.028	0.0092	mg/Kg	☼	11/04/11 13:24	11/04/11 18:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.86	J	0.87	0.17	mg/Kg	☼	10/28/11 15:49	10/28/11 17:50	1
Total Phosphate	320		84	0.83	mg/Kg	☼	10/31/11 09:00	10/31/11 16:46	5
Cr (VI)	ND		0.71	0.18	mg/Kg	☼	11/10/11 12:00	11/11/11 15:21	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 17:50	1
Cyanide, Total	0.85	J	0.88	0.18	mg/Kg	☼	10/28/11 13:05	10/28/11 14:14	1
Percent Moisture	44		0.10	0.10	%			10/26/11 09:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.85	0.11	mg/Kg	☼		11/07/11 17:28	1
Fluoride	0.53	J	0.85	0.25	mg/Kg	☼		11/07/11 17:28	1
Chloride	18	B	17	3.7	mg/Kg	☼		11/07/11 17:28	1
Sulfate	140	B	17	2.0	mg/Kg	☼		11/07/11 17:28	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.031		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Lab Sample ID: 180-5219-5
Date Collected: 10/22/11 11:15
Matrix: Sediment
Date Received: 10/25/11 10:00

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:43	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/28/11 11:28	1

Client Sample ID: CH-2011-MU3-GS(DUP)

Lab Sample ID: 180-5219-6
Date Collected: 10/22/11 11:15
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 52.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		7.3	0.69	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Bromomethane	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Chloroethane	ND		7.3	2.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Trichlorofluoromethane	ND		7.3	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,1-Dichloroethene	ND		7.3	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Acetone	ND		29	7.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Carbon disulfide	ND		7.3	0.75	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Methylene Chloride	2.4	J	7.3	0.98	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
trans-1,2-Dichloroethene	ND		7.3	0.87	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Methyl tert-butyl ether	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,1-Dichloroethane	ND		7.3	0.84	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
cis-1,2-Dichloroethene	ND		7.3	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
cis-1,3-Dichloropropene	ND		7.3	0.99	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
2-Butanone (MEK)	ND		7.3	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Chloroform	ND		7.3	0.85	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,1,1-Trichloroethane	ND		7.3	0.71	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Carbon tetrachloride	ND		7.3	0.65	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Benzene	ND		7.3	0.99	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
trans-1,3-Dichloropropene	ND		7.3	0.87	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2-Dichloroethane	ND		7.3	0.90	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Trichloroethene	ND		7.3	0.96	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2-Dichloropropane	ND		7.3	0.79	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Bromodichloromethane	ND		7.3	0.82	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
4-Methyl-2-pentanone (MIBK)	ND		7.3	0.95	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Toluene	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,1,2-Trichloroethane	ND		7.3	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Tetrachloroethene	ND		7.3	0.99	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Dibromochloromethane	ND		7.3	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2-Dibromoethane	ND		7.3	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Chlorobenzene	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,1,1,2-Tetrachloroethane	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Ethylbenzene	ND		7.3	0.94	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
m-Xylene & p-Xylene	ND		15	2.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
o-Xylene	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Xylenes, Total	ND		22	3.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Styrene	ND		7.3	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Bromoform	ND		7.3	0.65	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Isopropylbenzene	ND		7.3	0.99	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
N-Propylbenzene	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS(DUP)

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-6

Matrix: Sediment
Percent Solids: 52.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		7.3	1.0	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,3,5-Trimethylbenzene	ND		7.3	0.98	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2,4-Trimethylbenzene	ND		7.3	0.95	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,3-Dichlorobenzene	ND		7.3	0.96	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,4-Dichlorobenzene	ND		7.3	0.93	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2-Dichlorobenzene	ND		7.3	1.2	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2-Dibromo-3-Chloropropane	ND		7.3	1.1	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
1,2,4-Trichlorobenzene	ND		7.3	1.3	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Hexachlorobutadiene	ND		7.3	1.7	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Cyclohexane	ND		7.3	0.54	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Acrolein	ND		150	10	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Vinyl acetate	ND		7.3	0.52	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
n-Butyl alcohol	ND		290	48	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1
Hexane	ND		7.3	1.5	ug/Kg	☼	11/03/11 04:12	11/03/11 11:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*52 - 124*	*11/03/11 04:12*	*11/03/11 11:21*	*1*
Toluene-d8 (Surr)	*95*		*72 - 127*	*11/03/11 04:12*	*11/03/11 11:21*	*1*
4-Bromofluorobenzene (Surr)	*97*		*63 - 120*	*11/03/11 04:12*	*11/03/11 11:21*	*1*
Dibromofluoromethane (Surr)	*100*		*68 - 121*	*11/03/11 04:12*	*11/03/11 11:21*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**56**		25	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Acenaphthylene	**29**		25	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Anthracene	**130**		25	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Atrazine	ND	*	120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Benzo[a]anthracene	**480**		25	3.1	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Benzo[b]fluoranthene	**560**		25	3.9	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Benzo[k]fluoranthene	ND		25	5.1	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Benzo[a]pyrene	**400**		25	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Bis(2-chloroethyl)ether	ND		25	3.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Bis(2-ethylhexyl) phthalate	**92**	**J**	250	20	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Butyl benzyl phthalate	ND		120	17	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Carbazole	**33**		25	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Chrysene	**420**		25	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2-Chloronaphthalene	ND		25	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2-Chlorophenol	ND		120	10	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,4-Dichlorophenol	ND		25	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,4-Dimethylphenol	ND		120	20	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,4-Dinitrophenol	ND		640	150	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,4-Dinitrotoluene	ND		120	10	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,6-Dinitrotoluene	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2-Methylnaphthalene	**36**		25	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2-Methylphenol	ND		120	8.8	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2-Nitroaniline	ND		640	56	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,2'-oxybis[1-chloropropane]	ND		25	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,4,5-Trichlorophenol	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
2,4,6-Trichlorophenol	ND		120	19	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Methylphenol, 3 & 4	**20**	**J**	120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
4-Chloroaniline	ND		120	10	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS(DUP)

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-6

Matrix: Sediment
Percent Solids: 52.9

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	**76**		25	2.8	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Dibenzofuran	**36**	**J**	120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Di-n-butyl phthalate	ND		120	16	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Diethyl phthalate	ND		120	14	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Dimethyl phthalate	ND		120	14	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Di-n-octyl phthalate	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
3,3'-Dichlorobenzidine	ND		120	13	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Fluoranthene	**630**		25	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Fluorene	**71**		25	3.3	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Hexachlorobenzene	ND		25	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Hexachlorocyclopentadiene	ND		120	14	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Hexachloroethane	ND		120	9.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Indeno[1,2,3-cd]pyrene	**200**		25	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Isophorone	ND		120	9.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Naphthalene	**39**		25	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Nitrobenzene	ND		250	10	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
N-Nitrosodiphenylamine	ND		120	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
N-Nitrosodi-n-propylamine	ND		25	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Pyrene	**830**		25	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Phenol	ND		25	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Phenanthrene	**540**		25	4.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Pentachlorophenol	ND		120	11	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Benzyl alcohol	ND		120	15	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4
Benzoic acid	ND		640	52	ug/Kg	☼	11/04/11 02:45	11/04/11 18:16	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 18:16*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*83*		*21 - 116*	*11/04/11 02:45*	*11/04/11 18:16*	*4*
2-Fluorophenol	*65*		*28 - 107*	*11/04/11 02:45*	*11/04/11 18:16*	*4*
Phenol-d5	*74*		*30 - 112*	*11/04/11 02:45*	*11/04/11 18:16*	*4*
Nitrobenzene-d5	*66*		*27 - 110*	*11/04/11 02:45*	*11/04/11 18:16*	*4*
2-Fluorobiphenyl	*68*		*28 - 108*	*11/04/11 02:45*	*11/04/11 18:16*	*4*
Terphenyl-d14	*88*		*21 - 130*	*11/04/11 02:45*	*11/04/11 18:16*	*4*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		190	190	mg/Kg	☼	10/30/11 13:42	10/30/11 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*76*		*40 - 140*	*10/30/11 13:42*	*10/30/11 19:28*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.6	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
alpha-BHC	ND		1.6	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
alpha-Chlordane	ND		1.6	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
beta-BHC	ND		1.6	0.40	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
2,4'-DDD	**2.3**		1.6	0.093	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
2,4'-DDE	ND		1.6	0.14	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
2,4'-DDT	ND		1.6	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS(DUP)

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-6

Matrix: Sediment
Percent Solids: 52.9

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	**1.7**	**p**	1.6	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
4,4'-DDE	**3.4**		1.6	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
4,4'-DDT	**1.4**	**J**	1.6	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Chlordane (technical)	ND		16	0.69	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Dieldrin	ND		1.6	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Endosulfan I	ND		1.6	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Endosulfan II	ND		1.6	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Endosulfan sulfate	ND		1.6	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Endrin	ND		1.6	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Endrin aldehyde	ND		1.6	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Endrin ketone	ND		1.6	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
gamma-BHC (Lindane)	**3.0**		1.6	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
gamma-Chlordane	ND		1.6	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Heptachlor	ND		1.6	0.35	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Heptachlor epoxide	ND		1.6	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Methoxychlor	ND		3.1	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1
Toxaphene	ND		62	10	ug/Kg	☼	10/31/11 04:38	11/03/11 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*77*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:18*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:18*	*1*
Tetrachloro-m-xylene	*53*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:18*	*1*
Tetrachloro-m-xylene	*59*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:18*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**16**		16	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
PCB-1221	ND		16	3.0	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
PCB-1232	ND		16	2.7	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
PCB-1242	ND		16	2.5	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
PCB-1248	ND		16	1.5	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
PCB-1254	**24**		16	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
PCB-1260	ND		16	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1
Polychlorinated biphenyls, Total	**40**		16	3.4	ug/Kg	☼	10/31/11 04:38	11/09/11 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*35 - 140*	*10/31/11 04:38*	*11/09/11 07:15*	*1*
DCB Decachlorobiphenyl (Surr)	*94*		*35 - 140*	*10/31/11 04:38*	*11/09/11 07:15*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		38	4.7	ug/Kg	☼	11/03/11 04:08	11/09/11 17:13	20
2,4-D	ND		150	10	ug/Kg	☼	11/03/11 04:08	11/09/11 17:13	20
Dalapon	ND		170	13	ug/Kg	☼	11/03/11 04:08	11/09/11 17:13	20
Dinoseb	ND		23	8.6	ug/Kg	☼	11/03/11 04:08	11/09/11 17:13	20
Silvex (2,4,5-TP)	ND		38	4.0	ug/Kg	☼	11/03/11 04:08	11/09/11 17:13	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*57*		*42 - 140*	*11/03/11 04:08*	*11/09/11 17:13*	*20*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS(DUP)

Date Collected: 10/22/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-6

Matrix: Sediment

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:41	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:41	1
Boron	**0.28**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:41	1
Barium	**0.012**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:41	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:41	1
Calcium	**21**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:41	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:41	1
Cobalt	**0.00047**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:41	1
Chromium	**0.0033**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:41	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:41	1
Iron	**0.90**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:41	1
Potassium	**0.94**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:41	1
Magnesium	**2.3**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:41	1
Manganese	**0.0082**	**J**	0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:41	1
Sodium	**18**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:41	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:41	1
Lead	**0.0021**	**J**	0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:41	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:41	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:41	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:41	1
Vanadium	**0.0040**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:41	1
Zinc	**0.0064**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:41	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.084**	**J**	0.088	0.0034	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Arsenic	**5.3**		0.088	0.016	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Boron	**12**	**B**	0.44	0.032	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Barium	**22**		0.88	0.0094	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Beryllium	**0.33**		0.088	0.0066	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Calcium	**85000**	**B**	8.8	1.2	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Cadmium	**0.43**		0.088	0.0061	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Cobalt	**5.9**		0.044	0.0013	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Chromium	**16**	**B**	0.18	0.0053	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Copper	**21**		0.18	0.029	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Iron	**15000**	**B**	4.4	0.31	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Potassium	**1400**		8.8	1.2	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Magnesium	**41000**	**B**	8.8	0.16	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Manganese	**560**	**B**	0.44	0.0090	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Sodium	**180**		8.8	1.2	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Nickel	**13**		0.088	0.0099	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Lead	**25**	**B**	0.088	0.0033	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Antimony	**0.21**		0.18	0.0023	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Selenium	**0.40**	**J**	0.44	0.044	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Thallium	**0.26**		0.088	0.0018	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Vanadium	**18**	**B**	0.088	0.0069	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1
Zinc	**76**		0.44	0.057	mg/Kg	☼	10/27/11 15:40	11/08/11 23:56	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:11	1

Client Sample ID: CH-2011-MU3-GS(DUP)

Lab Sample ID: 180-5219-6

Date Collected: 10/22/11 11:15
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 52.9

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.062		0.030	0.0099	mg/Kg	☼	11/04/11 13:24	11/04/11 18:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.77	J	0.91	0.18	mg/Kg	☼	10/28/11 15:49	10/28/11 17:53	1
Total Phosphate	300		100	1.0	mg/Kg	☼	10/31/11 09:00	10/31/11 16:52	5
Cr (VI)	ND		0.76	0.19	mg/Kg	☼	11/10/11 12:00	11/11/11 15:22	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 17:53	1
Cyanide, Total	1.0		0.93	0.19	mg/Kg	☼	10/28/11 13:05	10/28/11 15:10	1
Percent Moisture	47		0.10	0.10	%			10/26/11 09:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.51	J	0.93	0.12	mg/Kg	☼		11/07/11 17:42	1
Fluoride	0.97		0.93	0.28	mg/Kg	☼		11/07/11 17:42	1
Chloride	20	B	19	4.1	mg/Kg	☼		11/07/11 17:42	1
Sulfate	200	B	19	2.2	mg/Kg	☼		11/07/11 17:42	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.039		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:44	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/28/11 11:28	1

Client Sample ID: CH-2011-MU1-GNU

Lab Sample ID: 180-5219-7

Date Collected: 10/23/11 10:00
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 58.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		7.2	0.68	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Bromomethane	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Chloroethane	ND		7.2	2.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Trichlorofluoromethane	ND		7.2	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,1-Dichloroethene	ND		7.2	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Acetone	28	J	29	7.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Carbon disulfide	ND		7.2	0.74	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Methylene Chloride	ND		7.2	0.97	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
trans-1,2-Dichloroethene	ND		7.2	0.86	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Methyl tert-butyl ether	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,1-Dichloroethane	ND		7.2	0.83	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
cis-1,2-Dichloroethene	ND		7.2	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
cis-1,3-Dichloropropene	ND		7.2	0.98	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
2-Butanone (MEK)	ND		7.2	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Date Collected: 10/23/11 10:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-7

Matrix: Sediment
Percent Solids: 58.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		7.2	0.85	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,1,1-Trichloroethane	ND		7.2	0.70	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Carbon tetrachloride	ND		7.2	0.65	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Benzene	ND		7.2	0.98	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
trans-1,3-Dichloropropene	ND	*	7.2	0.86	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2-Dichloroethane	ND		7.2	0.89	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Trichloroethene	ND		7.2	0.95	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2-Dichloropropane	ND		7.2	0.79	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Bromodichloromethane	ND		7.2	0.81	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
4-Methyl-2-pentanone (MIBK)	ND		7.2	0.94	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Toluene	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,1,2-Trichloroethane	ND		7.2	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Tetrachloroethene	ND		7.2	0.98	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Dibromochloromethane	ND		7.2	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2-Dibromoethane	ND		7.2	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Chlorobenzene	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,1,1,2-Tetrachloroethane	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Ethylbenzene	ND		7.2	0.93	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
m-Xylene & p-Xylene	ND		14	2.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
o-Xylene	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Xylenes, Total	ND		22	3.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Styrene	ND		7.2	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Bromoform	ND		7.2	0.64	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Isopropylbenzene	ND		7.2	0.98	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
N-Propylbenzene	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,1,2,2-Tetrachloroethane	ND		7.2	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,3,5-Trimethylbenzene	ND		7.2	0.97	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2,4-Trimethylbenzene	ND		7.2	0.94	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,3-Dichlorobenzene	ND		7.2	0.95	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,4-Dichlorobenzene	ND		7.2	0.92	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2-Dichlorobenzene	ND		7.2	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2-Dibromo-3-Chloropropane	ND		7.2	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
1,2,4-Trichlorobenzene	ND		7.2	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Hexachlorobutadiene	ND		7.2	1.6	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Cyclohexane	ND		7.2	0.54	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Acrolein	ND		140	10	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Vinyl acetate	ND		7.2	0.51	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
n-Butyl alcohol	ND		290	48	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1
Hexane	ND		7.2	1.5	ug/Kg	☼	10/31/11 04:09	10/31/11 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*75*		*52 - 124*	*10/31/11 04:09*	*10/31/11 14:06*	*1*
Toluene-d8 (Surr)	*121*		*72 - 127*	*10/31/11 04:09*	*10/31/11 14:06*	*1*
4-Bromofluorobenzene (Surr)	*78*		*63 - 120*	*10/31/11 04:09*	*10/31/11 14:06*	*1*
Dibromofluoromethane (Surr)	*91*		*68 - 121*	*10/31/11 04:09*	*10/31/11 14:06*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**95**		23	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Acenaphthylene	**81**		23	2.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Anthracene	**230**		23	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Date Collected: 10/23/11 10:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-7

Matrix: Sediment
Percent Solids: 58.1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND	*	110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Benzo[a]anthracene	**510**		23	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Benzo[b]fluoranthene	**810**		23	3.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Benzo[k]fluoranthene	ND		23	4.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Benzo[a]pyrene	**610**		23	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Bis(2-chloroethyl)ether	ND		23	3.1	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Bis(2-ethylhexyl) phthalate	**230**		230	18	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Butyl benzyl phthalate	ND		110	16	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Carbazole	**40**		23	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Chrysene	**640**		23	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2-Chloronaphthalene	ND		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2-Chlorophenol	ND		110	9.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,4-Dichlorophenol	ND		23	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,4-Dimethylphenol	ND		110	18	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,4-Dinitrophenol	ND		580	140	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,4-Dinitrotoluene	ND		110	9.2	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,6-Dinitrotoluene	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2-Methylnaphthalene	**110**		23	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2-Methylphenol	ND		110	8.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2-Nitroaniline	ND		580	51	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,2'-oxybis[1-chloropropane]	ND		23	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,4,5-Trichlorophenol	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
2,4,6-Trichlorophenol	ND		110	17	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Methylphenol, 3 & 4	**170**		110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
4-Chloroaniline	ND		110	9.2	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Dibenz(a,h)anthracene	**110**		23	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Dibenzofuran	**71**	**J**	110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Di-n-butyl phthalate	ND		110	14	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Diethyl phthalate	ND		110	13	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Dimethyl phthalate	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Di-n-octyl phthalate	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
3,3'-Dichlorobenzidine	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Fluoranthene	**780**		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Fluorene	**140**		23	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Hexachlorobenzene	ND		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Hexachlorocyclopentadiene	ND		110	12	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Hexachloroethane	ND		110	8.2	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Indeno[1,2,3-cd]pyrene	**310**		23	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Isophorone	ND		110	8.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Naphthalene	**160**		23	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Nitrobenzene	ND		230	9.5	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
N-Nitrosodiphenylamine	ND		110	11	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
N-Nitrosodi-n-propylamine	ND		23	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Pyrene	**1000**		23	2.3	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Phenol	ND		23	2.7	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Phenanthrene	**770**		23	3.6	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Pentachlorophenol	ND		110	10	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Benzyl alcohol	ND		110	14	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4
Benzoic acid	ND		580	47	ug/Kg	☼	11/04/11 02:45	11/04/11 18:40	4

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Date Collected: 10/23/11 10:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-7

Matrix: Sediment
Percent Solids: 58.1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
DMF	0.00	J N	ug/Kg	☼		68-12-2	11/04/11 02:45	11/04/11 18:40	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	89		21 - 116	11/04/11 02:45	11/04/11 18:40	4
2-Fluorophenol	81		28 - 107	11/04/11 02:45	11/04/11 18:40	4
Phenol-d5	85		30 - 112	11/04/11 02:45	11/04/11 18:40	4
Nitrobenzene-d5	81		27 - 110	11/04/11 02:45	11/04/11 18:40	4
2-Fluorobiphenyl	78		28 - 108	11/04/11 02:45	11/04/11 18:40	4
Terphenyl-d14	71		21 - 130	11/04/11 02:45	11/04/11 18:40	4

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		170	170	mg/Kg	☼	10/30/11 13:42	10/30/11 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	85		40 - 140	10/30/11 13:42	10/30/11 19:40	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
alpha-BHC	ND		1.5	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
alpha-Chlordane	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
beta-BHC	ND		1.5	0.37	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
2,4'-DDD	**21**		1.5	0.086	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
2,4'-DDE	ND		1.5	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
2,4'-DDT	ND		1.5	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
4,4'-DDD	**3.2**	**p**	1.5	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
4,4'-DDE	**6.0**	**p**	1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
4,4'-DDT	**18**		1.5	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Chlordane (technical)	ND		15	0.63	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Dieldrin	ND		1.5	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Endosulfan I	**1.2**	**J**	1.5	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Endosulfan II	ND		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Endosulfan sulfate	**0.64**	**J p**	1.5	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Endrin	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Endrin aldehyde	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Endrin ketone	ND		1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
gamma-BHC (Lindane)	ND		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
gamma-Chlordane	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Heptachlor	ND		1.5	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Heptachlor epoxide	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Methoxychlor	ND		2.8	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1
Toxaphene	ND		57	9.5	ug/Kg	☼	10/31/11 04:38	11/03/11 18:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	77		45 - 130	10/31/11 04:38	11/03/11 18:37	1
DCB Decachlorobiphenyl (Surr)	76		45 - 130	10/31/11 04:38	11/03/11 18:37	1
Tetrachloro-m-xylene	50		45 - 130	10/31/11 04:38	11/03/11 18:37	1
Tetrachloro-m-xylene	60		45 - 130	10/31/11 04:38	11/03/11 18:37	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**48**		14	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Date Collected: 10/23/11 10:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-7

Matrix: Sediment
Percent Solids: 58.1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		14	2.7	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1
PCB-1232	**290**		14	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1
PCB-1242	ND		14	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1
PCB-1248	ND		14	1.3	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1
PCB-1254	**250**		14	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1
PCB-1260	ND		14	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1
Polychlorinated biphenyls, Total	**590**		14	3.1	ug/Kg	☼	10/31/11 04:38	11/09/11 07:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*35 - 140*	*10/31/11 04:38*	*11/09/11 07:43*	*1*
DCB Decachlorobiphenyl (Surr)	*95*		*35 - 140*	*10/31/11 04:38*	*11/09/11 07:43*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		34	4.3	ug/Kg	☼	11/03/11 04:08	11/09/11 17:38	20
2,4-D	ND		140	9.4	ug/Kg	☼	11/03/11 04:08	11/09/11 17:38	20
Dalapon	ND		150	12	ug/Kg	☼	11/03/11 04:08	11/09/11 17:38	20
Dinoseb	ND		21	7.8	ug/Kg	☼	11/03/11 04:08	11/09/11 17:38	20
Silvex (2,4,5-TP)	ND		34	3.6	ug/Kg	☼	11/03/11 04:08	11/09/11 17:38	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*64*		*42 - 140*	*11/03/11 04:08*	*11/09/11 17:38*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:47	1
Arsenic	**0.0050**	**J**	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:47	1
Boron	**0.33**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:47	1
Barium	**0.016**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:47	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:47	1
Calcium	**20**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:47	1
Cadmium	**0.00021**	**J**	0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:47	1
Cobalt	**0.0014**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:47	1
Chromium	**0.0060**	**B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:47	1
Copper	**0.0056**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:47	1
Iron	**2.0**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:47	1
Potassium	**1.6**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:47	1
Magnesium	**3.0**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:47	1
Manganese	**0.026**		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:47	1
Sodium	**19**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:47	1
Nickel	**0.0023**	**J**	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:47	1
Lead	**0.012**		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:47	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:47	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:47	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:47	1
Vanadium	**0.0062**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:47	1
Zinc	**0.027**	**B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:47	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.25**		0.084	0.0033	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Arsenic	**9.8**		0.084	0.015	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Date Collected: 10/23/11 10:00
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-7

Matrix: Sediment
Percent Solids: 58.1

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12	B	0.42	0.031	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Barium	35		0.84	0.0090	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Beryllium	0.57		0.084	0.0063	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Calcium	57000	B	8.4	1.1	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Cadmium	0.80		0.084	0.0059	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Cobalt	6.6		0.042	0.0013	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Chromium	29	B	0.17	0.0051	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Copper	31		0.17	0.028	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Iron	43000	B	42	3.0	mg/Kg	☼	10/27/11 15:40	11/09/11 00:13	10
Potassium	1300		8.4	1.1	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Magnesium	27000	B	8.4	0.16	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Manganese	720	B	0.42	0.0086	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Sodium	140		8.4	1.1	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Nickel	18		0.084	0.0095	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Lead	85	B	0.084	0.0032	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Antimony	0.50		0.17	0.0022	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Selenium	0.53		0.42	0.042	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Thallium	0.49		0.084	0.0017	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Vanadium	21	B	0.084	0.0066	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1
Zinc	190		0.42	0.054	mg/Kg	☼	10/27/11 15:40	11/09/11 00:00	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:12	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14		0.027	0.0090	mg/Kg	☼	11/04/11 13:24	11/04/11 18:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	2.0		0.83	0.17	mg/Kg	☼	10/28/11 15:49	10/28/11 18:15	1
Total Phosphate	430		90	0.89	mg/Kg	☼	10/31/11 09:00	10/31/11 16:51	5
Cr (VI)	ND		0.69	0.17	mg/Kg	☼	11/10/11 12:00	11/11/11 15:23	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 18:15	1
Cyanide, Total	1.6		0.82	0.16	mg/Kg	☼	10/28/11 13:05	10/28/11 15:10	1
Percent Moisture	42		0.10	0.10	%			10/26/11 09:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.82	0.10	mg/Kg	☼		11/07/11 17:56	1
Fluoride	2.4		0.82	0.25	mg/Kg	☼		11/07/11 17:56	1
Chloride	19	B	16	3.6	mg/Kg	☼		11/07/11 17:56	1
Sulfate	97	B	16	1.9	mg/Kg	☼		11/07/11 17:56	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.067		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	0.011		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Lab Sample ID: 180-5219-7
Date Collected: 10/23/11 10:00
Matrix: Sediment
Date Received: 10/25/11 10:00

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:45	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/28/11 11:28	1

Client Sample ID: CH-2011-MU1-GNL

Lab Sample ID: 180-5219-8
Date Collected: 10/23/11 11:15
Matrix: Sediment
Date Received: 10/25/11 10:00
Percent Solids: 70.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		6.3	0.59	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Bromomethane	ND		6.3	0.93	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Chloroethane	ND		6.3	2.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Trichlorofluoromethane	ND		6.3	1.2	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,1-Dichloroethene	ND		6.3	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Acetone	20	J	25	6.3	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Carbon disulfide	ND		6.3	0.65	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Methylene Chloride	ND		6.3	0.85	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
trans-1,2-Dichloroethene	ND		6.3	0.75	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Methyl tert-butyl ether	ND		6.3	0.94	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,1-Dichloroethane	ND		6.3	0.73	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
cis-1,2-Dichloroethene	ND		6.3	0.89	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
cis-1,3-Dichloropropene	ND		6.3	0.85	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
2-Butanone (MEK)	ND		6.3	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Chloroform	ND		6.3	0.74	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,1,1-Trichloroethane	ND		6.3	0.61	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Carbon tetrachloride	ND		6.3	0.56	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Benzene	ND		6.3	0.85	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
trans-1,3-Dichloropropene	ND	*	6.3	0.75	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2-Dichloroethane	ND		6.3	0.77	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Trichloroethene	ND		6.3	0.83	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2-Dichloropropane	ND		6.3	0.68	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Bromodichloromethane	ND		6.3	0.71	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
4-Methyl-2-pentanone (MIBK)	ND		6.3	0.82	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Toluene	ND		6.3	0.92	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,1,2-Trichloroethane	ND		6.3	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Tetrachloroethene	ND		6.3	0.86	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Dibromochloromethane	ND		6.3	0.90	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2-Dibromoethane	ND		6.3	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Chlorobenzene	ND		6.3	0.96	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,1,1,2-Tetrachloroethane	ND		6.3	0.94	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Ethylbenzene	ND		6.3	0.81	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
m-Xylene & p-Xylene	ND		13	1.9	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
o-Xylene	ND		6.3	0.98	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Xylenes, Total	ND		19	2.8	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Styrene	ND		6.3	0.89	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Bromoform	ND		6.3	0.56	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Isopropylbenzene	ND		6.3	0.86	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
N-Propylbenzene	ND		6.3	0.96	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL

Date Collected: 10/23/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-8

Matrix: Sediment
Percent Solids: 70.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		6.3	0.91	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,3,5-Trimethylbenzene	ND		6.3	0.84	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2,4-Trimethylbenzene	ND		6.3	0.82	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,3-Dichlorobenzene	ND		6.3	0.83	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,4-Dichlorobenzene	ND		6.3	0.80	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2-Dichlorobenzene	ND		6.3	1.0	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2-Dibromo-3-Chloropropane	ND		6.3	0.94	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
1,2,4-Trichlorobenzene	ND		6.3	1.1	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Hexachlorobutadiene	ND		6.3	1.4	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Cyclohexane	ND		6.3	0.47	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Acrolein	ND		130	8.9	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Vinyl acetate	ND		6.3	0.45	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
n-Butyl alcohol	ND		250	41	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1
Hexane	ND		6.3	1.3	ug/Kg	☼	10/31/11 04:09	10/31/11 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*52 - 124*	*10/31/11 04:09*	*10/31/11 14:29*	*1*
Toluene-d8 (Surr)	*126*		*72 - 127*	*10/31/11 04:09*	*10/31/11 14:29*	*1*
4-Bromofluorobenzene (Surr)	*77*		*63 - 120*	*10/31/11 04:09*	*10/31/11 14:29*	*1*
Dibromofluoromethane (Surr)	*96*		*68 - 121*	*10/31/11 04:09*	*10/31/11 14:29*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**88**		19	1.8	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Acenaphthylene	**88**		19	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Anthracene	**290**		19	1.8	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Atrazine	ND	*	93	9.1	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Benzo[a]anthracene	**570**		19	2.4	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Benzo[b]fluoranthene	**600**		19	2.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Benzo[k]fluoranthene	ND		19	3.8	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Benzo[a]pyrene	**470**		19	1.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Bis(2-chloroethyl)ether	ND		19	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Bis(2-ethylhexyl) phthalate	**24**	**J**	190	15	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Butyl benzyl phthalate	ND		93	13	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Carbazole	**32**		19	1.7	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Chrysene	**590**		19	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2-Chloronaphthalene	ND		19	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2-Chlorophenol	ND		93	7.7	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,4-Dichlorophenol	ND		19	1.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,4-Dimethylphenol	ND		93	15	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,4-Dinitrophenol	ND		480	110	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,4-Dinitrotoluene	ND		93	7.6	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,6-Dinitrotoluene	ND		93	9.7	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2-Methylnaphthalene	**130**		19	1.7	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2-Methylphenol	ND		93	6.6	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2-Nitroaniline	ND		480	42	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,2'-oxybis[1-chloropropane]	ND		19	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,4,5-Trichlorophenol	ND		93	10	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
2,4,6-Trichlorophenol	ND		93	14	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Methylphenol, 3 & 4	**40**	**J**	93	9.2	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
4-Chloroaniline	ND		93	7.5	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL
Date Collected: 10/23/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-8
Matrix: Sediment
Percent Solids: 70.7

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	**61**		19	2.1	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Dibenzofuran	**63**	**J**	93	9.2	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Di-n-butyl phthalate	ND		93	12	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Diethyl phthalate	ND		93	10	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Dimethyl phthalate	ND		93	10	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Di-n-octyl phthalate	ND		93	9.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
3,3'-Dichlorobenzidine	ND		93	9.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Fluoranthene	**750**		19	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Fluorene	**150**		19	2.5	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Hexachlorobenzene	ND		19	2.0	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Hexachlorocyclopentadiene	ND		93	10	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Hexachloroethane	ND		93	6.7	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Indeno[1,2,3-cd]pyrene	**200**		19	1.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Isophorone	ND		93	7.1	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Naphthalene	**190**		19	1.6	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Nitrobenzene	ND		190	7.8	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
N-Nitrosodiphenylamine	ND		93	8.7	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
N-Nitrosodi-n-propylamine	ND		19	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Pyrene	**810**		19	1.9	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Phenol	ND		19	2.2	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Phenanthrene	**800**		19	3.0	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Pentachlorophenol	ND		93	8.4	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Benzyl alcohol	ND		93	11	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4
Benzoic acid	ND		480	39	ug/Kg	☼	11/04/11 02:45	11/04/11 19:04	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*11/04/11 02:45*	*11/04/11 19:04*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*21 - 116*	*11/04/11 02:45*	*11/04/11 19:04*	*4*
2-Fluorophenol	*70*		*28 - 107*	*11/04/11 02:45*	*11/04/11 19:04*	*4*
Phenol-d5	*75*		*30 - 112*	*11/04/11 02:45*	*11/04/11 19:04*	*4*
Nitrobenzene-d5	*72*		*27 - 110*	*11/04/11 02:45*	*11/04/11 19:04*	*4*
2-Fluorobiphenyl	*68*		*28 - 108*	*11/04/11 02:45*	*11/04/11 19:04*	*4*
Terphenyl-d14	*72*		*21 - 130*	*11/04/11 02:45*	*11/04/11 19:04*	*4*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		140	140	mg/Kg	☼	10/30/11 13:42	10/30/11 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*83*		*40 - 140*	*10/30/11 13:42*	*10/30/11 19:53*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.2	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
alpha-BHC	ND		1.2	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
alpha-Chlordane	ND		1.2	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
beta-BHC	ND		1.2	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
2,4'-DDD	**1.2**		1.2	0.070	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
2,4'-DDE	ND		1.2	0.11	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
2,4'-DDT	ND		1.2	0.10	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL

Date Collected: 10/23/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-8

Matrix: Sediment
Percent Solids: 70.7

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.2	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
4,4'-DDE	**0.69**	**J**	1.2	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
4,4'-DDT	**0.57**	**J**	1.2	0.17	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Chlordane (technical)	ND		12	0.51	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Dieldrin	ND		1.2	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Endosulfan I	**0.45**	**J**	1.2	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Endosulfan II	ND		1.2	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Endosulfan sulfate	ND		1.2	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Endrin	ND		1.2	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Endrin aldehyde	ND		1.2	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Endrin ketone	ND		1.2	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
gamma-BHC (Lindane)	**0.69**	**J**	1.2	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
gamma-Chlordane	ND		1.2	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Heptachlor	ND		1.2	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Heptachlor epoxide	ND		1.2	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Methoxychlor	ND		2.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1
Toxaphene	ND		47	7.8	ug/Kg	☼	10/31/11 04:38	11/03/11 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*78*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:56*	*1*
DCB Decachlorobiphenyl (Surr)	*77*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:56*	*1*
Tetrachloro-m-xylene	*55*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:56*	*1*
Tetrachloro-m-xylene	*62*		*45 - 130*	*10/31/11 04:38*	*11/03/11 18:56*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	1.7	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
PCB-1221	ND		12	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
PCB-1232	**27**		12	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
PCB-1242	ND		12	1.9	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
PCB-1248	ND		12	1.1	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
PCB-1254	**16**		12	1.7	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
PCB-1260	ND		12	1.7	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1
Polychlorinated biphenyls, Total	**43**		12	2.5	ug/Kg	☼	10/31/11 04:38	11/09/11 08:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*35 - 140*	*10/31/11 04:38*	*11/09/11 08:12*	*1*
DCB Decachlorobiphenyl (Surr)	*96*		*35 - 140*	*10/31/11 04:38*	*11/09/11 08:12*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		28	3.5	ug/Kg	☼	11/03/11 04:08	11/09/11 18:03	20
2,4-D	ND		110	7.7	ug/Kg	☼	11/03/11 04:08	11/09/11 18:03	20
Dalapon	ND		130	10	ug/Kg	☼	11/03/11 04:08	11/09/11 18:03	20
Dinoseb	ND		17	6.4	ug/Kg	☼	11/03/11 04:08	11/09/11 18:03	20
Silvex (2,4,5-TP)	ND		28	3.0	ug/Kg	☼	11/03/11 04:08	11/09/11 18:03	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*63*		*42 - 140*	*11/03/11 04:08*	*11/09/11 18:03*	*20*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL

Date Collected: 10/23/11 11:15
Date Received: 10/25/11 10:00

Lab Sample ID: 180-5219-8

Matrix: Sediment

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 20:53	1
Arsenic	0.023		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 20:53	1
Boron	0.51		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 20:53	1
Barium	0.024	J	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 20:53	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 20:53	1
Calcium	16	B	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 20:53	1
Cadmium	0.00043	J	0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 20:53	1
Cobalt	0.0024	J B	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 20:53	1
Chromium	0.0074	B	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 20:53	1
Copper	0.011	J	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 20:53	1
Iron	7.3		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 20:53	1
Potassium	2.6	J	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 20:53	1
Magnesium	3.0	J	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 20:53	1
Manganese	0.15		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 20:53	1
Sodium	22		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 20:53	1
Nickel	0.0049	J	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 20:53	1
Lead	0.057		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 20:53	1
Antimony	0.0034	J	0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 20:53	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 20:53	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 20:53	1
Vanadium	0.0086	J	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 20:53	1
Zinc	0.11	B	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 20:53	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.17		0.069	0.0027	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Arsenic	10		0.069	0.012	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Boron	13	B	0.35	0.026	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Barium	37		0.69	0.0074	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Beryllium	0.53		0.069	0.0052	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Calcium	69000	B	6.9	0.92	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Cadmium	0.44		0.069	0.0048	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Cobalt	6.7		0.035	0.0010	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Chromium	17	B	0.14	0.0042	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Copper	19		0.14	0.023	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Iron	40000	B	35	2.4	mg/Kg	☼	10/27/11 15:40	11/09/11 00:18	10
Potassium	1300		6.9	0.94	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Magnesium	33000	B	6.9	0.13	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Manganese	680	B	0.35	0.0071	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Sodium	160		6.9	0.94	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Nickel	14		0.069	0.0078	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Lead	54	B	0.069	0.0026	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Antimony	0.54		0.14	0.0018	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Selenium	0.34	J	0.35	0.035	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Thallium	0.53		0.069	0.0014	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Vanadium	20	B	0.069	0.0055	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1
Zinc	110		0.35	0.045	mg/Kg	☼	10/27/11 15:40	11/09/11 00:05	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 18:14	1

Client Sample ID: CH-2011-MU1-GNL

Lab Sample ID: 180-5219-8

Date Collected: 10/23/11 11:15
Date Received: 10/25/11 10:00

Matrix: Sediment
Percent Solids: 70.7

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16		0.023	0.0076	mg/Kg	☼	11/04/11 13:24	11/04/11 18:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	1.7		0.71	0.14	mg/Kg	☼	10/28/11 15:49	10/28/11 18:15	1
Total Phosphate	140		72	0.71	mg/Kg	☼	10/31/11 09:00	10/31/11 16:51	5
Cr (VI)	ND		0.57	0.14	mg/Kg	☼	11/10/11 12:00	11/11/11 15:24	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/28/11 18:15	1
Cyanide, Total	1.5		0.69	0.14	mg/Kg	☼	10/28/11 13:05	10/28/11 15:10	1
Percent Moisture	29		0.10	0.10	%			10/26/11 09:55	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.69	0.086	mg/Kg	☼		11/07/11 18:10	1
Fluoride	3.1		0.69	0.21	mg/Kg	☼		11/07/11 18:10	1
Chloride	14	B	14	3.0	mg/Kg	☼		11/07/11 18:10	1
Sulfate	17	B	14	1.6	mg/Kg	☼		11/07/11 18:10	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.20		0.050	0.025	mg/L		11/03/11 13:42	11/03/11 16:47	5
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 10:58	1
Cyanide, Total	0.042		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:46	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/28/11 11:28	1

Client Sample ID: CH-2011-MU1-GS

Lab Sample ID: 180-5219-9

Date Collected: 10/27/11 13:30
Date Received: 10/27/11 12:15

Matrix: SET, Dissolved

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 12:42	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 12:42	1
Methylene Chloride	10	B	1.0	0.15	ug/L			11/06/11 12:42	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 12:42	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 12:42	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 12:42	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 12:42	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 12:42	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 12:42	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 12:42	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 12:42	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 12:42	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 12:42	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 12:42	1

Client Sample ID: CH-2011-MU1-GS

Lab Sample ID: 180-5219-9

Date Collected: 10/27/11 13:30

Matrix: SET, Dissolved

Date Received: 10/27/11 12:15

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 12:42	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 12:42	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 12:42	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 12:42	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 12:42	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 12:42	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 12:42	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 12:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 12:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/06/11 12:42*	*1*
Toluene-d8 (Surr)	*96*		*71 - 118*		*11/06/11 12:42*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 118*		*11/06/11 12:42*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*11/06/11 12:42*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:10	11/02/11 17:53	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 17:53	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 17:53	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:10	11/02/11 17:53	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:10	11/02/11 17:53	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*54*		*23 - 112*	*11/01/11 09:10*	*11/02/11 17:53*	*1*
2-Fluorobiphenyl	*47*		*19 - 107*	*11/01/11 09:10*	*11/02/11 17:53*	*1*
Terphenyl-d14	*32*		*10 - 132*	*11/01/11 09:10*	*11/02/11 17:53*	*1*
2,4,6-Tribromophenol	*63*		*16 - 122*	*11/01/11 09:10*	*11/02/11 17:53*	*1*
2-Fluorophenol	*51*		*10 - 111*	*11/01/11 09:10*	*11/02/11 17:53*	*1*
Phenol-d5	*48*		*15 - 112*	*11/01/11 09:10*	*11/02/11 17:53*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:58	1
Chlordane (technical)	ND		0.012	0.0016	ug/L		10/27/11 13:35	10/31/11 12:58	1
Endrin	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:58	1
gamma-BHC (Lindane)	**0.0025**	**p**	0.0012	0.00075	ug/L		10/27/11 13:35	10/31/11 12:58	1
gamma-Chlordane	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:58	1
Heptachlor	ND		0.0012	0.00093	ug/L		10/27/11 13:35	10/31/11 12:58	1
Heptachlor epoxide	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:58	1
Methoxychlor	ND		0.0024	0.00086	ug/L		10/27/11 13:35	10/31/11 12:58	1
Toxaphene	ND		0.094	0.018	ug/L		10/27/11 13:35	10/31/11 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*101*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:58*	*1*
Tetrachloro-m-xylene	*83*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:58*	*1*
DCB Decachlorobiphenyl (Surr)	*77*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:58*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:58*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Date Collected: 10/27/11 13:30
Date Received: 10/27/11 12:15

Lab Sample ID: 180-5219-9

Matrix: SET, Dissolved

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0094	0.0024	ug/L		10/27/11 13:35	10/28/11 21:37	1
PCB-1221	ND		0.0094	0.0023	ug/L		10/27/11 13:35	10/28/11 21:37	1
PCB-1232	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 21:37	1
PCB-1242	ND		0.0094	0.0018	ug/L		10/27/11 13:35	10/28/11 21:37	1
PCB-1248	ND		0.0094	0.0021	ug/L		10/27/11 13:35	10/28/11 21:37	1
PCB-1254	ND		0.0094	0.0022	ug/L		10/27/11 13:35	10/28/11 21:37	1
PCB-1260	ND		0.0094	0.0013	ug/L		10/27/11 13:35	10/28/11 21:37	1
Polychlorinated biphenyls, Total	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*47 - 150*	*10/27/11 13:35*	*10/28/11 21:37*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*50 - 140*	*10/27/11 13:35*	*10/28/11 21:37*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		10/27/11 16:00	10/30/11 15:05	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		10/27/11 16:00	10/30/11 15:05	20
Dalapon	ND		4.7	0.65	ug/L		10/27/11 16:00	10/30/11 15:05	20
Dinoseb	ND		0.85	0.12	ug/L		10/27/11 16:00	10/30/11 15:05	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*48*		*32 - 140*	*10/27/11 16:00*	*10/30/11 15:05*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.26**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 19:47	1
Arsenic	**3.7**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 19:47	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 19:47	1
Boron	**34**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 19:47	1
Barium	**45**		10	0.098	ug/L		11/09/11 10:44	11/11/11 19:47	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 19:47	1
Chromium	**1.7**	**J**	2.0	0.54	ug/L		11/09/11 10:44	11/11/11 19:47	1
Calcium	**36000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 19:47	1
Cobalt	**0.24**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 19:47	1
Copper	**1.3**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 19:47	1
Iron	**440**		50	6.1	ug/L		11/09/11 10:44	11/11/11 19:47	1
Lead	**0.40**	**J B**	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 19:47	1
Manganese	**260**		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 19:47	1
Nickel	**0.46**	**J**	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 19:47	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 19:47	1
Potassium	**1800**	**B**	100	5.8	ug/L		11/09/11 10:44	11/11/11 19:47	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 19:47	1
Magnesium	**9100**		100	1.2	ug/L		11/09/11 10:44	11/11/11 19:47	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 19:47	1
Zinc	**7.0**		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 19:47	1
Sodium	**7600**		100	3.8	ug/L		11/09/11 10:44	11/11/11 19:47	1
Vanadium	**0.47**	**J B**	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 19:47	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:21	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GS

Lab Sample ID: 180-5219-9

Date Collected: 10/27/11 13:30
Matrix: SET, Dissolved
Date Received: 10/27/11 12:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**3.2**	**B**	0.10	0.033	mg/L		11/04/11 13:00	11/08/11 12:31	1
pH	**7.49**	**HF**	0.100	0.100	SU			10/28/11 12:19	1
Total Dissolved Solids	**180**		10	10	mg/L			10/27/11 15:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.53**		0.050	0.043	mg/L			10/27/11 15:54	1
Fluoride	**0.087**	**B**	0.050	0.014	mg/L			10/27/11 15:54	1
Chloride	**15**		1.0	0.20	mg/L			10/27/11 15:54	1
Sulfate	**23**		1.0	0.21	mg/L			10/27/11 15:54	1
Cyanide, Non-amenable	**0.16**		0.050	0.025	mg/L		11/03/11 13:42	11/03/11 16:47	5
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 13:27	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 17:23	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample ID: CH-2011-MU2-GN

Lab Sample ID: 180-5219-10

Date Collected: 10/27/11 13:45
Matrix: SET, Dissolved
Date Received: 10/27/11 12:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 13:07	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 13:07	1
Methylene Chloride	**11**	**B**	1.0	0.15	ug/L			11/06/11 13:07	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 13:07	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 13:07	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 13:07	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 13:07	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 13:07	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 13:07	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 13:07	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 13:07	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 13:07	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 13:07	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 13:07	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 13:07	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 13:07	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 13:07	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 13:07	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 13:07	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 13:07	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 13:07	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 13:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 13:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/06/11 13:07*	*1*
Toluene-d8 (Surr)	*99*		*71 - 118*		*11/06/11 13:07*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 118*		*11/06/11 13:07*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*11/06/11 13:07*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GN

Date Collected: 10/27/11 13:45
Date Received: 10/27/11 12:15

Lab Sample ID: 180-5219-10

Matrix: SET, Dissolved

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:10	11/02/11 18:16	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 18:16	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 18:16	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:10	11/02/11 18:16	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:10	11/02/11 18:16	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*43*		*23 - 112*	*11/01/11 09:10*	*11/02/11 18:16*	*1*
2-Fluorobiphenyl	*37*		*19 - 107*	*11/01/11 09:10*	*11/02/11 18:16*	*1*
Terphenyl-d14	*32*		*10 - 132*	*11/01/11 09:10*	*11/02/11 18:16*	*1*
2,4,6-Tribromophenol	*57*		*16 - 122*	*11/01/11 09:10*	*11/02/11 18:16*	*1*
2-Fluorophenol	*39*		*10 - 111*	*11/01/11 09:10*	*11/02/11 18:16*	*1*
Phenol-d5	*39*		*15 - 112*	*11/01/11 09:10*	*11/02/11 18:16*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 13:17	1
Chlordane (technical)	ND		0.012	0.0016	ug/L		10/27/11 13:35	10/31/11 13:17	1
Endrin	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 13:17	1
gamma-BHC (Lindane)	**0.0026**		0.0012	0.00075	ug/L		10/27/11 13:35	10/31/11 13:17	1
gamma-Chlordane	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 13:17	1
Heptachlor	ND		0.0012	0.00093	ug/L		10/27/11 13:35	10/31/11 13:17	1
Heptachlor epoxide	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 13:17	1
Methoxychlor	ND		0.0024	0.00086	ug/L		10/27/11 13:35	10/31/11 13:17	1
Toxaphene	ND		0.094	0.018	ug/L		10/27/11 13:35	10/31/11 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*85*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:17*	*1*
Tetrachloro-m-xylene	*76*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:17*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:17*	*1*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:17*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0094	0.0024	ug/L		10/27/11 13:35	10/28/11 22:07	1
PCB-1221	ND		0.0094	0.0023	ug/L		10/27/11 13:35	10/28/11 22:07	1
PCB-1232	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 22:07	1
PCB-1242	ND		0.0094	0.0018	ug/L		10/27/11 13:35	10/28/11 22:07	1
PCB-1248	ND		0.0094	0.0021	ug/L		10/27/11 13:35	10/28/11 22:07	1
PCB-1254	ND		0.0094	0.0022	ug/L		10/27/11 13:35	10/28/11 22:07	1
PCB-1260	ND		0.0094	0.0013	ug/L		10/27/11 13:35	10/28/11 22:07	1
Polychlorinated biphenyls, Total	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*47 - 150*	*10/27/11 13:35*	*10/28/11 22:07*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*50 - 140*	*10/27/11 13:35*	*10/28/11 22:07*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		10/27/11 16:00	10/30/11 15:30	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		10/27/11 16:00	10/30/11 15:30	20

Client Sample ID: CH-2011-MU2-GN

Lab Sample ID: 180-5219-10

Date Collected: 10/27/11 13:45

Matrix: SET, Dissolved

Date Received: 10/27/11 12:15

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dalapon	ND		4.7	0.65	ug/L		10/27/11 16:00	10/30/11 15:30	20
Dinoseb	ND		0.85	0.12	ug/L		10/27/11 16:00	10/30/11 15:30	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*47*		*32 - 140*	*10/27/11 16:00*	*10/30/11 15:30*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.22**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 19:52	1
Arsenic	**3.8**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 19:52	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 19:52	1
Boron	**35**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 19:52	1
Barium	**48**		10	0.098	ug/L		11/09/11 10:44	11/11/11 19:52	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 19:52	1
Chromium	**4.0**		2.0	0.54	ug/L		11/09/11 10:44	11/11/11 19:52	1
Calcium	**36000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 19:52	1
Cobalt	**0.39**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 19:52	1
Copper	**1.1**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 19:52	1
Iron	**160**		50	6.1	ug/L		11/09/11 10:44	11/11/11 19:52	1
Lead	**0.22**	**J B**	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 19:52	1
Manganese	**390**		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 19:52	1
Nickel	**0.80**	**J**	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 19:52	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 19:52	1
Potassium	**2100**	**B**	100	5.8	ug/L		11/09/11 10:44	11/11/11 19:52	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 19:52	1
Magnesium	**10000**		100	1.2	ug/L		11/09/11 10:44	11/11/11 19:52	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 19:52	1
Zinc	**6.7**		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 19:52	1
Sodium	**8000**		100	3.8	ug/L		11/09/11 10:44	11/11/11 19:52	1
Vanadium	**1.1**	**B**	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 19:52	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**3.2**	**B**	0.10	0.033	mg/L		11/04/11 13:00	11/08/11 12:32	1
pH	**7.52**	**HF**	0.100	0.100	SU			10/28/11 12:22	1
Total Dissolved Solids	**180**		10	10	mg/L			10/27/11 15:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.77**		0.050	0.043	mg/L			10/27/11 16:09	1
Fluoride	**0.069**	**B**	0.050	0.014	mg/L			10/27/11 16:09	1
Chloride	**14**		1.0	0.20	mg/L			10/27/11 16:09	1
Sulfate	**21**		1.0	0.21	mg/L			10/27/11 16:09	1
Cyanide, Non-amenable	**0.67**		0.50	0.25	mg/L		11/04/11 16:50	11/04/11 18:18	50
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 13:29	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 18:18	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GS

Date Collected: 10/27/11 14:00
Date Received: 10/27/11 12:15

Lab Sample ID: 180-5219-11

Matrix: SET, Dissolved

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 13:31	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 13:31	1
Methylene Chloride	**8.9**	**B**	1.0	0.15	ug/L			11/06/11 13:31	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 13:31	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 13:31	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 13:31	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 13:31	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 13:31	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 13:31	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 13:31	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 13:31	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 13:31	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 13:31	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 13:31	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 13:31	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 13:31	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 13:31	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 13:31	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 13:31	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 13:31	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 13:31	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 13:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 13:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/06/11 13:31*	*1*
Toluene-d8 (Surr)	*95*		*71 - 118*		*11/06/11 13:31*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 118*		*11/06/11 13:31*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*11/06/11 13:31*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:10	11/02/11 18:38	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 18:38	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 18:38	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:10	11/02/11 18:38	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:10	11/02/11 18:38	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*43*		*23 - 112*	*11/01/11 09:10*	*11/02/11 18:38*	*1*
2-Fluorobiphenyl	*36*		*19 - 107*	*11/01/11 09:10*	*11/02/11 18:38*	*1*
Terphenyl-d14	*29*		*10 - 132*	*11/01/11 09:10*	*11/02/11 18:38*	*1*
2,4,6-Tribromophenol	*49*		*16 - 122*	*11/01/11 09:10*	*11/02/11 18:38*	*1*
2-Fluorophenol	*41*		*10 - 111*	*11/01/11 09:10*	*11/02/11 18:38*	*1*
Phenol-d5	*41*		*15 - 112*	*11/01/11 09:10*	*11/02/11 18:38*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 13:36	1
Chlordane (technical)	ND		0.012	0.0016	ug/L		10/27/11 13:35	10/31/11 13:36	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU2-GS

Date Collected: 10/27/11 14:00
Date Received: 10/27/11 12:15

Lab Sample ID: 180-5219-11

Matrix: SET, Dissolved

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 13:36	1
gamma-BHC (Lindane)	**0.0027**	**p**	0.0012	0.00075	ug/L		10/27/11 13:35	10/31/11 13:36	1
gamma-Chlordane	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 13:36	1
Heptachlor	ND		0.0012	0.00093	ug/L		10/27/11 13:35	10/31/11 13:36	1
Heptachlor epoxide	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 13:36	1
Methoxychlor	ND		0.0024	0.00086	ug/L		10/27/11 13:35	10/31/11 13:36	1
Toxaphene	ND		0.094	0.018	ug/L		10/27/11 13:35	10/31/11 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:36*	*1*
Tetrachloro-m-xylene	*80*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:36*	*1*
DCB Decachlorobiphenyl (Surr)	*79*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:36*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:36*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0094	0.0024	ug/L		10/27/11 13:35	10/28/11 22:36	1
PCB-1221	ND		0.0094	0.0023	ug/L		10/27/11 13:35	10/28/11 22:36	1
PCB-1232	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 22:36	1
PCB-1242	ND		0.0094	0.0018	ug/L		10/27/11 13:35	10/28/11 22:36	1
PCB-1248	ND		0.0094	0.0021	ug/L		10/27/11 13:35	10/28/11 22:36	1
PCB-1254	ND		0.0094	0.0022	ug/L		10/27/11 13:35	10/28/11 22:36	1
PCB-1260	ND		0.0094	0.0013	ug/L		10/27/11 13:35	10/28/11 22:36	1
Polychlorinated biphenyls, Total	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*47 - 150*	*10/27/11 13:35*	*10/28/11 22:36*	*1*
DCB Decachlorobiphenyl (Surr)	*85*		*50 - 140*	*10/27/11 13:35*	*10/28/11 22:36*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		10/27/11 16:00	10/30/11 15:55	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		10/27/11 16:00	10/30/11 15:55	20
Dalapon	ND		4.7	0.65	ug/L		10/27/11 16:00	10/30/11 15:55	20
Dinoseb	ND		0.85	0.12	ug/L		10/27/11 16:00	10/30/11 15:55	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*36*		*32 - 140*	*10/27/11 16:00*	*10/30/11 15:55*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.33**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 19:56	1
Arsenic	**3.0**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 19:56	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 19:56	1
Boron	**33**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 19:56	1
Barium	**45**		10	0.098	ug/L		11/09/11 10:44	11/11/11 19:56	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 19:56	1
Chromium	**1.7**	**J**	2.0	0.54	ug/L		11/09/11 10:44	11/11/11 19:56	1
Calcium	**37000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 19:56	1
Cobalt	**0.24**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 19:56	1
Copper	**1.3**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 19:56	1
Iron	**16**	**J**	50	6.1	ug/L		11/09/11 10:44	11/11/11 19:56	1

Client Sample ID: CH-2011-MU2-GS

Lab Sample ID: 180-5219-11

Date Collected: 10/27/11 14:00

Matrix: SET, Dissolved

Date Received: 10/27/11 12:15

Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.17	J B	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 19:56	1
Manganese	190		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 19:56	1
Nickel	0.54	J	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 19:56	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 19:56	1
Potassium	1700	B	100	5.8	ug/L		11/09/11 10:44	11/11/11 19:56	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 19:56	1
Magnesium	9400		100	1.2	ug/L		11/09/11 10:44	11/11/11 19:56	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 19:56	1
Zinc	6.3		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 19:56	1
Sodium	7500		100	3.8	ug/L		11/09/11 10:44	11/11/11 19:56	1
Vanadium	0.79	J B	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 19:56	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	1.7	B	0.10	0.033	mg/L		11/04/11 13:00	11/08/11 12:34	1
pH	7.66	HF	0.100	0.100	SU			10/28/11 12:25	1
Total Dissolved Solids	150		10	10	mg/L			10/27/11 15:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.34		0.050	0.043	mg/L			10/27/11 16:24	1
Fluoride	0.078	B	0.050	0.014	mg/L			10/27/11 16:24	1
Chloride	13		1.0	0.20	mg/L			10/27/11 16:24	1
Sulfate	22		1.0	0.21	mg/L			10/27/11 16:24	1
Cyanide, Non-amenable	0.10		0.050	0.025	mg/L		11/03/11 13:42	11/03/11 16:47	5
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 13:31	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 17:23	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample ID: CH-2011-MU3-GN

Lab Sample ID: 180-5219-12

Date Collected: 10/27/11 15:00

Matrix: SET, Dissolved

Date Received: 10/27/11 12:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 13:55	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 13:55	1
Methylene Chloride	6.3	B	1.0	0.15	ug/L			11/06/11 13:55	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 13:55	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 13:55	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 13:55	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 13:55	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 13:55	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 13:55	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 13:55	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 13:55	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 13:55	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 13:55	1

Client Sample ID: CH-2011-MU3-GN

Lab Sample ID: 180-5219-12

Date Collected: 10/27/11 15:00

Matrix: SET, Dissolved

Date Received: 10/27/11 12:15

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 13:55	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 13:55	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 13:55	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 13:55	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 13:55	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 13:55	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 13:55	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 13:55	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 13:55	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 13:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 13:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*64 - 135*		*11/06/11 13:55*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*11/06/11 13:55*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 118*		*11/06/11 13:55*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*11/06/11 13:55*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.97	0.087	ug/L		11/01/11 09:10	11/02/11 19:01	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 19:01	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 19:01	1
Hexachlorocyclopentadiene	ND		0.97	0.050	ug/L		11/01/11 09:10	11/02/11 19:01	1
Pentachlorophenol	ND		0.97	0.064	ug/L		11/01/11 09:10	11/02/11 19:01	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*62*		*23 - 112*	*11/01/11 09:10*	*11/02/11 19:01*	*1*
2-Fluorobiphenyl	*53*		*19 - 107*	*11/01/11 09:10*	*11/02/11 19:01*	*1*
Terphenyl-d14	*37*		*10 - 132*	*11/01/11 09:10*	*11/02/11 19:01*	*1*
2,4,6-Tribromophenol	*70*		*16 - 122*	*11/01/11 09:10*	*11/02/11 19:01*	*1*
2-Fluorophenol	*62*		*10 - 111*	*11/01/11 09:10*	*11/02/11 19:01*	*1*
Phenol-d5	*61*		*15 - 112*	*11/01/11 09:10*	*11/02/11 19:01*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0062	0.0047	ug/L		11/01/11 12:30	11/03/11 20:51	5
Chlordane (technical)	ND		0.060	0.0079	ug/L		11/01/11 12:30	11/03/11 20:51	5
Endrin	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 20:51	5
gamma-BHC (Lindane)	ND		0.0062	0.0038	ug/L		11/01/11 12:30	11/03/11 20:51	5
gamma-Chlordane	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 20:51	5
Heptachlor	ND		0.0062	0.0047	ug/L		11/01/11 12:30	11/03/11 20:51	5
Heptachlor epoxide	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 20:51	5
Methoxychlor	ND		0.012	0.0043	ug/L		11/01/11 12:30	11/03/11 20:51	5
Toxaphene	ND		0.48	0.089	ug/L		11/01/11 12:30	11/03/11 20:51	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*	*X*	*60 - 111*	*11/01/11 12:30*	*11/03/11 20:51*	*5*
Tetrachloro-m-xylene	*83*		*60 - 111*	*11/01/11 12:30*	*11/03/11 20:51*	*5*
DCB Decachlorobiphenyl (Surr)	*45*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 20:51*	*5*
DCB Decachlorobiphenyl (Surr)	*47*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 20:51*	*5*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN

Date Collected: 10/27/11 15:00
Date Received: 10/27/11 12:15

Lab Sample ID: 180-5219-12

Matrix: SET, Dissolved

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.048	0.012	ug/L		11/01/11 12:30	11/03/11 21:49	5
PCB-1221	ND		0.048	0.012	ug/L		11/01/11 12:30	11/03/11 21:49	5
PCB-1232	ND		0.048	0.014	ug/L		11/01/11 12:30	11/03/11 21:49	5
PCB-1242	ND		0.048	0.0088	ug/L		11/01/11 12:30	11/03/11 21:49	5
PCB-1248	ND		0.048	0.011	ug/L		11/01/11 12:30	11/03/11 21:49	5
PCB-1254	ND		0.048	0.011	ug/L		11/01/11 12:30	11/03/11 21:49	5
PCB-1260	ND		0.048	0.0065	ug/L		11/01/11 12:30	11/03/11 21:49	5
Polychlorinated biphenyls, Total	ND		0.048	0.014	ug/L		11/01/11 12:30	11/03/11 21:49	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*103*		*47 - 150*	*11/01/11 12:30*	*11/03/11 21:49*	*5*
DCB Decachlorobiphenyl (Surr)	*106*		*50 - 140*	*11/01/11 12:30*	*11/03/11 21:49*	*5*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		11/01/11 16:45	11/05/11 14:43	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		11/01/11 16:45	11/05/11 14:43	20
Dalapon	ND	*	4.7	0.65	ug/L		11/01/11 16:45	11/05/11 14:43	20
Dinoseb	ND		0.85	0.12	ug/L		11/01/11 16:45	11/05/11 14:43	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*43*		*32 - 140*	*11/01/11 16:45*	*11/05/11 14:19*	*20*
2,4-Dichlorophenylacetic acid	*41*		*32 - 140*	*11/01/11 16:45*	*11/05/11 14:43*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.31**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:00	1
Arsenic	**2.2**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 20:00	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 20:00	1
Boron	**28**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 20:00	1
Barium	**41**		10	0.098	ug/L		11/09/11 10:44	11/11/11 20:00	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 20:00	1
Chromium	**1.9**	**J**	2.0	0.54	ug/L		11/09/11 10:44	11/11/11 20:00	1
Calcium	**35000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 20:00	1
Cobalt	**0.14**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 20:00	1
Copper	**0.65**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 20:00	1
Iron	**9.3**	**J**	50	6.1	ug/L		11/09/11 10:44	11/11/11 20:00	1
Lead	**0.15**	**J B**	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:00	1
Manganese	**220**		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 20:00	1
Nickel	**0.27**	**J**	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 20:00	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 20:00	1
Potassium	**1800**	**B**	100	5.8	ug/L		11/09/11 10:44	11/11/11 20:00	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 20:00	1
Magnesium	**9600**		100	1.2	ug/L		11/09/11 10:44	11/11/11 20:00	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 20:00	1
Zinc	**5.2**		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 20:00	1
Sodium	**7300**		100	3.8	ug/L		11/09/11 10:44	11/11/11 20:00	1
Vanadium	ND		1.0	0.082	ug/L		11/09/11 10:44	11/11/11 20:00	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:27	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GN

Lab Sample ID: 180-5219-12

Date Collected: 10/27/11 15:00
Matrix: SET, Dissolved
Date Received: 10/27/11 12:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**1.9**	**B**	0.10	0.033	mg/L		11/04/11 13:00	11/08/11 12:35	1
pH	**7.72**	**HF**	0.100	0.100	SU			10/28/11 12:28	1
Total Dissolved Solids	**190**		10	10	mg/L			10/28/11 10:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.36**		0.050	0.043	mg/L			10/27/11 16:39	1
Fluoride	**0.30**	**B**	0.050	0.014	mg/L			10/27/11 16:39	1
Chloride	**15**		1.0	0.20	mg/L			10/27/11 16:39	1
Sulfate	**22**		1.0	0.21	mg/L			10/27/11 16:39	1
Cyanide, Non-amenable	**0.40**		0.050	0.025	mg/L		11/04/11 16:50	11/04/11 17:42	5
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 13:32	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 17:42	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample ID: CH-2011-MU3-GS

Lab Sample ID: 180-5219-13

Date Collected: 10/28/11 14:00
Matrix: SET, Dissolved
Date Received: 10/28/11 14:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 14:19	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 14:19	1
Methylene Chloride	**8.8**	**B**	1.0	0.15	ug/L			11/06/11 14:19	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 14:19	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 14:19	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 14:19	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 14:19	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 14:19	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 14:19	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 14:19	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 14:19	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 14:19	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 14:19	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 14:19	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 14:19	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 14:19	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 14:19	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 14:19	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 14:19	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 14:19	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 14:19	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 14:19	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 14:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 135*		*11/06/11 14:19*	*1*
Toluene-d8 (Surr)	*96*		*71 - 118*		*11/06/11 14:19*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 118*		*11/06/11 14:19*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 128*		*11/06/11 14:19*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/28/11 14:00
Date Received: 10/28/11 14:45

Lab Sample ID: 180-5219-13

Matrix: SET, Dissolved

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:14	11/02/11 19:24	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:14	11/02/11 19:24	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:14	11/02/11 19:24	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:14	11/02/11 19:24	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:14	11/02/11 19:24	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:14	11/02/11 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*48*		*23 - 112*	*11/01/11 09:14*	*11/02/11 19:24*	*1*
2-Fluorobiphenyl	*44*		*19 - 107*	*11/01/11 09:14*	*11/02/11 19:24*	*1*
Terphenyl-d14	*38*		*10 - 132*	*11/01/11 09:14*	*11/02/11 19:24*	*1*
2,4,6-Tribromophenol	*63*		*16 - 122*	*11/01/11 09:14*	*11/02/11 19:24*	*1*
2-Fluorophenol	*50*		*10 - 111*	*11/01/11 09:14*	*11/02/11 19:24*	*1*
Phenol-d5	*52*		*15 - 112*	*11/01/11 09:14*	*11/02/11 19:24*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0062	0.0047	ug/L		11/01/11 12:30	11/03/11 21:10	5
Chlordane (technical)	ND		0.060	0.0079	ug/L		11/01/11 12:30	11/03/11 21:10	5
Endrin	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 21:10	5
gamma-BHC (Lindane)	ND		0.0062	0.0038	ug/L		11/01/11 12:30	11/03/11 21:10	5
gamma-Chlordane	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 21:10	5
Heptachlor	ND		0.0062	0.0047	ug/L		11/01/11 12:30	11/03/11 21:10	5
Heptachlor epoxide	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 21:10	5
Methoxychlor	ND		0.012	0.0043	ug/L		11/01/11 12:30	11/03/11 21:10	5
Toxaphene	ND		0.48	0.089	ug/L		11/01/11 12:30	11/03/11 21:10	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*60 - 111*	*11/01/11 12:30*	*11/03/11 21:10*	*5*
Tetrachloro-m-xylene	*93*		*60 - 111*	*11/01/11 12:30*	*11/03/11 21:10*	*5*
DCB Decachlorobiphenyl (Surr)	*46*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 21:10*	*5*
DCB Decachlorobiphenyl (Surr)	*51*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 21:10*	*5*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.048	0.012	ug/L		11/01/11 12:30	11/03/11 22:19	5
PCB-1221	ND		0.048	0.012	ug/L		11/01/11 12:30	11/03/11 22:19	5
PCB-1232	ND		0.048	0.014	ug/L		11/01/11 12:30	11/03/11 22:19	5
PCB-1242	ND		0.048	0.0088	ug/L		11/01/11 12:30	11/03/11 22:19	5
PCB-1248	ND		0.048	0.011	ug/L		11/01/11 12:30	11/03/11 22:19	5
PCB-1254	ND		0.048	0.011	ug/L		11/01/11 12:30	11/03/11 22:19	5
PCB-1260	ND		0.048	0.0065	ug/L		11/01/11 12:30	11/03/11 22:19	5
Polychlorinated biphenyls, Total	ND		0.048	0.014	ug/L		11/01/11 12:30	11/03/11 22:19	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*102*		*47 - 150*	*11/01/11 12:30*	*11/03/11 22:19*	*5*
DCB Decachlorobiphenyl (Surr)	*106*		*50 - 140*	*11/01/11 12:30*	*11/03/11 22:19*	*5*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		11/01/11 16:45	11/05/11 15:08	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		11/01/11 16:45	11/05/11 15:08	20

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS

Date Collected: 10/28/11 14:00
Date Received: 10/28/11 14:45

Lab Sample ID: 180-5219-13

Matrix: SET, Dissolved

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dalapon	ND	*	4.7	0.65	ug/L		11/01/11 16:45	11/05/11 15:08	20
Dinoseb	ND		0.85	0.12	ug/L		11/01/11 16:45	11/05/11 15:08	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*45*		*32 - 140*	*11/01/11 16:45*	*11/05/11 14:43*	*20*
2,4-Dichlorophenylacetic acid	*39*		*32 - 140*	*11/01/11 16:45*	*11/05/11 15:08*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.5**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:19	1
Arsenic	**3.4**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 20:19	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 20:19	1
Boron	**28**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 20:19	1
Barium	**42**		10	0.098	ug/L		11/09/11 10:44	11/11/11 20:19	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 20:19	1
Chromium	**1.4**	**J**	2.0	0.54	ug/L		11/09/11 10:44	11/11/11 20:19	1
Calcium	**36000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 20:19	1
Cobalt	**0.15**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 20:19	1
Copper	**1.1**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 20:19	1
Iron	**62**		50	6.1	ug/L		11/09/11 10:44	11/11/11 20:19	1
Lead	**0.13**	**J B**	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:19	1
Manganese	**220**		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 20:19	1
Nickel	**0.35**	**J**	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 20:19	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 20:19	1
Potassium	**1700**	**B**	100	5.8	ug/L		11/09/11 10:44	11/11/11 20:19	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 20:19	1
Magnesium	**9600**		100	1.2	ug/L		11/09/11 10:44	11/11/11 20:19	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 20:19	1
Zinc	**6.2**		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 20:19	1
Sodium	**7600**		100	3.8	ug/L		11/09/11 10:44	11/11/11 20:19	1
Vanadium	**0.59**	**J B**	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 20:19	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**2.6**	**B**	0.10	0.033	mg/L		11/08/11 09:30	11/10/11 12:06	1
pH	**7.43**	**HF**	0.100	0.100	SU			10/29/11 13:06	1
Total Dissolved Solids	**140**		10	10	mg/L			10/29/11 13:51	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.29**		0.050	0.043	mg/L			10/28/11 14:46	1
Fluoride	**0.082**	**B**	0.050	0.014	mg/L			10/28/11 14:46	1
Chloride	**14**		1.0	0.20	mg/L			10/28/11 14:46	1
Sulfate	**23**		1.0	0.21	mg/L			10/28/11 14:46	1
Cyanide, Non-amenable	**0.17**		0.050	0.025	mg/L		11/04/11 16:50	11/04/11 17:42	5
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 13:54	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 17:42	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS(DUP)

Lab Sample ID: 180-5219-14

Date Collected: 10/28/11 14:10
Matrix: SET, Dissolved
Date Received: 10/28/11 14:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 15:11	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 15:11	1
Methylene Chloride	**8.8**	**B**	1.0	0.15	ug/L			11/06/11 15:11	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 15:11	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 15:11	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 15:11	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 15:11	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 15:11	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 15:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 15:11	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 15:11	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 15:11	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 15:11	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 15:11	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 15:11	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 15:11	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 15:11	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 15:11	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 15:11	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 15:11	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 15:11	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 15:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 15:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*64 - 135*		*11/06/11 15:11*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*11/06/11 15:11*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*		*11/06/11 15:11*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*11/06/11 15:11*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.97	0.087	ug/L		11/01/11 09:14	11/02/11 19:46	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:14	11/02/11 19:46	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:14	11/02/11 19:46	1
Hexachlorocyclopentadiene	ND		0.97	0.050	ug/L		11/01/11 09:14	11/02/11 19:46	1
Pentachlorophenol	ND		0.97	0.064	ug/L		11/01/11 09:14	11/02/11 19:46	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:14	11/02/11 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*62*		*23 - 112*	*11/01/11 09:14*	*11/02/11 19:46*	*1*
2-Fluorobiphenyl	*55*		*19 - 107*	*11/01/11 09:14*	*11/02/11 19:46*	*1*
Terphenyl-d14	*47*		*10 - 132*	*11/01/11 09:14*	*11/02/11 19:46*	*1*
2,4,6-Tribromophenol	*81*		*16 - 122*	*11/01/11 09:14*	*11/02/11 19:46*	*1*
2-Fluorophenol	*66*		*10 - 111*	*11/01/11 09:14*	*11/02/11 19:46*	*1*
Phenol-d5	*66*		*15 - 112*	*11/01/11 09:14*	*11/02/11 19:46*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0061	0.0046	ug/L		11/01/11 12:30	11/03/11 21:29	5
Chlordane (technical)	ND		0.059	0.0078	ug/L		11/01/11 12:30	11/03/11 21:29	5

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU3-GS(DUP)

Date Collected: 10/28/11 14:10
Date Received: 10/28/11 14:45

Lab Sample ID: 180-5219-14

Matrix: SET, Dissolved

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	ND		0.0061	0.0045	ug/L		11/01/11 12:30	11/03/11 21:29	5
gamma-BHC (Lindane)	**0.0049**	**J**	0.0061	0.0038	ug/L		11/01/11 12:30	11/03/11 21:29	5
gamma-Chlordane	ND		0.0061	0.0045	ug/L		11/01/11 12:30	11/03/11 21:29	5
Heptachlor	ND		0.0061	0.0047	ug/L		11/01/11 12:30	11/03/11 21:29	5
Heptachlor epoxide	ND		0.0061	0.0046	ug/L		11/01/11 12:30	11/03/11 21:29	5
Methoxychlor	ND		0.012	0.0043	ug/L		11/01/11 12:30	11/03/11 21:29	5
Toxaphene	ND		0.47	0.088	ug/L		11/01/11 12:30	11/03/11 21:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*60 - 111*	*11/01/11 12:30*	*11/03/11 21:29*	*5*
Tetrachloro-m-xylene	*78*		*60 - 111*	*11/01/11 12:30*	*11/03/11 21:29*	*5*
DCB Decachlorobiphenyl (Surr)	*41*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 21:29*	*5*
DCB Decachlorobiphenyl (Surr)	*46*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 21:29*	*5*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.047	0.012	ug/L		11/01/11 12:30	11/03/11 22:48	5
PCB-1221	ND		0.047	0.012	ug/L		11/01/11 12:30	11/03/11 22:48	5
PCB-1232	ND		0.047	0.014	ug/L		11/01/11 12:30	11/03/11 22:48	5
PCB-1242	ND		0.047	0.0088	ug/L		11/01/11 12:30	11/03/11 22:48	5
PCB-1248	ND		0.047	0.011	ug/L		11/01/11 12:30	11/03/11 22:48	5
PCB-1254	ND		0.047	0.011	ug/L		11/01/11 12:30	11/03/11 22:48	5
PCB-1260	ND		0.047	0.0064	ug/L		11/01/11 12:30	11/03/11 22:48	5
Polychlorinated biphenyls, Total	ND		0.047	0.014	ug/L		11/01/11 12:30	11/03/11 22:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*97*		*47 - 150*	*11/01/11 12:30*	*11/03/11 22:48*	*5*
DCB Decachlorobiphenyl (Surr)	*99*		*50 - 140*	*11/01/11 12:30*	*11/03/11 22:48*	*5*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		11/01/11 16:45	11/05/11 15:32	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		11/01/11 16:45	11/05/11 15:32	20
Dalapon	ND	*	4.7	0.65	ug/L		11/01/11 16:45	11/05/11 15:32	20
Dinoseb	ND		0.85	0.12	ug/L		11/01/11 16:45	11/05/11 15:32	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*44*		*32 - 140*	*11/01/11 16:45*	*11/05/11 15:08*	*20*
2,4-Dichlorophenylacetic acid	*41*		*32 - 140*	*11/01/11 16:45*	*11/05/11 15:32*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.54**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:23	1
Arsenic	**2.5**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 20:23	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 20:23	1
Boron	**29**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 20:23	1
Barium	**43**		10	0.098	ug/L		11/09/11 10:44	11/11/11 20:23	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 20:23	1
Chromium	**1.6**	**J**	2.0	0.54	ug/L		11/09/11 10:44	11/11/11 20:23	1
Calcium	**35000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 20:23	1
Cobalt	**0.17**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 20:23	1
Copper	**0.76**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 20:23	1

Client Sample ID: CH-2011-MU3-GS(DUP)

Lab Sample ID: 180-5219-14

Date Collected: 10/28/11 14:10

Matrix: SET, Dissolved

Date Received: 10/28/11 14:45

Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	220		50	6.1	ug/L		11/09/11 10:44	11/11/11 20:23	1
Lead	0.061	J B	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:23	1
Manganese	220		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 20:23	1
Nickel	0.32	J	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 20:23	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 20:23	1
Potassium	1700	B	100	5.8	ug/L		11/09/11 10:44	11/11/11 20:23	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 20:23	1
Magnesium	9700		100	1.2	ug/L		11/09/11 10:44	11/11/11 20:23	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 20:23	1
Zinc	7.6		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 20:23	1
Sodium	7600		100	3.8	ug/L		11/09/11 10:44	11/11/11 20:23	1
Vanadium	0.16	J B	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 20:23	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	2.5	B	0.10	0.033	mg/L		11/08/11 09:30	11/10/11 12:07	1
pH	7.45	HF	0.100	0.100	SU			10/29/11 13:09	1
Total Dissolved Solids	150		10	10	mg/L			10/29/11 13:51	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.27		0.050	0.043	mg/L			10/28/11 15:01	1
Fluoride	0.076	B	0.050	0.014	mg/L			10/28/11 15:01	1
Chloride	14		1.0	0.20	mg/L			10/28/11 15:01	1
Sulfate	23		1.0	0.21	mg/L			10/28/11 15:01	1
Cyanide, Non-amenable	0.073		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:29	1
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 13:55	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 17:29	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample ID: CH-2011-MU1-GNU

Lab Sample ID: 180-5219-15

Date Collected: 10/28/11 14:20

Matrix: SET, Dissolved

Date Received: 10/28/11 14:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 15:36	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 15:36	1
Methylene Chloride	9.2	B	1.0	0.15	ug/L			11/06/11 15:36	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 15:36	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 15:36	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 15:36	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 15:36	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 15:36	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 15:36	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 15:36	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 15:36	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 15:36	1

Client Sample ID: CH-2011-MU1-GNU

Lab Sample ID: 180-5219-15

Date Collected: 10/28/11 14:20

Matrix: SET, Dissolved

Date Received: 10/28/11 14:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**0.25**	**J**	1.0	0.15	ug/L			11/06/11 15:36	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 15:36	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 15:36	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 15:36	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 15:36	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 15:36	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 15:36	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 15:36	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 15:36	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 15:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 15:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/06/11 15:36*	*1*
Toluene-d8 (Surr)	*98*		*71 - 118*		*11/06/11 15:36*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 118*		*11/06/11 15:36*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*11/06/11 15:36*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.98	0.087	ug/L		11/01/11 09:14	11/02/11 20:09	1
Benzo[a]pyrene	ND		0.20	0.013	ug/L		11/01/11 09:14	11/02/11 20:09	1
Bis(2-ethylhexyl) phthalate	ND		2.0	1.2	ug/L		11/01/11 09:14	11/02/11 20:09	1
Hexachlorocyclopentadiene	ND		0.98	0.051	ug/L		11/01/11 09:14	11/02/11 20:09	1
Pentachlorophenol	ND		0.98	0.065	ug/L		11/01/11 09:14	11/02/11 20:09	1
Phenol	ND		0.20	0.057	ug/L		11/01/11 09:14	11/02/11 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*53*		*23 - 112*	*11/01/11 09:14*	*11/02/11 20:09*	*1*
2-Fluorobiphenyl	*48*		*19 - 107*	*11/01/11 09:14*	*11/02/11 20:09*	*1*
Terphenyl-d14	*33*		*10 - 132*	*11/01/11 09:14*	*11/02/11 20:09*	*1*
2,4,6-Tribromophenol	*72*		*16 - 122*	*11/01/11 09:14*	*11/02/11 20:09*	*1*
2-Fluorophenol	*52*		*10 - 111*	*11/01/11 09:14*	*11/02/11 20:09*	*1*
Phenol-d5	*53*		*15 - 112*	*11/01/11 09:14*	*11/02/11 20:09*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0061	0.0046	ug/L		11/01/11 12:30	11/03/11 21:48	5
Chlordane (technical)	ND		0.059	0.0078	ug/L		11/01/11 12:30	11/03/11 21:48	5
Endrin	ND		0.0061	0.0045	ug/L		11/01/11 12:30	11/03/11 21:48	5
gamma-BHC (Lindane)	ND		0.0061	0.0038	ug/L		11/01/11 12:30	11/03/11 21:48	5
gamma-Chlordane	ND		0.0061	0.0045	ug/L		11/01/11 12:30	11/03/11 21:48	5
Heptachlor	ND		0.0061	0.0047	ug/L		11/01/11 12:30	11/03/11 21:48	5
Heptachlor epoxide	ND		0.0061	0.0046	ug/L		11/01/11 12:30	11/03/11 21:48	5
Methoxychlor	ND		0.012	0.0043	ug/L		11/01/11 12:30	11/03/11 21:48	5
Toxaphene	ND		0.47	0.088	ug/L		11/01/11 12:30	11/03/11 21:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*	*p X*	*60 - 111*	*11/01/11 12:30*	*11/03/11 21:48*	*5*
Tetrachloro-m-xylene	*83*		*60 - 111*	*11/01/11 12:30*	*11/03/11 21:48*	*5*
DCB Decachlorobiphenyl (Surr)	*44*	*X*	*56 - 122*	*11/01/11 12:30*	*11/03/11 21:48*	*5*

Client Sample ID: CH-2011-MU1-GNU

Lab Sample ID: 180-5219-15

Date Collected: 10/28/11 14:20

Matrix: SET, Dissolved

Date Received: 10/28/11 14:45

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	46	X	56 - 122	11/01/11 12:30	11/03/11 21:48	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.047	0.012	ug/L		11/01/11 12:30	11/03/11 23:17	5
PCB-1221	ND		0.047	0.012	ug/L		11/01/11 12:30	11/03/11 23:17	5
PCB-1232	ND		0.047	0.014	ug/L		11/01/11 12:30	11/03/11 23:17	5
PCB-1242	ND		0.047	0.0088	ug/L		11/01/11 12:30	11/03/11 23:17	5
PCB-1248	ND		0.047	0.011	ug/L		11/01/11 12:30	11/03/11 23:17	5
PCB-1254	ND		0.047	0.011	ug/L		11/01/11 12:30	11/03/11 23:17	5
PCB-1260	ND		0.047	0.0064	ug/L		11/01/11 12:30	11/03/11 23:17	5
Polychlorinated biphenyls, Total	ND		0.047	0.014	ug/L		11/01/11 12:30	11/03/11 23:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		47 - 150	11/01/11 12:30	11/03/11 23:17	5
DCB Decachlorobiphenyl (Surr)	99		50 - 140	11/01/11 12:30	11/03/11 23:17	5

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		11/01/11 16:45	11/05/11 15:57	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		11/01/11 16:45	11/05/11 15:57	20
Dalapon	ND	*	4.7	0.65	ug/L		11/01/11 16:45	11/05/11 15:57	20
Dinoseb	ND		0.85	0.12	ug/L		11/01/11 16:45	11/05/11 15:57	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	33		32 - 140	11/01/11 16:45	11/05/11 15:32	20
2,4-Dichlorophenylacetic acid	33		32 - 140	11/01/11 16:45	11/05/11 15:57	20

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.36**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:28	1
Arsenic	**2.7**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 20:28	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 20:28	1
Boron	**55**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 20:28	1
Barium	**59**		10	0.098	ug/L		11/09/11 10:44	11/11/11 20:28	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 20:28	1
Chromium	**1.8**	**J**	2.0	0.54	ug/L		11/09/11 10:44	11/11/11 20:28	1
Calcium	**33000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 20:28	1
Cobalt	**0.37**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 20:28	1
Copper	**0.54**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 20:28	1
Iron	**70**		50	6.1	ug/L		11/09/11 10:44	11/11/11 20:28	1
Lead	**0.21**	**J B**	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:28	1
Manganese	**250**		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 20:28	1
Nickel	**0.53**	**J**	1.0	0.17	ug/L		11/09/11 10:44	11/11/11 20:28	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 20:28	1
Potassium	**2900**	**B**	100	5.8	ug/L		11/09/11 10:44	11/11/11 20:28	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 20:28	1
Magnesium	**10000**		100	1.2	ug/L		11/09/11 10:44	11/11/11 20:28	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 20:28	1
Zinc	**3.2**	**J**	5.0	0.96	ug/L		11/09/11 10:44	11/11/11 20:28	1
Sodium	**8000**		100	3.8	ug/L		11/09/11 10:44	11/11/11 20:28	1
Vanadium	**0.70**	**J B**	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 20:28	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNU

Lab Sample ID: 180-5219-15

Date Collected: 10/28/11 14:20
Matrix: SET, Dissolved
Date Received: 10/28/11 14:45

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**13**	**B**	0.50	0.16	mg/L		11/08/11 09:30	11/10/11 12:09	5
pH	**7.47**	**HF**	0.100	0.100	SU			10/29/11 13:12	1
Total Dissolved Solids	**140**		10	10	mg/L			10/29/11 13:51	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.54**		0.050	0.043	mg/L			10/28/11 15:16	1
Fluoride	**0.10**	**B**	0.050	0.014	mg/L			10/28/11 15:16	1
Chloride	**14**		1.0	0.20	mg/L			10/28/11 15:16	1
Sulfate	**21**		1.0	0.21	mg/L			10/28/11 15:16	1
Cyanide, Non-amenable	**1.7**		1.0	0.50	mg/L		11/04/11 16:50	11/04/11 18:18	100
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 13:56	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 18:18	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Client Sample ID: CH-2011-MU1-GNL

Lab Sample ID: 180-5219-16

Date Collected: 10/28/11 14:30
Matrix: SET, Dissolved
Date Received: 10/28/11 14:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 16:00	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 16:00	1
Methylene Chloride	**6.6**	**B**	1.0	0.15	ug/L			11/06/11 16:00	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 16:00	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 16:00	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 16:00	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 16:00	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 16:00	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 16:00	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 16:00	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 16:00	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 16:00	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 16:00	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 16:00	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 16:00	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 16:00	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 16:00	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 16:00	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 16:00	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 16:00	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 16:00	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 16:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 16:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/06/11 16:00*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL

Date Collected: 10/28/11 14:30
Date Received: 10/28/11 14:45

Lab Sample ID: 180-5219-16

Matrix: SET, Dissolved

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		71 - 118		11/06/11 16:00	1
4-Bromofluorobenzene (Surr)	99		70 - 118		11/06/11 16:00	1
Dibromofluoromethane (Surr)	100		70 - 128		11/06/11 16:00	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:14	11/02/11 20:32	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:14	11/02/11 20:32	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:14	11/02/11 20:32	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:14	11/02/11 20:32	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:14	11/02/11 20:32	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:14	11/02/11 20:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	71		23 - 112	11/01/11 09:14	11/02/11 20:32	1
2-Fluorobiphenyl	61		19 - 107	11/01/11 09:14	11/02/11 20:32	1
Terphenyl-d14	31		10 - 132	11/01/11 09:14	11/02/11 20:32	1
2,4,6-Tribromophenol	83		16 - 122	11/01/11 09:14	11/02/11 20:32	1
2-Fluorophenol	67		10 - 111	11/01/11 09:14	11/02/11 20:32	1
Phenol-d5	67		15 - 112	11/01/11 09:14	11/02/11 20:32	1

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0062	0.0047	ug/L		11/01/11 12:30	11/03/11 22:07	5
Chlordane (technical)	ND		0.060	0.0079	ug/L		11/01/11 12:30	11/03/11 22:07	5
Endrin	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 22:07	5
gamma-BHC (Lindane)	ND		0.0062	0.0038	ug/L		11/01/11 12:30	11/03/11 22:07	5
gamma-Chlordane	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 22:07	5
Heptachlor	ND		0.0062	0.0047	ug/L		11/01/11 12:30	11/03/11 22:07	5
Heptachlor epoxide	ND		0.0062	0.0046	ug/L		11/01/11 12:30	11/03/11 22:07	5
Methoxychlor	ND		0.012	0.0043	ug/L		11/01/11 12:30	11/03/11 22:07	5
Toxaphene	ND		0.48	0.089	ug/L		11/01/11 12:30	11/03/11 22:07	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	57	X	60 - 111	11/01/11 12:30	11/03/11 22:07	5
Tetrachloro-m-xylene	85		60 - 111	11/01/11 12:30	11/03/11 22:07	5
DCB Decachlorobiphenyl (Surr)	43	X	56 - 122	11/01/11 12:30	11/03/11 22:07	5
DCB Decachlorobiphenyl (Surr)	47	X	56 - 122	11/01/11 12:30	11/03/11 22:07	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.048	0.012	ug/L		11/01/11 12:30	11/03/11 23:47	5
PCB-1221	ND		0.048	0.012	ug/L		11/01/11 12:30	11/03/11 23:47	5
PCB-1232	ND		0.048	0.014	ug/L		11/01/11 12:30	11/03/11 23:47	5
PCB-1242	ND		0.048	0.0088	ug/L		11/01/11 12:30	11/03/11 23:47	5
PCB-1248	ND		0.048	0.011	ug/L		11/01/11 12:30	11/03/11 23:47	5
PCB-1254	ND		0.048	0.011	ug/L		11/01/11 12:30	11/03/11 23:47	5
PCB-1260	ND		0.048	0.0065	ug/L		11/01/11 12:30	11/03/11 23:47	5
Polychlorinated biphenyls, Total	ND		0.048	0.014	ug/L		11/01/11 12:30	11/03/11 23:47	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	106		47 - 150	11/01/11 12:30	11/03/11 23:47	5

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL

Date Collected: 10/28/11 14:30
Date Received: 10/28/11 14:45

Lab Sample ID: 180-5219-16

Matrix: SET, Dissolved

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*99*		*50 - 140*	*11/01/11 12:30*	*11/03/11 23:47*	*5*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		11/01/11 16:45	11/05/11 16:21	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		11/01/11 16:45	11/05/11 16:21	20
Dalapon	ND	*	4.7	0.65	ug/L		11/01/11 16:45	11/05/11 16:21	20
Dinoseb	ND		0.85	0.12	ug/L		11/01/11 16:45	11/05/11 16:21	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*55*		*32 - 140*	*11/01/11 16:45*	*11/05/11 15:57*	*20*
2,4-Dichlorophenylacetic acid	*54*		*32 - 140*	*11/01/11 16:45*	*11/05/11 16:21*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.98**	**J**	2.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:32	1
Arsenic	**6.1**		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 20:32	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 20:32	1
Boron	**120**	**B**	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 20:32	1
Barium	**65**		10	0.098	ug/L		11/09/11 10:44	11/11/11 20:32	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 20:32	1
Chromium	**2.9**		2.0	0.54	ug/L		11/09/11 10:44	11/11/11 20:32	1
Calcium	**29000**		100	2.8	ug/L		11/09/11 10:44	11/11/11 20:32	1
Cobalt	**0.30**	**J**	0.50	0.026	ug/L		11/09/11 10:44	11/11/11 20:32	1
Copper	**1.2**	**J**	2.0	0.24	ug/L		11/09/11 10:44	11/11/11 20:32	1
Iron	**86**		50	6.1	ug/L		11/09/11 10:44	11/11/11 20:32	1
Lead	**0.82**	**J B**	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 20:32	1
Manganese	**100**		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 20:32	1
Nickel	**1.1**		1.0	0.17	ug/L		11/09/11 10:44	11/11/11 20:32	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 20:32	1
Potassium	**5500**	**B**	100	5.8	ug/L		11/09/11 10:44	11/11/11 20:32	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 20:32	1
Magnesium	**11000**		100	1.2	ug/L		11/09/11 10:44	11/11/11 20:32	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 20:32	1
Zinc	**5.5**		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 20:32	1
Sodium	**9800**		100	3.8	ug/L		11/09/11 10:44	11/11/11 20:32	1
Vanadium	**1.1**	**B**	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 20:32	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**13**	**B**	0.50	0.16	mg/L		11/08/11 09:30	11/10/11 12:10	5
pH	**8.00**	**HF**	0.100	0.100	SU			10/29/11 13:15	1
Total Dissolved Solids	**140**		10	10	mg/L			10/29/11 13:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.34**		0.050	0.043	mg/L			10/28/11 15:31	1
Fluoride	**0.18**	**B**	0.050	0.014	mg/L			10/28/11 15:31	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5219-1

Client Sample ID: CH-2011-MU1-GNL

Lab Sample ID: 180-5219-16

Date Collected: 10/28/11 14:30

Matrix: SET, Dissolved

Date Received: 10/28/11 14:45

General Chemistry - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		1.0	0.20	mg/L			10/28/11 15:31	1
Sulfate	**23**		1.0	0.21	mg/L			10/28/11 15:31	1
Cyanide, Non-amenable	**1.1**		1.0	0.50	mg/L		11/04/11 16:50	11/04/11 18:18	100
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 13:57	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/04/11 18:18	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 18:10	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-19085/1-A
Matrix: Sediment
Analysis Batch: 19093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19085

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.0	0.47	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Bromomethane	ND		5.0	0.74	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Chloroethane	ND		5.0	1.5	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Trichlorofluoromethane	ND		5.0	0.92	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,1-Dichloroethene	ND		5.0	0.85	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Acetone	ND		20	5.0	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Carbon disulfide	ND		5.0	0.51	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Methylene Chloride	ND		5.0	0.67	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
trans-1,2-Dichloroethene	ND		5.0	0.60	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Methyl tert-butyl ether	ND		5.0	0.75	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,1-Dichloroethane	ND		5.0	0.58	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
cis-1,2-Dichloroethene	ND		5.0	0.70	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
cis-1,3-Dichloropropene	ND		5.0	0.68	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
2-Butanone (MEK)	ND		5.0	0.88	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Chloroform	ND		5.0	0.58	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,1,1-Trichloroethane	ND		5.0	0.49	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Carbon tetrachloride	ND		5.0	0.45	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Benzene	ND		5.0	0.68	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
trans-1,3-Dichloropropene	ND		5.0	0.60	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2-Dichloroethane	ND		5.0	0.61	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Trichloroethene	ND		5.0	0.66	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2-Dichloropropane	ND		5.0	0.54	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Bromodichloromethane	ND		5.0	0.56	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.65	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Toluene	ND		5.0	0.73	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,1,2-Trichloroethane	ND		5.0	0.83	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Tetrachloroethene	ND		5.0	0.68	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Dibromochloromethane	ND		5.0	0.71	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2-Dibromoethane	ND		5.0	0.86	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Chlorobenzene	ND		5.0	0.76	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.74	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Ethylbenzene	ND		5.0	0.64	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
m-Xylene & p-Xylene	ND		10	1.5	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
o-Xylene	ND		5.0	0.78	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Xylenes, Total	ND		15	2.2	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Styrene	ND		5.0	0.71	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Bromoform	ND		5.0	0.44	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
N-Propylbenzene	ND		5.0	0.76	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.72	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,3,5-Trimethylbenzene	ND		5.0	0.67	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2,4-Trimethylbenzene	ND		5.0	0.65	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,3-Dichlorobenzene	ND		5.0	0.66	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,4-Dichlorobenzene	ND		5.0	0.64	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2-Dichlorobenzene	ND		5.0	0.80	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.75	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
1,2,4-Trichlorobenzene	ND		5.0	0.88	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Hexachlorobutadiene	ND		5.0	1.1	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Cyclohexane	ND		5.0	0.37	ug/Kg		10/31/11 04:09	10/31/11 06:33	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-19085/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19093 — **Prep Batch: 19085**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		100	7.0	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Vinyl acetate	ND		5.0	0.35	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
n-Butyl alcohol	ND		200	33	ug/Kg		10/31/11 04:09	10/31/11 06:33	1
Hexane	ND		5.0	1.0	ug/Kg		10/31/11 04:09	10/31/11 06:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*52 - 124*	*10/31/11 04:09*	*10/31/11 06:33*	*1*
Toluene-d8 (Surr)	*99*		*72 - 127*	*10/31/11 04:09*	*10/31/11 06:33*	*1*
4-Bromofluorobenzene (Surr)	*87*		*63 - 120*	*10/31/11 04:09*	*10/31/11 06:33*	*1*
Dibromofluoromethane (Surr)	*91*		*68 - 121*	*10/31/11 04:09*	*10/31/11 06:33*	*1*

Lab Sample ID: LCS 180-19085/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19093 — **Prep Batch: 19085**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	40.0	30.7		ug/Kg		77	63 - 124
Bromomethane	40.0	26.4		ug/Kg		66	25 - 150
Chloroethane	40.0	26.6		ug/Kg		67	22 - 150
Trichlorofluoromethane	40.0	29.9		ug/Kg		75	20 - 150
1,1-Dichloroethene	40.0	41.3		ug/Kg		103	59 - 129
Acetone	40.0	28.9		ug/Kg		72	20 - 150
Carbon disulfide	40.0	34.1		ug/Kg		85	50 - 127
Methylene Chloride	40.0	34.4		ug/Kg		86	58 - 127
trans-1,2-Dichloroethene	40.0	42.3		ug/Kg		106	77 - 121
Methyl tert-butyl ether	40.0	30.6		ug/Kg		77	48 - 132
1,1-Dichloroethane	40.0	35.3		ug/Kg		88	66 - 124
cis-1,2-Dichloroethene	40.0	40.8		ug/Kg		102	80 - 118
cis-1,3-Dichloropropene	40.0	30.5		ug/Kg		76	73 - 120
2-Butanone (MEK)	40.0	27.6		ug/Kg		69	35 - 149
Chloroform	40.0	33.0		ug/Kg		83	72 - 120
1,1,1-Trichloroethane	40.0	32.2		ug/Kg		81	67 - 126
Carbon tetrachloride	40.0	29.9		ug/Kg		75	69 - 122
Benzene	40.0	36.0		ug/Kg		90	77 - 120
trans-1,3-Dichloropropene	40.0	27.9	*	ug/Kg		70	74 - 129
1,2-Dichloroethane	40.0	29.2		ug/Kg		73	61 - 127
Trichloroethene	40.0	40.6		ug/Kg		101	76 - 119
1,2-Dichloropropane	40.0	34.4		ug/Kg		86	72 - 122
Bromodichloromethane	40.0	28.2		ug/Kg		70	70 - 125
4-Methyl-2-pentanone (MIBK)	40.0	29.2		ug/Kg		73	44 - 148
Toluene	40.0	38.4		ug/Kg		96	78 - 124
1,1,2-Trichloroethane	40.0	36.8		ug/Kg		92	70 - 128
Tetrachloroethene	40.0	42.8		ug/Kg		107	78 - 129
Dibromochloromethane	40.0	30.4		ug/Kg		76	70 - 132
1,2-Dibromoethane	40.0	32.2		ug/Kg		81	70 - 131
Chlorobenzene	40.0	40.1		ug/Kg		100	79 - 120
1,1,1,2-Tetrachloroethane	40.0	34.9		ug/Kg		87	76 - 124
Ethylbenzene	40.0	38.1		ug/Kg		95	78 - 125
m-Xylene & p-Xylene	80.0	74.3		ug/Kg		93	75 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-19085/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19093 — **Prep Batch: 19085**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	40.0	37.3		ug/Kg		93	83 - 127
Styrene	40.0	36.0		ug/Kg		90	83 - 129
Bromoform	40.0	26.2		ug/Kg		66	53 - 140
Isopropylbenzene	40.0	35.3		ug/Kg		88	70 - 133
N-Propylbenzene	40.0	39.7		ug/Kg		99	80 - 120
1,1,2,2-Tetrachloroethane	40.0	33.2		ug/Kg		83	60 - 139
1,3,5-Trimethylbenzene	40.0	34.1		ug/Kg		85	68 - 133
1,2,4-Trimethylbenzene	40.0	34.2		ug/Kg		86	80 - 121
1,3-Dichlorobenzene	40.0	39.6		ug/Kg		99	75 - 118
1,4-Dichlorobenzene	40.0	39.5		ug/Kg		99	77 - 116
1,2-Dichlorobenzene	40.0	39.4		ug/Kg		99	71 - 124
1,2-Dibromo-3-Chloropropane	40.0	27.8		ug/Kg		69	35 - 136
1,2,4-Trichlorobenzene	40.0	39.9		ug/Kg		100	51 - 136
Hexachlorobutadiene	40.0	42.4		ug/Kg		106	42 - 150
Cyclohexane	40.0	37.0		ug/Kg		93	64 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*52 - 124*
Toluene-d8 (Surr)	*98*		*72 - 127*
4-Bromofluorobenzene (Surr)	*83*		*63 - 120*
Dibromofluoromethane (Surr)	*92*		*68 - 121*

Lab Sample ID: 180-5238-G-6-A MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19093 — **Prep Batch: 19085**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	ND		51.7	39.8		ug/Kg	☼	77	63 - 124	18	27
Bromomethane	ND		51.7	33.9		ug/Kg	☼	66	25 - 150	14	40
Chloroethane	ND		51.7	32.7		ug/Kg	☼	63	22 - 150	16	40
Trichlorofluoromethane	ND		51.7	37.8		ug/Kg	☼	73	20 - 150	16	40
1,1-Dichloroethene	ND		51.7	54.1		ug/Kg	☼	105	59 - 129	23	25
Acetone	ND		51.7	40.7		ug/Kg	☼	79	20 - 150	10	40
Carbon disulfide	ND		51.7	45.3		ug/Kg	☼	88	50 - 127	21	23
Methylene Chloride	ND		51.7	47.3		ug/Kg	☼	91	58 - 127	25	28
trans-1,2-Dichloroethene	ND		51.7	54.7		ug/Kg	☼	106	77 - 121	20	20
Methyl tert-butyl ether	ND		51.7	43.0		ug/Kg	☼	83	48 - 132	23	36
1,1-Dichloroethane	ND		51.7	47.4	F	ug/Kg	☼	92	66 - 124	24	23
cis-1,2-Dichloroethene	ND		51.7	53.9	F	ug/Kg	☼	104	80 - 118	21	20
cis-1,3-Dichloropropene	ND		51.7	39.2		ug/Kg	☼	76	73 - 120	19	20
2-Butanone (MEK)	ND		51.7	39.8		ug/Kg	☼	77	35 - 149	15	36
Chloroform	ND		51.7	43.7		ug/Kg	☼	84	72 - 120	23	25
1,1,1-Trichloroethane	ND		51.7	41.5		ug/Kg	☼	80	67 - 126	20	31
Carbon tetrachloride	ND		51.7	38.8		ug/Kg	☼	75	69 - 122	20	22
Benzene	ND		51.7	48.3	F	ug/Kg	☼	94	77 - 120	21	20
trans-1,3-Dichloropropene	ND	*	51.7	37.6	F	ug/Kg	☼	73	74 - 129	18	20
1,2-Dichloroethane	ND		51.7	39.2		ug/Kg	☼	76	61 - 127	20	23
Trichloroethene	ND		51.7	53.4		ug/Kg	☼	103	76 - 119	20	21
1,2-Dichloropropane	ND		51.7	45.9	F	ug/Kg	☼	89	72 - 122	21	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-5238-G-6-A MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19093 — **Prep Batch: 19085**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromodichloromethane	ND		51.7	36.5		ug/Kg	☼	71	70 - 125	21	21
4-Methyl-2-pentanone (MIBK)	ND		51.7	41.1		ug/Kg	☼	79	44 - 148	17	30
Toluene	ND		51.7	50.3		ug/Kg	☼	97	78 - 124	19	21
1,1,2-Trichloroethane	ND		51.7	50.2		ug/Kg	☼	97	70 - 128	17	22
Tetrachloroethene	ND		51.7	54.3		ug/Kg	☼	105	78 - 129	13	20
Dibromochloromethane	ND		51.7	41.7		ug/Kg	☼	81	70 - 132	18	20
1,2-Dibromoethane	ND		51.7	44.9		ug/Kg	☼	87	70 - 131	17	20
Chlorobenzene	ND		51.7	52.8		ug/Kg	☼	102	79 - 120	19	20
1,1,1,2-Tetrachloroethane	ND		51.7	46.2		ug/Kg	☼	89	76 - 124	19	22
Ethylbenzene	ND		51.7	49.3		ug/Kg	☼	95	78 - 125	20	21
m-Xylene & p-Xylene	ND		103	98.3		ug/Kg	☼	95	75 - 126	20	21
o-Xylene	ND		51.7	49.1		ug/Kg	☼	95	83 - 127	20	20
Styrene	ND		51.7	48.6	F	ug/Kg	☼	94	83 - 129	21	20
Bromoform	ND		51.7	35.2		ug/Kg	☼	68	53 - 140	14	23
Isopropylbenzene	ND		51.7	46.9		ug/Kg	☼	91	70 - 133	19	22
N-Propylbenzene	ND		51.7	53.7		ug/Kg	☼	104	80 - 120	20	20
1,1,2,2-Tetrachloroethane	ND		51.7	47.2		ug/Kg	☼	91	60 - 139	18	24
1,3,5-Trimethylbenzene	ND		51.7	46.2	F	ug/Kg	☼	89	68 - 133	22	21
1,2,4-Trimethylbenzene	ND		51.7	45.9	F	ug/Kg	☼	89	80 - 121	21	20
1,3-Dichlorobenzene	ND		51.7	54.8	F	ug/Kg	☼	106	75 - 118	23	20
1,4-Dichlorobenzene	ND		51.7	54.6	F	ug/Kg	☼	106	77 - 116	23	20
1,2-Dichlorobenzene	ND		51.7	54.9		ug/Kg	☼	106	71 - 124	21	22
1,2-Dibromo-3-Chloropropane	ND		51.7	43.9		ug/Kg	☼	85	35 - 136	21	40
1,2,4-Trichlorobenzene	ND		51.7	55.7		ug/Kg	☼	108	51 - 136	18	40
Hexachlorobutadiene	ND		51.7	56.3		ug/Kg	☼	109	42 - 150	21	40
Cyclohexane	ND		51.7	45.5		ug/Kg	☼	88	64 - 130	12	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*75*		*52 - 124*
Toluene-d8 (Surr)	*96*		*72 - 127*
4-Bromofluorobenzene (Surr)	*85*		*63 - 120*
Dibromofluoromethane (Surr)	*95*		*68 - 121*

Lab Sample ID: 180-5238-H-6-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19093 — **Prep Batch: 19085**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	ND		41.8	33.3		ug/Kg	☼	80	63 - 124
Bromomethane	ND		41.8	29.4		ug/Kg	☼	70	25 - 150
Chloroethane	ND		41.8	27.9		ug/Kg	☼	67	22 - 150
Trichlorofluoromethane	ND		41.8	32.1		ug/Kg	☼	77	20 - 150
1,1-Dichloroethene	ND		41.8	42.9		ug/Kg	☼	103	59 - 129
Acetone	ND		41.8	36.9		ug/Kg	☼	88	20 - 150
Carbon disulfide	ND		41.8	36.6		ug/Kg	☼	88	50 - 127
Methylene Chloride	ND		41.8	36.9		ug/Kg	☼	88	58 - 127
trans-1,2-Dichloroethene	ND		41.8	44.8		ug/Kg	☼	107	77 - 121
Methyl tert-butyl ether	ND		41.8	34.2		ug/Kg	☼	82	48 - 132
1,1-Dichloroethane	ND		41.8	37.4		ug/Kg	☼	89	66 - 124

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-5238-H-6-A MS
Matrix: Sediment
Analysis Batch: 19093

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19085

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	ND		41.8	43.9		ug/Kg	☼	105	80 - 118
cis-1,3-Dichloropropene	ND		41.8	32.3		ug/Kg	☼	77	73 - 120
2-Butanone (MEK)	ND		41.8	34.2		ug/Kg	☼	82	35 - 149
Chloroform	ND		41.8	34.8		ug/Kg	☼	83	72 - 120
1,1,1-Trichloroethane	ND		41.8	33.8		ug/Kg	☼	81	67 - 126
Carbon tetrachloride	ND		41.8	31.8		ug/Kg	☼	76	69 - 122
Benzene	ND		41.8	39.0		ug/Kg	☼	93	77 - 120
trans-1,3-Dichloropropene	ND	*	41.8	31.3		ug/Kg	☼	75	74 - 129
1,2-Dichloroethane	ND		41.8	32.1		ug/Kg	☼	77	61 - 127
Trichloroethene	ND		41.8	43.6		ug/Kg	☼	104	76 - 119
1,2-Dichloropropane	ND		41.8	37.1		ug/Kg	☼	89	72 - 122
Bromodichloromethane	ND		41.8	29.5		ug/Kg	☼	71	70 - 125
4-Methyl-2-pentanone (MIBK)	ND		41.8	34.7		ug/Kg	☼	83	44 - 148
Toluene	ND		41.8	41.5		ug/Kg	☼	99	78 - 124
1,1,2-Trichloroethane	ND		41.8	42.1		ug/Kg	☼	101	70 - 128
Tetrachloroethene	ND		41.8	47.6		ug/Kg	☼	114	78 - 129
Dibromochloromethane	ND		41.8	34.7		ug/Kg	☼	83	70 - 132
1,2-Dibromoethane	ND		41.8	37.8		ug/Kg	☼	91	70 - 131
Chlorobenzene	ND		41.8	43.5		ug/Kg	☼	104	79 - 120
1,1,1,2-Tetrachloroethane	ND		41.8	38.1		ug/Kg	☼	91	76 - 124
Ethylbenzene	ND		41.8	40.3		ug/Kg	☼	96	78 - 125
m-Xylene & p-Xylene	ND		83.6	80.8		ug/Kg	☼	97	75 - 126
o-Xylene	ND		41.8	40.0		ug/Kg	☼	96	83 - 127
Styrene	ND		41.8	39.4		ug/Kg	☼	94	83 - 129
Bromoform	ND		41.8	30.7		ug/Kg	☼	74	53 - 140
Isopropylbenzene	ND		41.8	38.6		ug/Kg	☼	92	70 - 133
N-Propylbenzene	ND		41.8	44.0		ug/Kg	☼	105	80 - 120
1,1,2,2-Tetrachloroethane	ND		41.8	39.2		ug/Kg	☼	94	60 - 139
1,3,5-Trimethylbenzene	ND		41.8	37.2		ug/Kg	☼	89	68 - 133
1,2,4-Trimethylbenzene	ND		41.8	37.3		ug/Kg	☼	89	80 - 121
1,3-Dichlorobenzene	ND		41.8	43.7		ug/Kg	☼	105	75 - 118
1,4-Dichlorobenzene	ND		41.8	43.1		ug/Kg	☼	103	77 - 116
1,2-Dichlorobenzene	ND		41.8	44.5		ug/Kg	☼	107	71 - 124
1,2-Dibromo-3-Chloropropane	ND		41.8	35.4		ug/Kg	☼	85	35 - 136
1,2,4-Trichlorobenzene	ND		41.8	46.6		ug/Kg	☼	111	51 - 136
Hexachlorobutadiene	ND		41.8	45.6		ug/Kg	☼	109	42 - 150
Cyclohexane	ND		41.8	40.4		ug/Kg	☼	97	64 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*74*		*52 - 124*
Toluene-d8 (Surr)	*97*		*72 - 127*
4-Bromofluorobenzene (Surr)	*84*		*63 - 120*
Dibromofluoromethane (Surr)	*89*		*68 - 121*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-19546/1-A
Matrix: Sediment
Analysis Batch: 19593

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19546

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.0	0.47	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Bromomethane	ND		5.0	0.74	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Chloroethane	ND		5.0	1.5	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Trichlorofluoromethane	ND		5.0	0.92	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,1-Dichloroethene	ND		5.0	0.85	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Acetone	ND		20	5.0	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Carbon disulfide	ND		5.0	0.51	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Methylene Chloride	ND		5.0	0.67	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
trans-1,2-Dichloroethene	ND		5.0	0.60	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Methyl tert-butyl ether	ND		5.0	0.75	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,1-Dichloroethane	ND		5.0	0.58	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
cis-1,2-Dichloroethene	ND		5.0	0.70	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
cis-1,3-Dichloropropene	ND		5.0	0.68	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
2-Butanone (MEK)	ND		5.0	0.88	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Chloroform	ND		5.0	0.58	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,1,1-Trichloroethane	ND		5.0	0.49	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Carbon tetrachloride	ND		5.0	0.45	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Benzene	ND		5.0	0.68	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
trans-1,3-Dichloropropene	ND		5.0	0.60	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2-Dichloroethane	ND		5.0	0.61	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Trichloroethene	ND		5.0	0.66	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2-Dichloropropane	ND		5.0	0.54	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Bromodichloromethane	ND		5.0	0.56	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.65	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Toluene	ND		5.0	0.73	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,1,2-Trichloroethane	ND		5.0	0.83	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Tetrachloroethene	ND		5.0	0.68	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Dibromochloromethane	ND		5.0	0.71	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2-Dibromoethane	ND		5.0	0.86	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Chlorobenzene	ND		5.0	0.76	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.74	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Ethylbenzene	ND		5.0	0.64	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
m-Xylene & p-Xylene	ND		10	1.5	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
o-Xylene	ND		5.0	0.78	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Xylenes, Total	ND		15	2.2	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Styrene	ND		5.0	0.71	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Bromoform	ND		5.0	0.44	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
N-Propylbenzene	ND		5.0	0.76	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.72	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,3,5-Trimethylbenzene	ND		5.0	0.67	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2,4-Trimethylbenzene	ND		5.0	0.65	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,3-Dichlorobenzene	ND		5.0	0.66	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,4-Dichlorobenzene	ND		5.0	0.64	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2-Dichlorobenzene	ND		5.0	0.80	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.75	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
1,2,4-Trichlorobenzene	ND		5.0	0.88	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Hexachlorobutadiene	ND		5.0	1.1	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Cyclohexane	ND		5.0	0.37	ug/Kg		11/03/11 04:12	11/03/11 06:53	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-19546/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19593 — **Prep Batch: 19546**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		100	7.0	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Vinyl acetate	ND		5.0	0.35	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
n-Butyl alcohol	ND		200	33	ug/Kg		11/03/11 04:12	11/03/11 06:53	1
Hexane	ND		5.0	1.0	ug/Kg		11/03/11 04:12	11/03/11 06:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*52 - 124*	*11/03/11 04:12*	*11/03/11 06:53*	*1*
Toluene-d8 (Surr)	*99*		*72 - 127*	*11/03/11 04:12*	*11/03/11 06:53*	*1*
4-Bromofluorobenzene (Surr)	*101*		*63 - 120*	*11/03/11 04:12*	*11/03/11 06:53*	*1*
Dibromofluoromethane (Surr)	*103*		*68 - 121*	*11/03/11 04:12*	*11/03/11 06:53*	*1*

Lab Sample ID: LCS 180-19546/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19593 — **Prep Batch: 19546**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	40.0	43.4		ug/Kg		109	63 - 124
Bromomethane	40.0	39.5		ug/Kg		99	25 - 150
Chloroethane	40.0	40.1		ug/Kg		100	22 - 150
Trichlorofluoromethane	40.0	43.5		ug/Kg		109	20 - 150
1,1-Dichloroethene	40.0	42.3		ug/Kg		106	59 - 129
Acetone	40.0	48.7		ug/Kg		122	20 - 150
Carbon disulfide	40.0	37.5		ug/Kg		94	50 - 127
Methylene Chloride	40.0	38.8		ug/Kg		97	58 - 127
trans-1,2-Dichloroethene	40.0	41.1		ug/Kg		103	77 - 121
Methyl tert-butyl ether	40.0	41.7		ug/Kg		104	48 - 132
1,1-Dichloroethane	40.0	39.3		ug/Kg		98	66 - 124
cis-1,2-Dichloroethene	40.0	40.9		ug/Kg		102	80 - 118
cis-1,3-Dichloropropene	40.0	38.1		ug/Kg		95	73 - 120
2-Butanone (MEK)	40.0	42.2		ug/Kg		106	35 - 149
Chloroform	40.0	40.6		ug/Kg		102	72 - 120
1,1,1-Trichloroethane	40.0	43.8		ug/Kg		110	67 - 126
Carbon tetrachloride	40.0	45.1		ug/Kg		113	69 - 122
Benzene	40.0	39.4		ug/Kg		98	77 - 120
trans-1,3-Dichloropropene	40.0	40.0		ug/Kg		100	74 - 129
1,2-Dichloroethane	40.0	38.9		ug/Kg		97	61 - 127
Trichloroethene	40.0	38.5		ug/Kg		96	76 - 119
1,2-Dichloropropane	40.0	37.4		ug/Kg		94	72 - 122
Bromodichloromethane	40.0	38.9		ug/Kg		97	70 - 125
4-Methyl-2-pentanone (MIBK)	40.0	46.7		ug/Kg		117	44 - 148
Toluene	40.0	40.1		ug/Kg		100	78 - 124
1,1,2-Trichloroethane	40.0	38.4		ug/Kg		96	70 - 128
Tetrachloroethene	40.0	40.5		ug/Kg		101	78 - 129
Dibromochloromethane	40.0	41.4		ug/Kg		103	70 - 132
1,2-Dibromoethane	40.0	40.0		ug/Kg		100	70 - 131
Chlorobenzene	40.0	40.6		ug/Kg		101	79 - 120
1,1,1,2-Tetrachloroethane	40.0	42.2		ug/Kg		106	76 - 124
Ethylbenzene	40.0	41.3		ug/Kg		103	78 - 125
m-Xylene & p-Xylene	80.0	82.4		ug/Kg		103	75 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-19546/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19593 — **Prep Batch: 19546**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	40.0	41.1		ug/Kg		103	83 - 127
Styrene	40.0	41.1		ug/Kg		103	83 - 129
Bromoform	40.0	36.7		ug/Kg		92	53 - 140
Isopropylbenzene	40.0	42.8		ug/Kg		107	70 - 133
N-Propylbenzene	40.0	40.3		ug/Kg		101	80 - 120
1,1,2,2-Tetrachloroethane	40.0	41.6		ug/Kg		104	60 - 139
1,3,5-Trimethylbenzene	40.0	41.5		ug/Kg		104	68 - 133
1,2,4-Trimethylbenzene	40.0	41.0		ug/Kg		102	80 - 121
1,3-Dichlorobenzene	40.0	39.0		ug/Kg		98	75 - 118
1,4-Dichlorobenzene	40.0	39.8		ug/Kg		100	77 - 116
1,2-Dichlorobenzene	40.0	39.0		ug/Kg		97	71 - 124
1,2-Dibromo-3-Chloropropane	40.0	36.6		ug/Kg		91	35 - 136
1,2,4-Trichlorobenzene	40.0	42.3		ug/Kg		106	51 - 136
Hexachlorobutadiene	40.0	44.8		ug/Kg		112	42 - 150
Cyclohexane	40.0	45.4		ug/Kg		113	64 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*52 - 124*
Toluene-d8 (Surr)	*96*		*72 - 127*
4-Bromofluorobenzene (Surr)	*93*		*63 - 120*
Dibromofluoromethane (Surr)	*96*		*68 - 121*

Lab Sample ID: LCSD 180-19546/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19593 — **Prep Batch: 19546**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	40.0	44.5		ug/Kg		111	63 - 124	2	27
Bromomethane	40.0	40.2		ug/Kg		101	25 - 150	2	40
Chloroethane	40.0	42.4		ug/Kg		106	22 - 150	6	40
Trichlorofluoromethane	40.0	35.9		ug/Kg		90	20 - 150	19	40
1,1-Dichloroethene	40.0	44.6		ug/Kg		111	59 - 129	5	25
Acetone	40.0	55.6		ug/Kg		139	20 - 150	13	40
Carbon disulfide	40.0	39.8		ug/Kg		100	50 - 127	6	23
Methylene Chloride	40.0	39.8		ug/Kg		100	58 - 127	3	28
trans-1,2-Dichloroethene	40.0	42.9		ug/Kg		107	77 - 121	4	20
Methyl tert-butyl ether	40.0	42.9		ug/Kg		107	48 - 132	3	36
1,1-Dichloroethane	40.0	41.8		ug/Kg		105	66 - 124	6	23
cis-1,2-Dichloroethene	40.0	43.0		ug/Kg		107	80 - 118	5	20
cis-1,3-Dichloropropene	40.0	41.5		ug/Kg		104	73 - 120	9	20
2-Butanone (MEK)	40.0	49.4		ug/Kg		124	35 - 149	16	36
Chloroform	40.0	42.6		ug/Kg		106	72 - 120	5	25
1,1,1-Trichloroethane	40.0	46.1		ug/Kg		115	67 - 126	5	31
Carbon tetrachloride	40.0	45.9		ug/Kg		115	69 - 122	2	22
Benzene	40.0	41.7		ug/Kg		104	77 - 120	6	20
trans-1,3-Dichloropropene	40.0	43.7		ug/Kg		109	74 - 129	9	20
1,2-Dichloroethane	40.0	41.4		ug/Kg		103	61 - 127	6	23
Trichloroethene	40.0	41.1		ug/Kg		103	76 - 119	7	21
1,2-Dichloropropane	40.0	40.8		ug/Kg		102	72 - 122	9	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-19546/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19593 — **Prep Batch: 19546**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromodichloromethane	40.0	42.6		ug/Kg		107	70 - 125	9	21
4-Methyl-2-pentanone (MIBK)	40.0	46.9		ug/Kg		117	44 - 148	0	30
Toluene	40.0	42.6		ug/Kg		106	78 - 124	6	21
1,1,2-Trichloroethane	40.0	40.5		ug/Kg		101	70 - 128	6	22
Tetrachloroethene	40.0	43.3		ug/Kg		108	78 - 129	7	20
Dibromochloromethane	40.0	44.1		ug/Kg		110	70 - 132	6	20
1,2-Dibromoethane	40.0	42.3		ug/Kg		106	70 - 131	6	20
Chlorobenzene	40.0	42.8		ug/Kg		107	79 - 120	5	20
1,1,1,2-Tetrachloroethane	40.0	44.6		ug/Kg		111	76 - 124	5	22
Ethylbenzene	40.0	43.3		ug/Kg		108	78 - 125	5	21
m-Xylene & p-Xylene	80.0	87.9		ug/Kg		110	75 - 126	6	21
o-Xylene	40.0	43.9		ug/Kg		110	83 - 127	6	20
Styrene	40.0	43.8		ug/Kg		109	83 - 129	6	20
Bromoform	40.0	38.3		ug/Kg		96	53 - 140	4	23
Isopropylbenzene	40.0	44.5		ug/Kg		111	70 - 133	4	22
N-Propylbenzene	40.0	41.5		ug/Kg		104	80 - 120	3	20
1,1,2,2-Tetrachloroethane	40.0	44.1		ug/Kg		110	60 - 139	6	24
1,3,5-Trimethylbenzene	40.0	42.7		ug/Kg		107	68 - 133	3	21
1,2,4-Trimethylbenzene	40.0	43.2		ug/Kg		108	80 - 121	5	20
1,3-Dichlorobenzene	40.0	42.0		ug/Kg		105	75 - 118	7	20
1,4-Dichlorobenzene	40.0	41.2		ug/Kg		103	77 - 116	3	20
1,2-Dichlorobenzene	40.0	42.2		ug/Kg		105	71 - 124	8	22
1,2-Dibromo-3-Chloropropane	40.0	37.6		ug/Kg		94	35 - 136	3	40
1,2,4-Trichlorobenzene	40.0	43.8		ug/Kg		110	51 - 136	4	40
Hexachlorobutadiene	40.0	46.9		ug/Kg		117	42 - 150	5	40
Cyclohexane	40.0	44.9		ug/Kg		112	64 - 130	1	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*52 - 124*
Toluene-d8 (Surr)	*99*		*72 - 127*
4-Bromofluorobenzene (Surr)	*99*		*63 - 120*
Dibromofluoromethane (Surr)	*102*		*68 - 121*

Lab Sample ID: MB 180-19824/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19824

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/06/11 08:44	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/06/11 08:44	1
Methylene Chloride	0.408	J	1.0	0.15	ug/L			11/06/11 08:44	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/06/11 08:44	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/06/11 08:44	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/06/11 08:44	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/06/11 08:44	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/06/11 08:44	1
Benzene	ND		1.0	0.11	ug/L			11/06/11 08:44	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/06/11 08:44	1
Trichloroethene	ND		1.0	0.14	ug/L			11/06/11 08:44	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-19824/3
Matrix: Water
Analysis Batch: 19824

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/06/11 08:44	1
Toluene	ND		1.0	0.15	ug/L			11/06/11 08:44	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/06/11 08:44	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/06/11 08:44	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/06/11 08:44	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/06/11 08:44	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/06/11 08:44	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/06/11 08:44	1
Styrene	ND		1.0	0.097	ug/L			11/06/11 08:44	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/06/11 08:44	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/06/11 08:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/06/11 08:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/06/11 08:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/06/11 08:44*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*11/06/11 08:44*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 118*		*11/06/11 08:44*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*11/06/11 08:44*	*1*

Lab Sample ID: LCS 180-19824/5
Matrix: Water
Analysis Batch: 19824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	10.2		ug/L		102	53 - 138
1,1-Dichloroethene	10.0	11.0		ug/L		110	65 - 136
Methylene Chloride	10.0	11.0		ug/L		110	63 - 129
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	73 - 126
Methyl tert-butyl ether	10.0	9.58		ug/L		96	64 - 123
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	70 - 120
1,1,1-Trichloroethane	10.0	9.47		ug/L		95	63 - 133
Carbon tetrachloride	10.0	9.23		ug/L		92	55 - 150
Benzene	10.0	10.6		ug/L		106	80 - 120
1,2-Dichloroethane	10.0	11.0		ug/L		110	68 - 132
Trichloroethene	10.0	10.4		ug/L		104	73 - 120
1,2-Dichloropropane	10.0	10.1		ug/L		101	76 - 124
Toluene	10.0	11.4		ug/L		114	80 - 123
1,1,2-Trichloroethane	10.0	11.7		ug/L		117	77 - 127
Tetrachloroethene	10.0	11.2		ug/L		112	70 - 135
1,2-Dibromoethane	10.0	10.7		ug/L		107	74 - 123
Chlorobenzene	10.0	11.0		ug/L		110	80 - 120
Ethylbenzene	10.0	11.1		ug/L		111	72 - 126
Styrene	10.0	10.6		ug/L		106	71 - 127
1,4-Dichlorobenzene	10.0	10.8		ug/L		108	77 - 120
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.12		ug/L		91	37 - 133
1,2,4-Trichlorobenzene	10.0	9.97		ug/L		100	60 - 127

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-19824/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19824

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 135
Toluene-d8 (Surr)	108		71 - 118
4-Bromofluorobenzene (Surr)	104		70 - 118
Dibromofluoromethane (Surr)	98		70 - 128

Lab Sample ID: LCSD 180-19824/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19824

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	10.0	9.56		ug/L		96	53 - 138	6	35
1,1-Dichloroethene	10.0	10.1		ug/L		101	65 - 136	9	35
Methylene Chloride	10.0	10.1		ug/L		101	63 - 129	8	35
trans-1,2-Dichloroethene	10.0	9.85		ug/L		98	73 - 126	8	35
Methyl tert-butyl ether	10.0	9.17		ug/L		92	64 - 123	4	35
cis-1,2-Dichloroethene	10.0	9.81		ug/L		98	70 - 120	8	35
1,1,1-Trichloroethane	10.0	8.93		ug/L		89	63 - 133	6	35
Carbon tetrachloride	10.0	8.91		ug/L		89	55 - 150	4	35
Benzene	10.0	10.1		ug/L		101	80 - 120	5	32
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 132	8	32
Trichloroethene	10.0	9.65		ug/L		97	73 - 120	7	35
1,2-Dichloropropane	10.0	9.65		ug/L		96	76 - 124	4	34
Toluene	10.0	10.9		ug/L		109	80 - 123	4	35
1,1,2-Trichloroethane	10.0	11.1		ug/L		111	77 - 127	6	35
Tetrachloroethene	10.0	10.6		ug/L		106	70 - 135	6	35
1,2-Dibromoethane	10.0	10.5		ug/L		105	74 - 123	2	35
Chlorobenzene	10.0	10.7		ug/L		107	80 - 120	3	29
Ethylbenzene	10.0	10.7		ug/L		107	72 - 126	4	33
Styrene	10.0	10.3		ug/L		103	71 - 127	4	34
1,4-Dichlorobenzene	10.0	10.1		ug/L		101	77 - 120	7	24
1,2-Dichlorobenzene	10.0	10.2		ug/L		102	77 - 120	4	24
1,2-Dibromo-3-Chloropropane	10.0	8.45		ug/L		85	37 - 133	8	35
1,2,4-Trichlorobenzene	10.0	9.53		ug/L		95	60 - 127	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		64 - 135
Toluene-d8 (Surr)	99		71 - 118
4-Bromofluorobenzene (Surr)	98		70 - 118
Dibromofluoromethane (Surr)	89		70 - 128

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 180-19224/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		1.0	0.089	ug/L		11/01/11 09:10	11/02/11 13:05	1
Benzo[a]pyrene	ND		0.20	0.013	ug/L		11/01/11 09:10	11/02/11 13:05	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 180-19224/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		2.0	1.3	ug/L		11/01/11 09:10	11/02/11 13:05	1
Hexachlorocyclopentadiene	ND		1.0	0.052	ug/L		11/01/11 09:10	11/02/11 13:05	1
Phenol	ND		0.20	0.058	ug/L		11/01/11 09:10	11/02/11 13:05	1
Pentachlorophenol	ND		1.0	0.066	ug/L		11/01/11 09:10	11/02/11 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*79*		*16 - 122*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
2-Fluorophenol	*77*		*10 - 111*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Nitrobenzene-d5	*68*		*23 - 112*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
2-Fluorobiphenyl	*67*		*19 - 107*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Terphenyl-d14	*66*		*10 - 132*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Phenol-d5	*77*		*15 - 112*	*11/01/11 09:10*	*11/02/11 13:05*	*1*

Lab Sample ID: LCS 180-19224/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	20.0	24.7		ug/L		124	30 - 150
Benzo[a]pyrene	20.0	14.4		ug/L		72	26 - 108
Bis(2-ethylhexyl) phthalate	20.0	13.3		ug/L		67	20 - 116
Hexachlorocyclopentadiene	20.0	16.5		ug/L		83	36 - 115
Phenol	20.0	14.1		ug/L		71	32 - 95
Pentachlorophenol	20.0	15.2		ug/L		76	15 - 111

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*92*		*16 - 122*
2-Fluorophenol	*81*		*10 - 111*
Nitrobenzene-d5	*74*		*23 - 112*
2-Fluorobiphenyl	*71*		*19 - 107*
Terphenyl-d14	*74*		*10 - 132*
Phenol-d5	*81*		*15 - 112*

Lab Sample ID: LCSD 180-19224/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	20.0	25.8		ug/L		129	30 - 150	4	35
Benzo[a]pyrene	20.0	14.5		ug/L		73	26 - 108	1	40
Bis(2-ethylhexyl) phthalate	20.0	13.7		ug/L		68	20 - 116	3	40
Hexachlorocyclopentadiene	20.0	17.9		ug/L		89	36 - 115	8	47
Phenol	20.0	14.8		ug/L		74	32 - 95	5	39
Pentachlorophenol	20.0	15.2		ug/L		76	15 - 111	0	42

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*92*		*16 - 122*
2-Fluorophenol	*82*		*10 - 111*
Nitrobenzene-d5	*76*		*23 - 112*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 180-19224/3-A
Matrix: Water
Analysis Batch: 19538

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19224

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*74*		*19 - 107*
Terphenyl-d14	*76*		*10 - 132*
Phenol-d5	*83*		*15 - 112*

Lab Sample ID: MB 180-19662/1-A
Matrix: Sediment
Analysis Batch: 19772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19662

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		3.4	0.32	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Acenaphthylene	ND		3.4	0.38	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Anthracene	ND		3.4	0.33	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Atrazine	ND		17	1.6	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Benzo[a]anthracene	ND		3.4	0.42	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Benzo[b]fluoranthene	ND		3.4	0.52	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Benzo[k]fluoranthene	ND		3.4	0.67	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Benzo[a]pyrene	ND		3.4	0.33	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Bis(2-chloroethyl)ether	ND		3.4	0.45	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Bis(2-ethylhexyl) phthalate	ND		33	2.7	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Butyl benzyl phthalate	ND		17	2.3	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Carbazole	ND		3.4	0.31	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Chrysene	ND		3.4	0.40	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2-Chloronaphthalene	ND		3.4	0.35	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2-Chlorophenol	ND		17	1.4	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,4-Dichlorophenol	ND		3.4	0.33	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,4-Dimethylphenol	ND		17	2.6	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,4-Dinitrophenol	ND		85	20	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,4-Dinitrotoluene	ND		17	1.3	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,6-Dinitrotoluene	ND		17	1.7	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2-Methylnaphthalene	ND		3.4	0.30	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2-Methylphenol	ND		17	1.2	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2-Nitroaniline	ND		85	7.5	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,2'-oxybis[1-chloropropane]	ND		3.4	0.36	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,4,5-Trichlorophenol	ND		17	1.8	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
2,4,6-Trichlorophenol	ND		17	2.5	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Methylphenol, 3 & 4	ND		17	1.6	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
4-Chloroaniline	ND		17	1.3	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Dibenz(a,h)anthracene	ND		3.4	0.37	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Dibenzofuran	ND		17	1.6	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Di-n-butyl phthalate	ND		17	2.1	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Diethyl phthalate	ND		17	1.8	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Dimethyl phthalate	ND		17	1.8	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Di-n-octyl phthalate	ND		17	1.8	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
3,3'-Dichlorobenzidine	ND		17	1.8	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Fluoranthene	ND		3.4	0.36	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Fluorene	ND		3.4	0.44	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Hexachlorobenzene	ND		3.4	0.36	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Hexachlorocyclopentadiene	ND		17	1.8	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Hexachloroethane	ND		17	1.2	ug/Kg		11/04/11 02:45	11/04/11 14:26	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 180-19662/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19772 — **Prep Batch: 19662**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		3.4	0.34	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Isophorone	ND		17	1.3	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Naphthalene	ND		3.4	0.29	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Nitrobenzene	ND		33	1.4	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
N-Nitrosodiphenylamine	ND		17	1.5	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
N-Nitrosodi-n-propylamine	ND		3.4	0.39	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Pyrene	ND		3.4	0.34	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Phenol	ND		3.4	0.39	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Phenanthrene	ND		3.4	0.53	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Pentachlorophenol	ND		17	1.5	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Benzyl alcohol	ND		17	2.0	ug/Kg		11/04/11 02:45	11/04/11 14:26	1
Benzoic acid	ND		85	6.9	ug/Kg		11/04/11 02:45	11/04/11 14:26	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.000*	*J N*	*ug/Kg*			*68-12-2*	*11/04/11 02:45*	*11/04/11 14:26*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*21 - 116*	*11/04/11 02:45*	*11/04/11 14:26*	*1*
2-Fluorophenol	*93*		*28 - 107*	*11/04/11 02:45*	*11/04/11 14:26*	*1*
Nitrobenzene-d5	*83*		*27 - 110*	*11/04/11 02:45*	*11/04/11 14:26*	*1*
2-Fluorobiphenyl	*80*		*28 - 108*	*11/04/11 02:45*	*11/04/11 14:26*	*1*
Terphenyl-d14	*81*		*21 - 130*	*11/04/11 02:45*	*11/04/11 14:26*	*1*
Phenol-d5	*95*		*30 - 112*	*11/04/11 02:45*	*11/04/11 14:26*	*1*

Lab Sample ID: LCS 180-19662/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19772 — **Prep Batch: 19662**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	281		ug/Kg		84	42 - 104
Acenaphthylene	333	289		ug/Kg		87	43 - 117
Anthracene	333	298		ug/Kg		89	43 - 111
Atrazine	333	579	*	ug/Kg		174	30 - 150
Benzo[a]anthracene	333	276		ug/Kg		83	45 - 110
Benzo[b]fluoranthene	333	282		ug/Kg		85	37 - 108
Benzo[k]fluoranthene	333	293		ug/Kg		88	39 - 115
Benzo[a]pyrene	333	316		ug/Kg		95	42 - 114
Bis(2-chloroethyl)ether	333	265		ug/Kg		80	40 - 100
Bis(2-ethylhexyl) phthalate	333	269		ug/Kg		81	41 - 121
Butyl benzyl phthalate	333	296		ug/Kg		89	40 - 117
Carbazole	333	281		ug/Kg		84	42 - 114
Chrysene	333	289		ug/Kg		87	44 - 108
2-Chloronaphthalene	333	277		ug/Kg		83	40 - 104
2-Chlorophenol	333	282		ug/Kg		85	40 - 105
2,4-Dichlorophenol	333	285		ug/Kg		86	44 - 110
2,4-Dimethylphenol	333	279		ug/Kg		84	39 - 106
2,4-Dinitrophenol	333	249		ug/Kg		75	19 - 140
2,4-Dinitrotoluene	333	267		ug/Kg		80	48 - 118
2,6-Dinitrotoluene	333	278		ug/Kg		83	47 - 119

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 180-19662/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19772 — **Prep Batch: 19662**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	333	270		ug/Kg		81	43 - 105
2-Methylphenol	333	266		ug/Kg		80	41 - 104
2-Nitroaniline	333	265		ug/Kg		79	41 - 118
2,2'-oxybis[1-chloropropane]	333	241		ug/Kg		72	37 - 105
2,4,5-Trichlorophenol	333	312		ug/Kg		93	42 - 110
2,4,6-Trichlorophenol	333	295		ug/Kg		89	43 - 111
Methylphenol, 3 & 4	667	570		ug/Kg		86	43 - 107
4-Chloroaniline	333	278		ug/Kg		84	33 - 102
Dibenz(a,h)anthracene	333	325		ug/Kg		97	34 - 131
Dibenzofuran	333	282		ug/Kg		84	42 - 106
Di-n-butyl phthalate	333	289		ug/Kg		87	44 - 120
Diethyl phthalate	333	275		ug/Kg		83	44 - 113
Dimethyl phthalate	333	276		ug/Kg		83	44 - 111
Di-n-octyl phthalate	333	281		ug/Kg		84	35 - 129
3,3'-Dichlorobenzidine	333	316		ug/Kg		95	24 - 113
Fluoranthene	333	289		ug/Kg		87	40 - 118
Fluorene	333	290		ug/Kg		87	43 - 110
Hexachlorobenzene	333	311		ug/Kg		93	42 - 110
Hexachlorocyclopentadiene	333	343		ug/Kg		103	10 - 150
Hexachloroethane	333	265		ug/Kg		80	40 - 102
Indeno[1,2,3-cd]pyrene	333	314		ug/Kg		94	34 - 130
Isophorone	333	263		ug/Kg		79	39 - 114
Naphthalene	333	281		ug/Kg		84	42 - 104
Nitrobenzene	333	276		ug/Kg		83	40 - 109
N-Nitrosodiphenylamine	333	309		ug/Kg		93	41 - 110
N-Nitrosodi-n-propylamine	333	275		ug/Kg		82	42 - 108
Pyrene	333	298		ug/Kg		90	39 - 113
Phenol	333	272		ug/Kg		82	39 - 105
Phenanthrene	333	282		ug/Kg		85	41 - 107
Pentachlorophenol	333	293		ug/Kg		88	18 - 125
Benzyl alcohol	333	275		ug/Kg		82	18 - 129
Benzoic acid	333	222		ug/Kg		67	10 - 93

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*111*		*21 - 116*
2-Fluorophenol	*91*		*28 - 107*
Nitrobenzene-d5	*84*		*27 - 110*
2-Fluorobiphenyl	*86*		*28 - 108*
Terphenyl-d14	*90*		*21 - 130*
Phenol-d5	*93*		*30 - 112*

Lab Sample ID: 180-5219-4 MS — **Client Sample ID: CH-2011-MU3-GN**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19772 — **Prep Batch: 19662**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	50		570	373		ug/Kg	☼	57	42 - 104
Acenaphthylene	33		570	372		ug/Kg	☼	59	43 - 117
Anthracene	120		570	514		ug/Kg	☼	70	43 - 111

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5219-4 MS
Matrix: Sediment
Analysis Batch: 19772

Client Sample ID: CH-2011-MU3-GN
Prep Type: Total/NA
Prep Batch: 19662

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	ND	*	570	892	F	ug/Kg	☼	156	30 - 150
Benzo[a]anthracene	320		570	700		ug/Kg	☼	67	45 - 110
Benzo[b]fluoranthene	340		570	624		ug/Kg	☼	50	37 - 108
Benzo[k]fluoranthene	130		570	478		ug/Kg	☼	62	39 - 115
Benzo[a]pyrene	340		570	671		ug/Kg	☼	57	42 - 114
Bis(2-chloroethyl)ether	ND		570	303		ug/Kg	☼	53	40 - 100
Bis(2-ethylhexyl) phthalate	89	J	570	439		ug/Kg	☼	61	41 - 121
Butyl benzyl phthalate	ND		570	380		ug/Kg	☼	67	40 - 117
Carbazole	25		570	406		ug/Kg	☼	67	42 - 114
Chrysene	330		570	695		ug/Kg	☼	64	44 - 108
2-Chloronaphthalene	ND		570	359		ug/Kg	☼	63	40 - 104
2-Chlorophenol	ND		570	309		ug/Kg	☼	54	40 - 105
2,4-Dichlorophenol	ND		570	322		ug/Kg	☼	56	44 - 110
2,4-Dimethylphenol	ND		570	373		ug/Kg	☼	65	39 - 106
2,4-Dinitrophenol	ND		570	ND	F	ug/Kg	☼	0	19 - 140
2,4-Dinitrotoluene	ND		570	343		ug/Kg	☼	60	48 - 118
2,6-Dinitrotoluene	ND		570	409		ug/Kg	☼	72	47 - 119
2-Methylnaphthalene	27		570	339		ug/Kg	☼	55	43 - 105
2-Methylphenol	ND		570	306		ug/Kg	☼	54	41 - 104
2-Nitroaniline	ND		570	368	J	ug/Kg	☼	65	41 - 118
2,2'-oxybis[1-chloropropane]	ND		570	255		ug/Kg	☼	45	37 - 105
2,4,5-Trichlorophenol	ND		570	328		ug/Kg	☼	57	42 - 110
2,4,6-Trichlorophenol	ND		570	355		ug/Kg	☼	62	43 - 111
Methylphenol, 3 & 4	13	J	1140	703		ug/Kg	☼	61	43 - 107
4-Chloroaniline	ND		570	318		ug/Kg	☼	56	33 - 102
Dibenz(a,h)anthracene	68		570	501		ug/Kg	☼	76	34 - 131
Dibenzofuran	31	J	570	362		ug/Kg	☼	58	42 - 106
Di-n-butyl phthalate	ND		570	390		ug/Kg	☼	68	44 - 120
Diethyl phthalate	ND		570	381		ug/Kg	☼	67	44 - 113
Dimethyl phthalate	ND		570	374		ug/Kg	☼	66	44 - 111
Di-n-octyl phthalate	ND		570	293		ug/Kg	☼	51	35 - 129
3,3'-Dichlorobenzidine	ND		570	152		ug/Kg	☼	27	24 - 113
Fluoranthene	550		570	967		ug/Kg	☼	73	40 - 118
Fluorene	52		570	384		ug/Kg	☼	58	43 - 110
Hexachlorobenzene	ND		570	408		ug/Kg	☼	72	42 - 110
Hexachlorocyclopentadiene	ND		570	77.1	J	ug/Kg	☼	14	10 - 150
Hexachloroethane	ND		570	240		ug/Kg	☼	42	40 - 102
Indeno[1,2,3-cd]pyrene	220		570	609		ug/Kg	☼	68	34 - 130
Isophorone	ND		570	313		ug/Kg	☼	55	39 - 114
Naphthalene	31		570	328		ug/Kg	☼	52	42 - 104
Nitrobenzene	ND		570	343		ug/Kg	☼	60	40 - 109
N-Nitrosodiphenylamine	ND		570	495		ug/Kg	☼	87	41 - 110
N-Nitrosodi-n-propylamine	ND		570	298		ug/Kg	☼	52	42 - 108
Pyrene	570		570	915		ug/Kg	☼	61	39 - 113
Phenol	ND		570	314		ug/Kg	☼	55	39 - 105
Phenanthrene	380		570	787		ug/Kg	☼	71	41 - 107
Pentachlorophenol	ND		570	162		ug/Kg	☼	28	18 - 125
Benzyl alcohol	ND		570	269		ug/Kg	☼	47	18 - 129
Benzoic acid	ND		570	ND	F	ug/Kg	☼	0	10 - 93

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5219-4 MS
Matrix: Sediment
Analysis Batch: 19772

Client Sample ID: CH-2011-MU3-GN
Prep Type: Total/NA
Prep Batch: 19662

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*97*		*21 - 116*
2-Fluorophenol	*65*		*28 - 107*
Nitrobenzene-d5	*74*		*27 - 110*
2-Fluorobiphenyl	*72*		*28 - 108*
Terphenyl-d14	*74*		*21 - 130*
Phenol-d5	*69*		*30 - 112*

Lab Sample ID: 180-5219-4 MSD
Matrix: Sediment
Analysis Batch: 19772

Client Sample ID: CH-2011-MU3-GN
Prep Type: Total/NA
Prep Batch: 19662

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	50		570	437		ug/Kg	☼	68	42 - 104	16	34
Acenaphthylene	33		570	429		ug/Kg	☼	69	43 - 117	14	36
Anthracene	120		570	559		ug/Kg	☼	78	43 - 111	8	35
Atrazine	ND	*	570	1080	F	ug/Kg	☼	189	30 - 150	19	40
Benzo[a]anthracene	320		570	687		ug/Kg	☼	64	45 - 110	2	31
Benzo[b]fluoranthene	340		570	686		ug/Kg	☼	60	37 - 108	9	28
Benzo[k]fluoranthene	130		570	580		ug/Kg	☼	80	39 - 115	19	42
Benzo[a]pyrene	340		570	802		ug/Kg	☼	80	42 - 114	18	31
Bis(2-chloroethyl)ether	ND		570	332		ug/Kg	☼	58	40 - 100	9	33
Bis(2-ethylhexyl) phthalate	89	J	570	465		ug/Kg	☼	66	41 - 121	6	31
Butyl benzyl phthalate	ND		570	412		ug/Kg	☼	72	40 - 117	8	34
Carbazole	25		570	451		ug/Kg	☼	75	42 - 114	11	35
Chrysene	330		570	813		ug/Kg	☼	85	44 - 108	16	31
2-Chloronaphthalene	ND		570	397		ug/Kg	☼	70	40 - 104	10	34
2-Chlorophenol	ND		570	353		ug/Kg	☼	62	40 - 105	13	37
2,4-Dichlorophenol	ND		570	381		ug/Kg	☼	67	44 - 110	17	27
2,4-Dimethylphenol	ND		570	415		ug/Kg	☼	73	39 - 106	11	42
2,4-Dinitrophenol	ND		570	155	J	ug/Kg	☼	27	19 - 140	NC	43
2,4-Dinitrotoluene	ND		570	418		ug/Kg	☼	73	48 - 118	20	33
2,6-Dinitrotoluene	ND		570	439		ug/Kg	☼	77	47 - 119	7	30
2-Methylnaphthalene	27		570	347		ug/Kg	☼	56	43 - 105	2	34
2-Methylphenol	ND		570	300		ug/Kg	☼	53	41 - 104	2	37
2-Nitroaniline	ND		570	437	J	ug/Kg	☼	77	41 - 118	17	33
2,2'-oxybis[1-chloropropane]	ND		570	244		ug/Kg	☼	43	37 - 105	4	31
2,4,5-Trichlorophenol	ND		570	378		ug/Kg	☼	66	42 - 110	14	35
2,4,6-Trichlorophenol	ND		570	399		ug/Kg	☼	70	43 - 111	12	36
Methylphenol, 3 & 4	13	J	1140	743		ug/Kg	☼	64	43 - 107	6	36
4-Chloroaniline	ND		570	337		ug/Kg	☼	59	33 - 102	6	28
Dibenz(a,h)anthracene	68		570	578		ug/Kg	☼	89	34 - 131	14	32
Dibenzofuran	31	J	570	390		ug/Kg	☼	63	42 - 106	7	33
Di-n-butyl phthalate	ND		570	452		ug/Kg	☼	79	44 - 120	15	34
Diethyl phthalate	ND		570	428		ug/Kg	☼	75	44 - 113	12	32
Dimethyl phthalate	ND		570	415		ug/Kg	☼	73	44 - 111	10	34
Di-n-octyl phthalate	ND		570	343		ug/Kg	☼	60	35 - 129	16	33
3,3'-Dichlorobenzidine	ND		570	165		ug/Kg	☼	29	24 - 113	8	30
Fluoranthene	550		570	1130		ug/Kg	☼	102	40 - 118	16	23
Fluorene	52		570	441		ug/Kg	☼	68	43 - 110	14	37

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5219-4 MSD — **Client Sample ID: CH-2011-MU3-GN**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19772 — **Prep Batch: 19662**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene	ND		570	473		ug/Kg	☼	83	42 - 110	15	29
Hexachlorocyclopentadiene	ND		570	63.7	J	ug/Kg	☼	11	10 - 150	19	33
Hexachloroethane	ND		570	265		ug/Kg	☼	46	40 - 102	10	34
Indeno[1,2,3-cd]pyrene	220		570	722		ug/Kg	☼	88	34 - 130	17	30
Isophorone	ND		570	353		ug/Kg	☼	62	39 - 114	12	33
Naphthalene	31		570	356		ug/Kg	☼	57	42 - 104	8	25
Nitrobenzene	ND		570	365		ug/Kg	☼	64	40 - 109	6	31
N-Nitrosodiphenylamine	ND		570	580		ug/Kg	☼	102	41 - 110	16	32
N-Nitrosodi-n-propylamine	ND		570	315		ug/Kg	☼	55	42 - 108	5	32
Pyrene	570		570	982		ug/Kg	☼	73	39 - 113	7	28
Phenol	ND		570	348		ug/Kg	☼	61	39 - 105	10	40
Phenanthrene	380		570	824		ug/Kg	☼	78	41 - 107	5	20
Pentachlorophenol	ND		570	119		ug/Kg	☼	21	18 - 125	31	34
Benzyl alcohol	ND		570	300		ug/Kg	☼	53	18 - 129	11	41
Benzoic acid	ND		570	ND	F	ug/Kg	☼	0	10 - 93	NC	36

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*94*		*21 - 116*
2-Fluorophenol	*75*		*28 - 107*
Nitrobenzene-d5	*78*		*27 - 110*
2-Fluorobiphenyl	*79*		*28 - 108*
Terphenyl-d14	*80*		*21 - 130*
Phenol-d5	*76*		*30 - 112*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: LB 180-19073/1-A LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		100	100	mg/Kg		10/30/11 13:42	10/30/11 20:05	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*81*		*40 - 140*	*10/30/11 13:42*	*10/30/11 20:05*	*1*

Lab Sample ID: LCS 180-19073/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethylene glycol			200	136		mg/Kg		68	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Bis (2-ethoxyethyl) ether (Surr)	*83*		*40 - 140*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: LCSD 180-19073/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene glycol	200	138		mg/Kg		69	40 - 140	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Bis (2-ethoxyethyl) ether (Surr)	*83*		*40 - 140*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0013	0.00098	ug/L		10/27/11 13:35	10/31/11 13:55	1
Chlordane (technical)	ND		0.013	0.0017	ug/L		10/27/11 13:35	10/31/11 13:55	1
Endrin	ND		0.0013	0.00096	ug/L		10/27/11 13:35	10/31/11 13:55	1
gamma-BHC (Lindane)	ND		0.0013	0.00080	ug/L		10/27/11 13:35	10/31/11 13:55	1
gamma-Chlordane	ND		0.0013	0.00096	ug/L		10/27/11 13:35	10/31/11 13:55	1
Heptachlor	ND		0.0013	0.00099	ug/L		10/27/11 13:35	10/31/11 13:55	1
Heptachlor epoxide	ND		0.0013	0.00097	ug/L		10/27/11 13:35	10/31/11 13:55	1
Methoxychlor	ND		0.0025	0.00091	ug/L		10/27/11 13:35	10/31/11 13:55	1
Toxaphene	ND		0.10	0.019	ug/L		10/27/11 13:35	10/31/11 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
Tetrachloro-m-xylene	*79*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:55*	*1*

Lab Sample ID: LCS 180-18835/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	0.0250	0.0188		ug/L		75	59 - 114
Endrin	0.0250	0.0193		ug/L		77	31 - 138
gamma-BHC (Lindane)	0.0250	0.0186		ug/L		75	57 - 110
gamma-Chlordane	0.0250	0.0186		ug/L		75	60 - 114
Heptachlor	0.0250	0.0183		ug/L		73	63 - 120
Heptachlor epoxide	0.0250	0.0188		ug/L		75	60 - 120
Methoxychlor	0.0250	0.0174		ug/L		69	35 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*60 - 111*
Tetrachloro-m-xylene	*82*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*80*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*100*		*56 - 122*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 180-18835/3-A
Matrix: Water
Analysis Batch: 19205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18835

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-Chlordane	0.0250	0.0193		ug/L		77	59 - 114	2	21
Endrin	0.0250	0.0193		ug/L		77	31 - 138	0	24
gamma-BHC (Lindane)	0.0250	0.0189		ug/L		76	57 - 110	2	21
gamma-Chlordane	0.0250	0.0186		ug/L		74	60 - 114	0	21
Heptachlor	0.0250	0.0187		ug/L		75	63 - 120	2	25
Heptachlor epoxide	0.0250	0.0189		ug/L		76	60 - 120	1	20
Methoxychlor	0.0250	0.0178		ug/L		71	35 - 137	3	27

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*82*		*60 - 111*
Tetrachloro-m-xylene	*80*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*83*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*

Lab Sample ID: MB 180-19080/1-B
Matrix: Sediment
Analysis Batch: 19915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
alpha-BHC	ND		0.85	0.14	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
alpha-Chlordane	ND		0.85	0.17	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
beta-BHC	ND		0.85	0.22	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDD	ND		0.85	0.050	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDE	ND		0.85	0.077	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDT	ND		0.85	0.072	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDD	ND		0.85	0.11	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDE	ND		0.85	0.13	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDT	ND		0.85	0.12	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Chlordane (technical)	ND		8.5	0.37	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Dieldrin	ND		0.85	0.14	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan I	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan II	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan sulfate	ND		0.85	0.087	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin aldehyde	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin ketone	ND		0.85	0.13	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
gamma-BHC (Lindane)	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
gamma-Chlordane	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Heptachlor	ND		0.85	0.19	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Heptachlor epoxide	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Methoxychlor	ND		1.7	0.17	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Toxaphene	ND		34	5.6	ug/Kg		10/31/11 04:38	11/03/11 19:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*
Tetrachloro-m-xylene	*71*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*
Tetrachloro-m-xylene	*75*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 180-19080/2-B
Matrix: Sediment
Analysis Batch: 19915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	16.7	14.7		ug/Kg		88	70 - 123
alpha-BHC	16.7	15.0		ug/Kg		90	59 - 127
alpha-Chlordane	16.7	14.6		ug/Kg		88	71 - 130
beta-BHC	16.7	14.1		ug/Kg		84	70 - 138
4,4'-DDD	16.7	14.2		ug/Kg		85	70 - 135
4,4'-DDE	16.7	15.0		ug/Kg		90	70 - 133
4,4'-DDT	16.7	14.7		ug/Kg		88	61 - 126
Dieldrin	16.7	15.1		ug/Kg		91	70 - 123
Endosulfan I	16.7	14.4		ug/Kg		87	70 - 126
Endosulfan II	16.7	13.6		ug/Kg		81	70 - 128
Endosulfan sulfate	16.7	12.6		ug/Kg		76	55 - 140
Endrin	16.7	14.6		ug/Kg		88	70 - 127
Endrin aldehyde	16.7	11.5		ug/Kg		69	65 - 122
Endrin ketone	16.7	14.2		ug/Kg		85	70 - 132
gamma-BHC (Lindane)	16.7	14.5		ug/Kg		87	66 - 124
gamma-Chlordane	16.7	14.2		ug/Kg		85	68 - 123
Heptachlor	16.7	14.2		ug/Kg		85	70 - 128
Heptachlor epoxide	16.7	14.4		ug/Kg		87	69 - 131
Methoxychlor	16.7	13.6		ug/Kg		82	70 - 143

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 130*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 130*
Tetrachloro-m-xylene	*96*		*45 - 130*
Tetrachloro-m-xylene	*94*		*45 - 130*

Lab Sample ID: MB 180-19303/1-A
Matrix: Water
Analysis Batch: 19916

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19303

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0013	0.00098	ug/L		11/01/11 12:30	11/03/11 22:26	1
Chlordane (technical)	ND		0.013	0.0017	ug/L		11/01/11 12:30	11/03/11 22:26	1
Endrin	ND		0.0013	0.00096	ug/L		11/01/11 12:30	11/03/11 22:26	1
gamma-BHC (Lindane)	ND		0.0013	0.00080	ug/L		11/01/11 12:30	11/03/11 22:26	1
gamma-Chlordane	ND		0.0013	0.00096	ug/L		11/01/11 12:30	11/03/11 22:26	1
Heptachlor	ND		0.0013	0.00099	ug/L		11/01/11 12:30	11/03/11 22:26	1
Heptachlor epoxide	ND		0.0013	0.00097	ug/L		11/01/11 12:30	11/03/11 22:26	1
Methoxychlor	ND		0.0025	0.00091	ug/L		11/01/11 12:30	11/03/11 22:26	1
Toxaphene	ND		0.10	0.019	ug/L		11/01/11 12:30	11/03/11 22:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*60 - 111*	*11/01/11 12:30*	*11/03/11 22:26*	*1*
Tetrachloro-m-xylene	*80*		*60 - 111*	*11/01/11 12:30*	*11/03/11 22:26*	*1*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*	*11/01/11 12:30*	*11/03/11 22:26*	*1*
DCB Decachlorobiphenyl (Surr)	*80*		*56 - 122*	*11/01/11 12:30*	*11/03/11 22:26*	*1*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 180-19303/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19916 — **Prep Batch: 19303**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	0.0250	0.0203		ug/L		81	59 - 114
Endrin	0.0250	0.0209		ug/L		84	31 - 138
gamma-BHC (Lindane)	0.0250	0.0199		ug/L		80	57 - 110
gamma-Chlordane	0.0250	0.0200		ug/L		80	60 - 114
Heptachlor	0.0250	0.0205		ug/L		82	63 - 120
Heptachlor epoxide	0.0250	0.0198		ug/L		79	60 - 120
Methoxychlor	0.0250	0.0199		ug/L		79	35 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*86*		*60 - 111*
Tetrachloro-m-xylene	*85*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*88*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*88*		*56 - 122*

Lab Sample ID: LCSD 180-19303/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19916 — **Prep Batch: 19303**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-Chlordane	0.0250	0.0213		ug/L		85	59 - 114	5	21
Endrin	0.0250	0.0213		ug/L		85	31 - 138	2	24
gamma-BHC (Lindane)	0.0250	0.0210		ug/L		84	57 - 110	5	21
gamma-Chlordane	0.0250	0.0207		ug/L		83	60 - 114	3	21
Heptachlor	0.0250	0.0209		ug/L		83	63 - 120	2	25
Heptachlor epoxide	0.0250	0.0207		ug/L		83	60 - 120	4	20
Methoxychlor	0.0250	0.0203		ug/L		81	35 - 137	2	27

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*86*		*60 - 111*
Tetrachloro-m-xylene	*86*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*86*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*87*		*56 - 122*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-19080/1-B — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1221	ND		8.3	1.6	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1232	ND		8.3	1.4	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1242	ND		8.3	1.4	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1248	ND		8.3	0.79	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1254	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1260	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
Polychlorinated biphenyls, Total	ND		8.3	1.8	ug/Kg		10/31/11 04:38	11/09/11 03:31	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 180-19080/1-B — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	92		35 - 140	10/31/11 04:38	11/09/11 03:31	1
DCB Decachlorobiphenyl (Surr)	92		35 - 140	10/31/11 04:38	11/09/11 03:31	1

Lab Sample ID: LCS 180-19080/5-B — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	667	586		ug/Kg		88	55 - 130
PCB-1260	667	577		ug/Kg		87	54 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	96		35 - 140
DCB Decachlorobiphenyl (Surr)	98		35 - 140

Lab Sample ID: 180-5048-B-2-P MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	22		1170	904		ug/Kg	☼	75	55 - 130
PCB-1260	ND		1170	915		ug/Kg	☼	78	54 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	62		35 - 140
DCB Decachlorobiphenyl (Surr)	87		35 - 140

Lab Sample ID: 180-5048-B-2-Q MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	22		1160	902		ug/Kg	☼	76	55 - 130	0	35
PCB-1260	ND		1160	914		ug/Kg	☼	79	54 - 130	0	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	61		35 - 140
DCB Decachlorobiphenyl (Surr)	86		35 - 140

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.010	0.0025	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1221	ND		0.010	0.0025	ug/L		10/27/11 13:35	10/28/11 23:05	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		0.010	0.0029	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1242	ND		0.010	0.0019	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1248	ND		0.010	0.0023	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1254	ND		0.010	0.0023	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1260	ND		0.010	0.0014	ug/L		10/27/11 13:35	10/28/11 23:05	1
Polychlorinated biphenyls, Total	ND		0.010	0.0029	ug/L		10/27/11 13:35	10/28/11 23:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*47 - 150*	*10/27/11 13:35*	*10/28/11 23:05*	*1*
DCB Decachlorobiphenyl (Surr)	*85*		*50 - 140*	*10/27/11 13:35*	*10/28/11 23:05*	*1*

Lab Sample ID: LCS 180-18835/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.756		ug/L		76	60 - 110
PCB-1260	1.00	0.741		ug/L		74	60 - 111

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*89*		*47 - 150*
DCB Decachlorobiphenyl (Surr)	*86*		*50 - 140*

Lab Sample ID: LCSD 180-18835/5-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.00	0.793		ug/L		79	60 - 110	5	27
PCB-1260	1.00	0.770		ug/L		77	60 - 111	4	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*93*		*47 - 150*
DCB Decachlorobiphenyl (Surr)	*89*		*50 - 140*

Lab Sample ID: MB 180-19303/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20234 — **Prep Batch: 19303**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.010	0.0025	ug/L		11/01/11 12:30	11/04/11 00:17	1
PCB-1221	ND		0.010	0.0025	ug/L		11/01/11 12:30	11/04/11 00:17	1
PCB-1232	ND		0.010	0.0029	ug/L		11/01/11 12:30	11/04/11 00:17	1
PCB-1242	ND		0.010	0.0019	ug/L		11/01/11 12:30	11/04/11 00:17	1
PCB-1248	ND		0.010	0.0023	ug/L		11/01/11 12:30	11/04/11 00:17	1
PCB-1254	ND		0.010	0.0023	ug/L		11/01/11 12:30	11/04/11 00:17	1
PCB-1260	ND		0.010	0.0014	ug/L		11/01/11 12:30	11/04/11 00:17	1
Polychlorinated biphenyls, Total	ND		0.010	0.0029	ug/L		11/01/11 12:30	11/04/11 00:17	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 180-19303/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20234 — **Prep Batch: 19303**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	90		47 - 150	11/01/11 12:30	11/04/11 00:17	1
DCB Decachlorobiphenyl (Surr)	89		50 - 140	11/01/11 12:30	11/04/11 00:17	1

Lab Sample ID: LCS 180-19303/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20234 — **Prep Batch: 19303**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.815		ug/L		81	60 - 110
PCB-1260	1.00	0.818		ug/L		82	60 - 111

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	96		47 - 150
DCB Decachlorobiphenyl (Surr)	95		50 - 140

Lab Sample ID: LCSD 180-19303/5-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20234 — **Prep Batch: 19303**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.00	0.832		ug/L		83	60 - 110	2	27
PCB-1260	1.00	0.839		ug/L		84	60 - 111	3	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	93		47 - 150
DCB Decachlorobiphenyl (Surr)	92		50 - 140

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 180-18845/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		4.0	0.45	ug/L		10/27/11 16:00	10/30/11 14:16	20
Dalapon	ND		5.0	0.69	ug/L		10/27/11 16:00	10/30/11 14:16	20
Dinoseb	ND		0.90	0.13	ug/L		10/27/11 16:00	10/30/11 14:16	20
Silvex (2,4,5-TP)	ND		1.0	0.11	ug/L		10/27/11 16:00	10/30/11 14:16	20

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	42		32 - 140	10/27/11 16:00	10/30/11 14:16	20

Lab Sample ID: LCS 180-18845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	16.0	7.64		ug/L		48	32 - 140

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 180-18845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dalapon	8.00	4.09	J	ug/L		51	32 - 140
Dinoseb	2.40	1.54		ug/L		64	10 - 140
Silvex (2,4,5-TP)	4.00	2.52		ug/L		63	32 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*53*		*32 - 140*

Lab Sample ID: LCSD 180-18845/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	16.0	9.44		ug/L		59	32 - 140	21	30
Dalapon	8.00	5.32		ug/L		66	32 - 140	26	30
Dinoseb	2.40	1.74		ug/L		73	10 - 140	12	30
Silvex (2,4,5-TP)	4.00	3.09		ug/L		77	32 - 140	20	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*66*		*32 - 140*

Lab Sample ID: MB 180-19343/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19912 — **Prep Batch: 19343**

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*70*		*32 - 140*	*11/01/11 16:45*	*11/05/11 17:34*	*20*

Lab Sample ID: MB 180-19343/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19911 — **Prep Batch: 19343**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		4.0	0.45	ug/L		11/01/11 16:45	11/05/11 17:58	20
Dalapon	ND		5.0	0.69	ug/L		11/01/11 16:45	11/05/11 17:58	20
Dinoseb	ND		0.90	0.13	ug/L		11/01/11 16:45	11/05/11 17:58	20
Silvex (2,4,5-TP)	ND		1.0	0.11	ug/L		11/01/11 16:45	11/05/11 17:58	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*65*		*32 - 140*	*11/01/11 16:45*	*11/05/11 17:58*	*20*

Lab Sample ID: LCS 180-19343/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19912 — **Prep Batch: 19343**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	16.0	11.4		ug/L		71	32 - 140
Dalapon	8.00	3.58	J	ug/L		45	32 - 140

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 180-19343/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19912 — **Prep Batch: 19343**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	80		32 - 140

Lab Sample ID: LCS 180-19343/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19911 — **Prep Batch: 19343**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dinoseb	2.40	2.05	p	ug/L		85	10 - 140
Silvex (2,4,5-TP)	4.00	2.81		ug/L		70	32 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	79		32 - 140

Lab Sample ID: LCSD 180-19343/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19912 — **Prep Batch: 19343**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	16.0	13.1		ug/L		82	32 - 140	14	30
Dalapon	8.00	5.67	*	ug/L		71	32 - 140	45	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	95		32 - 140

Lab Sample ID: LCSD 180-19343/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19911 — **Prep Batch: 19343**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dinoseb	2.40	2.23	p	ug/L		93	10 - 140	8	30
Silvex (2,4,5-TP)	4.00	3.28		ug/L		82	32 - 140	15	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	89		32 - 140

Lab Sample ID: MB 180-19528/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20292 — **Prep Batch: 19528**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.5	ug/Kg		11/03/11 04:08	11/09/11 13:53	20
2,4-D	ND		80	5.5	ug/Kg		11/03/11 04:08	11/09/11 13:53	20
Dalapon	ND		90	7.1	ug/Kg		11/03/11 04:08	11/09/11 13:53	20
Dinoseb	ND		12	4.5	ug/Kg		11/03/11 04:08	11/09/11 13:53	20
Silvex (2,4,5-TP)	ND		20	2.1	ug/Kg		11/03/11 04:08	11/09/11 13:53	20

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	79		42 - 140	11/03/11 04:08	11/09/11 13:53	20

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 180-19528/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20292 — **Prep Batch: 19528**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	80.0	44.4		ug/Kg		56	30 - 140
2,4-D	320	133		ug/Kg		42	30 - 140
Dalapon	160	91.8		ug/Kg		57	36 - 120
Dinoseb	48.0	9.67	J	ug/Kg		20	10 - 140
Silvex (2,4,5-TP)	80.0	58.8		ug/Kg		74	40 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*89*		*42 - 140*

Lab Sample ID: 180-5417-A-7-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20293 — **Prep Batch: 19528**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		153	72.1		ug/Kg	☼	47	30 - 140
2,4-D	ND		611	259		ug/Kg	☼	42	30 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*70*		*42 - 140*

Lab Sample ID: 180-5417-A-7-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20292 — **Prep Batch: 19528**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dalapon	ND		305	154	J	ug/Kg	☼	50	36 - 120
Dinoseb	ND		91.6	18.4	J	ug/Kg	☼	20	10 - 140
Silvex (2,4,5-TP)	ND		153	91.7		ug/Kg	☼	60	40 - 130

Lab Sample ID: 180-5417-A-7-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20293 — **Prep Batch: 19528**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	ND		612	298		ug/Kg	☼	49	30 - 140	14	30

Lab Sample ID: 180-5417-A-7-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20292 — **Prep Batch: 19528**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		153	85.8		ug/Kg	☼	56	30 - 140	18	30
Dalapon	ND		306	185		ug/Kg	☼	60	36 - 120	18	30
Dinoseb	ND		91.8	21.2	J	ug/Kg	☼	23	10 - 140	14	30
Silvex (2,4,5-TP)	ND		153	112		ug/Kg	☼	73	40 - 130	20	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*42 - 140*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 180-19329/15-A | **Client Sample ID: Method Blank**
Matrix: Sediment | **Prep Type: Total/NA**
Analysis Batch: 19544 | **Prep Batch: 19329**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 18:40	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 18:40	1
Boron	ND		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Barium	ND		0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 18:40	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 18:40	1
Calcium	0.0134	J	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 18:40	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Cobalt	0.00106	J	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 18:40	1
Chromium	ND		0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 18:40	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 18:40	1
Iron	ND		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 18:40	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 18:40	1
Magnesium	ND		5.0	0.021	mg/L		11/01/11 16:58	11/02/11 18:40	1
Manganese	ND		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 18:40	1
Sodium	ND		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 18:40	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 18:40	1
Lead	ND		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 18:40	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 18:40	1
Vanadium	ND		0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 18:40	1
Zinc	0.00523	J	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 18:40	1

Lab Sample ID: LCS 180-19329/16-A | **Client Sample ID: Lab Control Sample**
Matrix: Sediment | **Prep Type: Total/NA**
Analysis Batch: 19544 | **Prep Batch: 19329**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.0500	0.0518		mg/L		104	
Arsenic	2.00	2.02		mg/L		101	
Boron	1.00	1.01		mg/L		101	
Barium	2.00	2.07		mg/L		104	
Beryllium	0.0500	0.0515		mg/L		103	
Calcium	50.0	51.0		mg/L		102	
Cadmium	0.0500	0.0492		mg/L		98	
Cobalt	0.500	0.495		mg/L		99	
Chromium	0.200	0.206		mg/L		103	
Copper	0.250	0.261		mg/L		104	
Iron	1.00	0.922		mg/L		92	
Potassium	50.0	49.5		mg/L		99	
Magnesium	50.0	50.3		mg/L		101	
Manganese	0.500	0.510		mg/L		102	
Sodium	50.0	50.5		mg/L		101	
Nickel	0.500	0.495		mg/L		99	
Lead	0.500	0.498		mg/L		100	
Antimony	0.500	0.512		mg/L		102	
Selenium	2.00	1.95		mg/L		98	
Thallium	2.00	2.03		mg/L		101	
Vanadium	0.500	0.517		mg/L		103	
Zinc	0.500	0.517		mg/L		103	

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB 180-18692/14-B LB
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Method Blank
Prep Type: SPLP East
Prep Batch: 19329

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 18:46	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 18:46	1
Boron	ND		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Barium	ND		0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 18:46	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 18:46	1
Calcium	0.0266	J	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 18:46	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Cobalt	0.000580	J	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 18:46	1
Chromium	0.000890	J	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 18:46	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 18:46	1
Iron	ND		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 18:46	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 18:46	1
Magnesium	ND		5.0	0.021	mg/L		11/01/11 16:58	11/02/11 18:46	1
Manganese	ND		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 18:46	1
Sodium	ND		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 18:46	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 18:46	1
Lead	ND		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 18:46	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 18:46	1
Vanadium	ND		0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 18:46	1
Zinc	0.00357	J	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 18:46	1

Lab Sample ID: 180-5172-A-4-F MS
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Matrix Spike
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		0.0500	0.0498		mg/L		100	
Arsenic	0.0035	J	2.00	1.95		mg/L		97	
Boron	0.31		1.00	1.30		mg/L		99	
Barium	0.014	J	2.00	2.01		mg/L		100	
Beryllium	ND		0.0500	0.0492		mg/L		98	
Calcium	22	B	50.0	71.9		mg/L		99	
Cadmium	ND		0.0500	0.0470		mg/L		94	
Cobalt	0.0012	J B	0.500	0.475		mg/L		95	
Chromium	0.0032	J B	0.200	0.201		mg/L		99	
Copper	ND		0.250	0.253		mg/L		101	
Iron	0.93		1.00	2.06		mg/L		112	
Potassium	1.1	J	50.0	50.2		mg/L		98	
Magnesium	2.5	J	50.0	51.2		mg/L		97	
Manganese	0.0090	J	0.500	0.500		mg/L		98	
Sodium	18		50.0	67.0		mg/L		97	
Nickel	ND		0.500	0.474		mg/L		95	
Lead	0.0026	J	0.500	0.478		mg/L		95	
Antimony	ND		0.500	0.495		mg/L		99	
Selenium	ND		2.00	1.88		mg/L		94	
Thallium	ND		2.00	1.94		mg/L		97	
Vanadium	0.0031	J	0.500	0.500		mg/L		99	
Zinc	0.0081	J B	0.500	0.505		mg/L		99	

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 180-5172-A-4-G MSD
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Matrix Spike Duplicate
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		0.0500	0.0518		mg/L		104		3.97	
Arsenic	0.0035	J	2.00	2.03		mg/L		101		3.92	
Boron	0.31		1.00	1.36		mg/L		105		4.24	
Barium	0.014	J	2.00	2.09		mg/L		104		3.65	
Beryllium	ND		0.0500	0.0514		mg/L		103		4.42	
Calcium	22	B	50.0	75.5		mg/L		106		4.82	
Cadmium	ND		0.0500	0.0491		mg/L		98		4.45	
Cobalt	0.0012	J B	0.500	0.494		mg/L		98		3.87	
Chromium	0.0032	J B	0.200	0.209		mg/L		103		4.11	
Copper	ND		0.250	0.262		mg/L		105		3.86	
Iron	0.93		1.00	2.16		mg/L		123		5.08	
Potassium	1.1	J	50.0	51.8		mg/L		101		3.09	
Magnesium	2.5	J	50.0	53.6		mg/L		102		4.51	
Manganese	0.0090	J	0.500	0.521		mg/L		102		4.05	
Sodium	18		50.0	69.6		mg/L		102		3.74	
Nickel	ND		0.500	0.493		mg/L		99		4.03	
Lead	0.0026	J	0.500	0.498		mg/L		99		3.97	
Antimony	ND		0.500	0.516		mg/L		103		4.14	
Selenium	ND		2.00	1.96		mg/L		98		4.21	
Thallium	ND		2.00	2.02		mg/L		101		3.86	
Vanadium	0.0031	J	0.500	0.522		mg/L		104		4.37	
Zinc	0.0081	J B	0.500	0.526		mg/L		104		4.07	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-18829/1-A
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050	0.0091	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Boron	0.134	J	0.25	0.019	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Barium	ND		0.50	0.0054	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Beryllium	ND		0.050	0.0038	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Cadmium	ND		0.050	0.0035	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Calcium	2.51	J	5.0	0.66	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Chromium	0.0147	J	0.10	0.0031	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Cobalt	ND		0.025	0.00075	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Copper	ND		0.10	0.017	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Iron	1.48	J	2.5	0.18	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Manganese	0.0173	J	0.25	0.0052	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Nickel	ND		0.050	0.0057	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Potassium	ND		5.0	0.68	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Lead	0.00595	J	0.050	0.0019	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Silver	ND		0.050	0.0020	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Antimony	ND		0.10	0.0013	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Magnesium	1.77	J	5.0	0.094	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Selenium	ND		0.25	0.025	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Thallium	ND		0.050	0.0010	mg/Kg		10/27/11 15:40	11/08/11 22:56	1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-18829/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20157 — **Prep Batch: 18829**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		5.0	0.68	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Vanadium	0.0186	J	0.050	0.0040	mg/Kg		10/27/11 15:40	11/08/11 22:56	1
Zinc	ND		0.25	0.032	mg/Kg		10/27/11 15:40	11/08/11 22:56	1

Lab Sample ID: LCS 180-18829/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20157 — **Prep Batch: 18829**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	1.67		mg/Kg		84	80 - 120
Boron	50.0	50.1		mg/Kg		100	80 - 120
Barium	100	87.7		mg/Kg		88	80 - 120
Beryllium	2.50	2.44		mg/Kg		98	80 - 120
Cadmium	2.50	2.30		mg/Kg		92	80 - 120
Calcium	2500	2430		mg/Kg		97	80 - 120
Chromium	10.0	9.79		mg/Kg		98	80 - 120
Cobalt	25.0	24.1		mg/Kg		96	80 - 120
Copper	12.5	12.2		mg/Kg		97	80 - 120
Iron	50.0	52.3		mg/Kg		105	80 - 120
Manganese	25.0	25.3		mg/Kg		101	80 - 120
Nickel	25.0	24.0		mg/Kg		96	80 - 120
Potassium	2500	2440		mg/Kg		97	80 - 120
Lead	1.00	1.03		mg/Kg		103	80 - 120
Silver	2.50	2.33		mg/Kg		93	80 - 120
Antimony	25.0	22.6		mg/Kg		91	80 - 120
Magnesium	2500	2470		mg/Kg		99	80 - 120
Selenium	0.500	0.479		mg/Kg		96	80 - 120
Thallium	2.50	2.50		mg/Kg		100	80 - 120
Sodium	2500	2370		mg/Kg		95	80 - 120
Vanadium	25.0	24.4		mg/Kg		98	80 - 120
Zinc	25.0	23.3		mg/Kg		93	80 - 120

Lab Sample ID: 180-5219-1 MS — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20157 — **Prep Batch: 18829**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.0		3.30	7.34		mg/Kg	☼	100	75 - 125
Boron	9.5	B	82.5	95.0		mg/Kg	☼	104	75 - 125
Barium	19		165	171		mg/Kg	☼	92	75 - 125
Beryllium	0.27		4.13	4.24		mg/Kg	☼	96	75 - 125
Cadmium	0.30		4.13	4.12		mg/Kg	☼	93	75 - 125
Calcium	62000	B	4130	73500	4	mg/Kg	☼	272	75 - 125
Chromium	12	B	16.5	30.9		mg/Kg	☼	113	75 - 125
Cobalt	4.9		41.3	40.5		mg/Kg	☼	86	75 - 125
Copper	15		20.6	33.8		mg/Kg	☼	90	75 - 125
Iron	12000	B	82.5	14200	4	mg/Kg	☼	2727	75 - 125
Manganese	380	B	41.3	471	4	mg/Kg	☼	214	75 - 125
Nickel	10		41.3	45.6		mg/Kg	☼	85	75 - 125
Potassium	1000		4130	5820		mg/Kg	☼	116	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-5219-1 MS — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20157 — **Prep Batch: 18829**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	19	B	1.65	24.0	4	mg/Kg	☼	278	75 - 125
Silver	0.062	J	4.13	3.82		mg/Kg	☼	91	75 - 125
Antimony	0.16		41.3	27.7	F	mg/Kg	☼	67	75 - 125
Magnesium	29000	B	4130	36500	4	mg/Kg	☼	181	75 - 125
Selenium	0.36	J	0.825	1.01		mg/Kg	☼	79	75 - 125
Thallium	0.19		4.13	4.11		mg/Kg	☼	95	75 - 125
Sodium	120		4130	3820		mg/Kg	☼	90	75 - 125
Vanadium	14	B	41.3	57.8		mg/Kg	☼	105	75 - 125
Zinc	60		41.3	96.5		mg/Kg	☼	88	75 - 125

Lab Sample ID: 180-5219-1 MSD — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20157 — **Prep Batch: 18829**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.0		3.21	6.79		mg/Kg	☼	86	75 - 125	8	20
Boron	9.5	B	80.1	92.2		mg/Kg	☼	103	75 - 125	3	20
Barium	19		160	165		mg/Kg	☼	91	75 - 125	4	20
Beryllium	0.27		4.01	4.17		mg/Kg	☼	97	75 - 125	2	20
Cadmium	0.30		4.01	3.97		mg/Kg	☼	92	75 - 125	4	20
Calcium	62000	B	4010	65100	4	mg/Kg	☼	70	75 - 125	12	20
Chromium	12	B	16.0	29.5		mg/Kg	☼	108	75 - 125	5	20
Cobalt	4.9		40.1	38.6		mg/Kg	☼	84	75 - 125	5	20
Copper	15		20.0	32.2		mg/Kg	☼	85	75 - 125	5	20
Iron	12000	B	80.1	12900	4	mg/Kg	☼	1202	75 - 125	9	20
Manganese	380	B	40.1	423	4	mg/Kg	☼	100	75 - 125	11	20
Nickel	10		40.1	43.9		mg/Kg	☼	84	75 - 125	4	20
Potassium	1000		4010	5590		mg/Kg	☼	114	75 - 125	4	20
Lead	19	B	1.60	22.3	4	mg/Kg	☼	175	75 - 125	8	20
Silver	0.062	J	4.01	3.70		mg/Kg	☼	91	75 - 125	3	20
Antimony	0.16		40.1	26.9	F	mg/Kg	☼	67	75 - 125	3	20
Magnesium	29000	B	4010	32600	4	mg/Kg	☼	91	75 - 125	11	20
Selenium	0.36	J	0.801	1.01		mg/Kg	☼	81	75 - 125	1	20
Thallium	0.19		4.01	4.01		mg/Kg	☼	95	75 - 125	2	20
Sodium	120		4010	3690		mg/Kg	☼	89	75 - 125	3	20
Vanadium	14	B	40.1	55.5		mg/Kg	☼	103	75 - 125	4	20
Zinc	60		40.1	90.6		mg/Kg	☼	76	75 - 125	6	20

Lab Sample ID: MB 180-20148/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 20559 — **Prep Batch: 20148**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.29	ug/L		11/09/11 10:44	11/11/11 18:50	1
Boron	4.78	J	5.0	0.28	ug/L		11/09/11 10:44	11/11/11 18:50	1
Barium	ND		10	0.098	ug/L		11/09/11 10:44	11/11/11 18:50	1
Beryllium	ND		1.0	0.037	ug/L		11/09/11 10:44	11/11/11 18:50	1
Cadmium	ND		1.0	0.11	ug/L		11/09/11 10:44	11/11/11 18:50	1
Calcium	ND		100	2.8	ug/L		11/09/11 10:44	11/11/11 18:50	1
Chromium	ND		2.0	0.54	ug/L		11/09/11 10:44	11/11/11 18:50	1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-20148/1-A | **Client Sample ID: Method Blank**
Matrix: Water | **Prep Type: Total Recoverable**
Analysis Batch: 20559 | **Prep Batch: 20148**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		0.50	0.026	ug/L		11/09/11 10:44	11/11/11 18:50	1
Copper	ND		2.0	0.24	ug/L		11/09/11 10:44	11/11/11 18:50	1
Iron	ND		50	6.1	ug/L		11/09/11 10:44	11/11/11 18:50	1
Manganese	ND		5.0	0.039	ug/L		11/09/11 10:44	11/11/11 18:50	1
Nickel	ND		1.0	0.17	ug/L		11/09/11 10:44	11/11/11 18:50	1
Potassium	16.4	J	100	5.8	ug/L		11/09/11 10:44	11/11/11 18:50	1
Lead	0.0400	J	1.0	0.019	ug/L		11/09/11 10:44	11/11/11 18:50	1
Silver	ND		1.0	0.036	ug/L		11/09/11 10:44	11/11/11 18:50	1
Antimony	ND		2.0	0.019	ug/L		11/09/11 10:44	11/11/11 18:50	1
Magnesium	ND		100	1.2	ug/L		11/09/11 10:44	11/11/11 18:50	1
Selenium	ND		5.0	0.42	ug/L		11/09/11 10:44	11/11/11 18:50	1
Thallium	ND		1.0	0.015	ug/L		11/09/11 10:44	11/11/11 18:50	1
Sodium	ND		100	3.8	ug/L		11/09/11 10:44	11/11/11 18:50	1
Vanadium	0.319	J	1.0	0.082	ug/L		11/09/11 10:44	11/11/11 18:50	1
Zinc	ND		5.0	0.96	ug/L		11/09/11 10:44	11/11/11 18:50	1

Lab Sample ID: LCS 180-20148/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Water | **Prep Type: Total Recoverable**
Analysis Batch: 20559 | **Prep Batch: 20148**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	35.4		ug/L		89	80 - 120
Boron	1000	1040		ug/L		104	80 - 120
Barium	2000	1890		ug/L		95	80 - 120
Beryllium	50.0	48.3		ug/L		97	80 - 120
Cadmium	50.0	51.1		ug/L		102	80 - 120
Calcium	50000	49700		ug/L		99	80 - 120
Chromium	200	188		ug/L		94	80 - 120
Cobalt	500	453		ug/L		91	80 - 120
Copper	250	227		ug/L		91	80 - 120
Iron	1000	960		ug/L		96	80 - 120
Manganese	500	498		ug/L		100	80 - 120
Nickel	500	449		ug/L		90	80 - 120
Potassium	50000	48300		ug/L		97	80 - 120
Lead	20.0	20.4		ug/L		102	80 - 120
Silver	50.0	49.1		ug/L		98	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Magnesium	50000	50200		ug/L		100	80 - 120
Selenium	10.0	10.1		ug/L		101	80 - 120
Thallium	50.0	49.0		ug/L		98	80 - 120
Sodium	50000	48300		ug/L		97	80 - 120
Vanadium	500	470		ug/L		94	80 - 120
Zinc	500	484		ug/L		97	80 - 120

Lab Sample ID: 180-5463-C-1-B MS | **Client Sample ID: Matrix Spike**
Matrix: Water | **Prep Type: Dissolved**
Analysis Batch: 20559 | **Prep Batch: 20148**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		40.0	34.4		ug/L		86	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-5463-C-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 20559 — **Prep Batch: 20148**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	17	B	1000	1020		ug/L		100	75 - 125
Barium	20		2000	1960		ug/L		97	75 - 125
Beryllium	1.4		50.0	47.6		ug/L		92	75 - 125
Cadmium	6.9		50.0	55.8		ug/L		98	75 - 125
Calcium	370000		50000	424000	4	ug/L		102	75 - 125
Chromium	1.9	J	200	180		ug/L		89	75 - 125
Cobalt	260		500	694		ug/L		86	75 - 125
Copper	260		250	468		ug/L		83	75 - 125
Iron	51000		1000	52000	4	ug/L		72	75 - 125
Manganese	23000		500	23300	4	ug/L		110	75 - 125
Nickel	36		500	458		ug/L		84	75 - 125
Potassium	28000	B	50000	75100		ug/L		93	75 - 125
Lead	12	B	20.0	31.9		ug/L		99	75 - 125
Silver	ND		50.0	47.5		ug/L		95	75 - 125
Antimony	1.1	J	500	509		ug/L		102	75 - 125
Magnesium	150000		50000	199000		ug/L		97	75 - 125
Selenium	5.5		10.0	15.9		ug/L		105	75 - 125
Thallium	0.26	J	50.0	49.7		ug/L		99	75 - 125
Sodium	7300		50000	54300		ug/L		94	75 - 125
Vanadium	0.26	J B	500	456		ug/L		91	75 - 125
Zinc	6500		500	6780	4	ug/L		65	75 - 125

Lab Sample ID: 180-5463-C-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 20559 — **Prep Batch: 20148**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		40.0	35.2		ug/L		88	75 - 125	2	20
Boron	17	B	1000	1010		ug/L		99	75 - 125	1	20
Barium	20		2000	1930		ug/L		95	75 - 125	2	20
Beryllium	1.4		50.0	45.7		ug/L		89	75 - 125	4	20
Cadmium	6.9		50.0	54.9		ug/L		96	75 - 125	2	20
Calcium	370000		50000	417000	4	ug/L		88	75 - 125	2	20
Chromium	1.9	J	200	177		ug/L		88	75 - 125	2	20
Cobalt	260		500	677		ug/L		83	75 - 125	2	20
Copper	260		250	457		ug/L		78	75 - 125	2	20
Iron	51000		1000	51200	4	ug/L		-9	75 - 125	2	20
Manganese	23000		500	23000	4	ug/L		40	75 - 125	2	20
Nickel	36		500	446		ug/L		82	75 - 125	2	20
Potassium	28000	B	50000	73900		ug/L		91	75 - 125	2	20
Lead	12	B	20.0	31.7		ug/L		98	75 - 125	1	20
Silver	ND		50.0	46.3		ug/L		93	75 - 125	3	20
Antimony	1.1	J	500	493		ug/L		98	75 - 125	3	20
Magnesium	150000		50000	198000		ug/L		94	75 - 125	1	20
Selenium	5.5		10.0	15.6		ug/L		102	75 - 125	2	20
Thallium	0.26	J	50.0	49.2		ug/L		98	75 - 125	1	20
Sodium	7300		50000	53800		ug/L		93	75 - 125	1	20
Vanadium	0.26	J B	500	451		ug/L		90	75 - 125	1	20
Zinc	6500		500	6680	4	ug/L		45	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-19610/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:43	1

Lab Sample ID: LCS 180-19610/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00239		mg/L		96	80 - 120

Lab Sample ID: MB 180-20832/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20883 — **Prep Batch: 20832**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/15/11 14:29	11/15/11 19:14	1

Lab Sample ID: LCS 180-20832/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20883 — **Prep Batch: 20832**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.36		ug/L		94	80 - 120

Lab Sample ID: 180-5663-B-5-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20883 — **Prep Batch: 20832**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		1.00	0.968		ug/L		97	75 - 125

Lab Sample ID: 180-5663-B-5-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20883 — **Prep Batch: 20832**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	0.966		ug/L		97	75 - 125	0	20

Lab Sample ID: LB 180-18692/14-C LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:47	1

Lab Sample ID: 180-5219-8 MS — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.000948		mg/L		95	75 - 125

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-5219-8 MSD — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00103		mg/L		103	75 - 125	8	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 180-19737/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0055	mg/Kg		11/04/11 13:24	11/04/11 18:00	1

Lab Sample ID: LCS 180-19737/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.208	0.203		mg/Kg		98	80 - 120

Lab Sample ID: 180-5172-B-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.095		0.172	0.272		mg/Kg	☼	103	75 - 125

Lab Sample ID: 180-5172-B-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.095		0.172	0.267		mg/Kg	☼	100	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-18943/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18943

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.043	mg/L			10/27/11 11:11	1
Fluoride	0.0194	J	0.050	0.014	mg/L			10/27/11 11:11	1
Chloride	ND		1.0	0.20	mg/L			10/27/11 11:11	1
Sulfate	ND		1.0	0.21	mg/L			10/27/11 11:11	1

Lab Sample ID: LCS 180-18943/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18943

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.60		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 180-18943/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18943

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.50	2.55		mg/L		102	90 - 110
Chloride	50.0	52.6		mg/L		105	90 - 110
Sulfate	50.0	53.1		mg/L		106	90 - 110

Lab Sample ID: LCSD 180-18943/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18943

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.60		mg/L		104	90 - 110	0	20
Fluoride	2.50	2.56		mg/L		102	90 - 110	0	20
Chloride	50.0	52.6		mg/L		105	90 - 110	0	20
Sulfate	50.0	52.9		mg/L		106	90 - 110	0	20

Lab Sample ID: MB 180-19044/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19044

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.043	mg/L			10/28/11 07:23	1
Fluoride	0.0218	J	0.050	0.014	mg/L			10/28/11 07:23	1
Chloride	ND		1.0	0.20	mg/L			10/28/11 07:23	1
Sulfate	ND		1.0	0.21	mg/L			10/28/11 07:23	1

Lab Sample ID: LCS 180-19044/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19044

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.62		mg/L		105	90 - 110
Fluoride	2.50	2.66		mg/L		106	90 - 110
Chloride	50.0	52.6		mg/L		105	90 - 110
Sulfate	50.0	53.0		mg/L		106	90 - 110

Lab Sample ID: LCSD 180-19044/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19044

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.60		mg/L		104	90 - 110	1	20
Fluoride	2.50	2.56		mg/L		102	90 - 110	4	20
Chloride	50.0	52.7		mg/L		105	90 - 110	0	20
Sulfate	50.0	53.3		mg/L		107	90 - 110	1	20

Lab Sample ID: MB 180-20017/6 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.0063	mg/Kg			11/07/11 11:29	1
Fluoride	ND		0.050	0.015	mg/Kg			11/07/11 11:29	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-20017/6 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.675	J	1.0	0.22	mg/Kg			11/07/11 11:29	1
Sulfate	ND		1.0	0.12	mg/Kg			11/07/11 11:29	1

Lab Sample ID: LCS 180-20017/5 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.50		mg/Kg		100	90 - 110
Fluoride	2.50	2.34		mg/Kg		94	90 - 110
Chloride	50.0	49.8		mg/Kg		100	90 - 110
Sulfate	50.0	49.2		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 180-20017/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.52		mg/Kg		101	90 - 110	1	20
Fluoride	2.50	2.36		mg/Kg		95	90 - 110	1	20
Chloride	50.0	50.0		mg/Kg		100	90 - 110	0	20
Sulfate	50.0	49.4		mg/Kg		99	90 - 110	0	20

Lab Sample ID: LB3 180-19896/9-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 20017

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.063	mg/Kg			11/07/11 18:24	1
Fluoride	ND		0.50	0.15	mg/Kg			11/07/11 18:24	1
Chloride	6.72	J	10	2.2	mg/Kg			11/07/11 18:24	1
Sulfate	8.21	J	10	1.2	mg/Kg			11/07/11 18:24	1

Method: 335.1 - Cyanide, Amenable

Lab Sample ID: MB 240-21100/2-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21197 — **Prep Batch: 21100**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.50	0.10	mg/Kg		10/28/11 15:49	10/28/11 17:50	1

Lab Sample ID: LCS 240-21100/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21197 — **Prep Batch: 21100**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	2.22	2.09		mg/Kg		94	68 - 123

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: 180-5219-1 MS — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21197 — **Prep Batch: 21100**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.85		3.17	5.73		mg/Kg	☼	154	

Lab Sample ID: 180-5219-1 MSD — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21197 — **Prep Batch: 21100**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.85		3.14	5.49		mg/Kg	☼	148		4	

Lab Sample ID: MB 240-21848/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:27	1

Lab Sample ID: MB 240-21848/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:27	1

Lab Sample ID: LCS 240-21848/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0449	0.0353		mg/L		79	62 - 118

Lab Sample ID: MRL 240-21886/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21886

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0100	0.00992	J	mg/L		99	70 - 130

Lab Sample ID: MB 240-22035/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22063 — **Prep Batch: 22035**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:28	1

Lab Sample ID: MB 240-22035/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22063 — **Prep Batch: 22035**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:28	1

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: MB 240-22035/4-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22063 — **Prep Batch: 22035**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:29	1

Lab Sample ID: LCS 240-22035/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22063 — **Prep Batch: 22035**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0449	0.0495		mg/L		110	62 - 118

Lab Sample ID: 180-5219-16 MS — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 22063 — **Prep Batch: 22035**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	1.1		0.0400	0.980	4	mg/L		-289	42 - 140

Lab Sample ID: 180-5219-16 MSD — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 22063 — **Prep Batch: 22035**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	1.1		0.0400	0.819	4	mg/L		-691	42 - 140	18	20

Lab Sample ID: LB 240-21620/14-C LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:38	1

Lab Sample ID: 180-5219-1 MS — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.075		0.0400	0.0710	F	mg/L		-11	42 - 140

Lab Sample ID: 180-5219-1 MSD — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.075		0.0400	0.0739	F	mg/L		-4	42 - 140	4	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-19741/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20027 — **Prep Batch: 19741**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.0590	J	0.10	0.033	mg/L		11/04/11 13:00	11/08/11 12:30	1

Lab Sample ID: LCS 180-19741/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20027 — **Prep Batch: 19741**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	2.00	1.82		mg/L		91	90 - 110

Lab Sample ID: 180-5272-J-4-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20027 — **Prep Batch: 19741**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	0.78	B	2.00	2.97		mg/L		109	90 - 110

Lab Sample ID: 180-5272-J-4-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20027 — **Prep Batch: 19741**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia, distilled	0.78	B	2.00	2.79		mg/L		100	90 - 110	6	20

Lab Sample ID: MB 180-20007/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20353 — **Prep Batch: 20007**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.0940	J	0.10	0.033	mg/L		11/08/11 09:30	11/10/11 12:04	1

Lab Sample ID: LCS 180-20007/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20353 — **Prep Batch: 20007**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	2.00	2.03		mg/L		102	90 - 110

Lab Sample ID: 180-5366-J-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20353 — **Prep Batch: 20007**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	0.18	B	2.00	2.21		mg/L		101	90 - 110

Lab Sample ID: 180-5366-J-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20353 — **Prep Batch: 20007**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia, distilled	0.18	B	2.00	2.43	F	mg/L		112	90 - 110	10	20

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 240-21273/10-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21316 — **Prep Batch: 21273**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphate	ND		9.6	0.095	mg/Kg		10/31/11 09:00	10/31/11 14:55	1

Lab Sample ID: LCS 240-21273/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21316 — **Prep Batch: 21273**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphate	529	492		mg/Kg		93	75 - 125

Lab Sample ID: 240-5104-D-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21316 — **Prep Batch: 21273**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphate	150		49.9	172	F	mg/Kg	☼	52	75 - 125

Lab Sample ID: 240-5104-D-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21316 — **Prep Batch: 21273**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphate	150		48.9	242	F	mg/Kg	☼	195	75 - 125	34	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 180-18905/4 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18905

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:32	1

Lab Sample ID: LCS 180-18905/3 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18905

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.249		mg/L		100	85 - 115

Lab Sample ID: MB 180-18972/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18972

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 13:25	1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 180-18972/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18972

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.261		mg/L		104	85 - 115

Lab Sample ID: MB 180-19042/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19042

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 13:53	1

Lab Sample ID: LCS 180-19042/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19042

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.250		mg/L		100	85 - 115

Lab Sample ID: MB 180-19805/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20497 — **Prep Batch: 19805**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.40	0.10	mg/Kg		11/10/11 12:00	11/11/11 15:07	1

Lab Sample ID: LCSI 180-19805/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20497 — **Prep Batch: 19805**

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	708	675		mg/Kg		95	80 - 120

Lab Sample ID: LCSS 180-19805/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20497 — **Prep Batch: 19805**

Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.0	19.0		mg/Kg		95	80 - 120

Lab Sample ID: 180-5238-B-12-H MSS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20497 — **Prep Batch: 19805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		22.9	17.3		mg/Kg	☼	76	75 - 125

Lab Sample ID: 180-5238-B-12-I MSI — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20497 — **Prep Batch: 19805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		810	683		mg/Kg	☼	84	75 - 125

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 180-5238-B-12-J DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20497 — **Prep Batch: 19805**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cr (VI)	ND			ND		mg/Kg	☼			NC	20

Lab Sample ID: 180-5219-12 MS — **Client Sample ID: CH-2011-MU3-GN**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 18972

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	ND		0.250	0.257		mg/L		103	85 - 115		

Lab Sample ID: 180-5219-12 MSD — **Client Sample ID: CH-2011-MU3-GN**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 18972

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.257		mg/L		103	85 - 115	0	20

Lab Sample ID: 180-5219-16 MS — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 19042

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	ND		0.250	0.246		mg/L		99	85 - 115		

Lab Sample ID: 180-5219-16 MSD — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 19042

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.252		mg/L		101	85 - 115	2	20

Lab Sample ID: LB 180-18695/14-A LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:33	1

Lab Sample ID: 180-5219-2 MS — **Client Sample ID: CH-2011-MU2-GN**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	ND		0.250	0.257		mg/L		103	85 - 115		

Lab Sample ID: 180-5219-2 MSD — **Client Sample ID: CH-2011-MU2-GN**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.245		mg/L		98	85 - 115	5	20

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 180-5219-8 MS — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		0.250	0.246		mg/L		99	85 - 115

Lab Sample ID: 180-5219-8 MSD — **Client Sample ID: CH-2011-MU1-GNL**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.244		mg/L		98	85 - 115	1	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-21082/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21102 — **Prep Batch: 21082**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.50	0.099	mg/Kg		10/28/11 13:05	10/28/11 14:14	1

Lab Sample ID: LCS 240-21082/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21102 — **Prep Batch: 21082**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	2.27	2.08		mg/Kg		92	68 - 123

Lab Sample ID: 180-5219-1 MS — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21102 — **Prep Batch: 21082**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.22	J	3.37	3.72		mg/Kg	☼	104	50 - 134

Lab Sample ID: 180-5219-1 MSD — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21102 — **Prep Batch: 21082**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.22	J	3.27	3.58		mg/Kg	☼	103	50 - 134	4	20

Lab Sample ID: MB 240-21648/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 240-21648/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0433		mg/L		96	69 - 118

Lab Sample ID: MRL 240-21689/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.00877	J	mg/L		88	70 - 130

Lab Sample ID: MB 240-22035/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22062 — **Prep Batch: 22035**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/04/11 16:50	11/04/11 17:23	1

Lab Sample ID: LCS 240-22035/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22062 — **Prep Batch: 22035**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0516		mg/L		115	69 - 120

Lab Sample ID: MRL 240-22036/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 22036

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.00742	J	mg/L		74	70 - 130

Lab Sample ID: 180-5219-10 MS — **Client Sample ID: CH-2011-MU2-GN**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 22062 — **Prep Batch: 22035**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.00117		0.0400	0.0388		mg/L		97	42 - 140

Lab Sample ID: 180-5219-10 MSD — **Client Sample ID: CH-2011-MU2-GN**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 22062 — **Prep Batch: 22035**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.00117		0.0400	0.0384		mg/L		96	42 - 140	1	20

Lab Sample ID: LB 240-21620/14-B LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 240-5399-D-40-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.0400	0.0382		mg/L		96	42 - 140

Lab Sample ID: 240-5399-D-40-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.0400	0.0377		mg/L		94	42 - 140	1	20

Method: 9040B - pH

Lab Sample ID: LCS 180-18939/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.000		SU		100	99 - 101

Lab Sample ID: 180-5309-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18939

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	5.61		5.600		SU		0.2	2

Lab Sample ID: LCS 180-19036/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.990		SU		100	99 - 101

Lab Sample ID: 180-5353-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19036

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	5.39		5.410		SU		0.4	2

Method: Moisture - Percent Moisture

Lab Sample ID: 180-5219-1 DU — **Client Sample ID: CH-2011-MU1-GS**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18622

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	39		40		%		0.8	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-18748/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			10/27/11 09:13	1

Lab Sample ID: LCS 180-18748/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	413	386		mg/L		93	80 - 120

Lab Sample ID: 180-5266-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	680		691		mg/L		1	20

Lab Sample ID: MB 180-18900/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18900

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			10/28/11 08:45	1

Lab Sample ID: LCS 180-18900/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18900

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	413	430		mg/L		104	80 - 120

Lab Sample ID: 180-5306-B-2 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18900

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	140		138		mg/L		1	20

Lab Sample ID: MB 180-19040/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19040

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			10/29/11 13:51	1

Lab Sample ID: LCS 180-19040/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19040

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	413	352		mg/L		85	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 180-5353-A-1 DU
Matrix: Water
Analysis Batch: 19040

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	27			27.0		mg/L				0	20

GC/MS VOA

Prep Batch: 19085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	5035	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	5035	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	5035	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	5035	
180-5238-G-6-A MSD	Matrix Spike Duplicate	Total/NA	Sediment	5035	
180-5238-H-6-A MS	Matrix Spike	Total/NA	Sediment	5035	
LCS 180-19085/2-A	Lab Control Sample	Total/NA	Sediment	5035	
MB 180-19085/1-A	Method Blank	Total/NA	Sediment	5035	

Analysis Batch: 19093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8260B	19085
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8260B	19085
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8260B	19085
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8260B	19085
180-5238-G-6-A MSD	Matrix Spike Duplicate	Total/NA	Sediment	8260B	19085
180-5238-H-6-A MS	Matrix Spike	Total/NA	Sediment	8260B	19085
LCS 180-19085/2-A	Lab Control Sample	Total/NA	Sediment	8260B	19085
MB 180-19085/1-A	Method Blank	Total/NA	Sediment	8260B	19085

Prep Batch: 19546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	5035	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	5035	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	5035	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	5035	
LCS 180-19546/2-A	Lab Control Sample	Total/NA	Sediment	5035	
LCSD 180-19546/3-A	Lab Control Sample Dup	Total/NA	Sediment	5035	
MB 180-19546/1-A	Method Blank	Total/NA	Sediment	5035	

Analysis Batch: 19593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8260B	19546
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8260B	19546
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8260B	19546
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8260B	19546
LCS 180-19546/2-A	Lab Control Sample	Total/NA	Sediment	8260B	19546
LCSD 180-19546/3-A	Lab Control Sample Dup	Total/NA	Sediment	8260B	19546
MB 180-19546/1-A	Method Blank	Total/NA	Sediment	8260B	19546

Analysis Batch: 19824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	8260B	
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	8260B	
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	8260B	
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	8260B	
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	8260B	
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	8260B	
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	8260B	
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	8260B	
LCS 180-19824/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 180-19824/6	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS VOA (Continued)

Analysis Batch: 19824 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-19824/3	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 19224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	3520C	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	3520C	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	3520C	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	3520C	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	3520C	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	3520C	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	3520C	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	3520C	
LCS 180-19224/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 180-19224/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 180-19224/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 19538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	8270C LL	19224
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	8270C LL	19224
LCS 180-19224/2-A	Lab Control Sample	Total/NA	Water	8270C LL	19224
LCSD 180-19224/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	19224
MB 180-19224/1-A	Method Blank	Total/NA	Water	8270C LL	19224

Prep Batch: 19662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	3541	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	3541	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	3541	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	3541	
180-5219-4 MS	CH-2011-MU3-GN	Total/NA	Sediment	3541	
180-5219-4 MSD	CH-2011-MU3-GN	Total/NA	Sediment	3541	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	3541	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	3541	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	3541	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	3541	
LCS 180-19662/2-A	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-19662/1-A	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 19771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8270C LL	19662
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8270C LL	19662
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8270C LL	19662

GC/MS Semi VOA (Continued)

Analysis Batch: 19771 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8270C LL	19662

Analysis Batch: 19772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8270C LL	19662
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8270C LL	19662
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8270C LL	19662
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8270C LL	19662
180-5219-4 MS	CH-2011-MU3-GN	Total/NA	Sediment	8270C LL	19662
180-5219-4 MSD	CH-2011-MU3-GN	Total/NA	Sediment	8270C LL	19662
LCS 180-19662/2-A	Lab Control Sample	Total/NA	Sediment	8270C LL	19662
MB 180-19662/1-A	Method Blank	Total/NA	Sediment	8270C LL	19662

GC VOA

Prep Batch: 19073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	DILeach_Prep	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	DILeach_Prep	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	DILeach_Prep	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	DILeach_Prep	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	DILeach_Prep	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	DILeach_Prep	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	DILeach_Prep	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	DILeach_Prep	
LB 180-19073/1-A LB	Method Blank	Total/NA	Sediment	DILeach_Prep	
LCS 180-19073/2-A	Lab Control Sample	Total/NA	Sediment	DILeach_Prep	
LCSD 180-19073/3-A	Lab Control Sample Dup	Total/NA	Sediment	DILeach_Prep	

Analysis Batch: 19633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8015C	19073
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8015C	19073
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8015C	19073
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8015C	19073
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8015C	19073
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8015C	19073
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8015C	19073
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8015C	19073
LB 180-19073/1-A LB	Method Blank	Total/NA	Sediment	8015C	19073
LCS 180-19073/2-A	Lab Control Sample	Total/NA	Sediment	8015C	19073
LCSD 180-19073/3-A	Lab Control Sample Dup	Total/NA	Sediment	8015C	19073

GC Semi VOA

Prep Batch: 18835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	3510C	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	3510C	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	3510C	
LCS 180-18835/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 180-18835/4-A	Lab Control Sample	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 18835 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 180-18835/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 180-18835/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 180-18835/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 18845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	8151A	
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	8151A	
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	8151A	
LCS 180-18845/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 180-18845/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 180-18845/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 19080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-B-2-P MS	Matrix Spike	Total/NA	Sediment	3541	
180-5048-B-2-Q MSD	Matrix Spike Duplicate	Total/NA	Sediment	3541	
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	3541	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	3541	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	3541	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	3541	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	3541	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	3541	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	3541	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	3541	
LCS 180-19080/2-B	Lab Control Sample	Total/NA	Sediment	3541	
LCS 180-19080/5-B	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 19089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	8151A	18845
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	8151A	18845
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	8151A	18845
LCS 180-18845/2-A	Lab Control Sample	Total/NA	Water	8151A	18845
LCSD 180-18845/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	18845
MB 180-18845/1-A	Method Blank	Total/NA	Water	8151A	18845

Analysis Batch: 19205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	8081A	18835
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	8081A	18835
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	8081A	18835
LCS 180-18835/2-A	Lab Control Sample	Total/NA	Water	8081A	18835
LCSD 180-18835/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	18835
MB 180-18835/1-A	Method Blank	Total/NA	Water	8081A	18835

Prep Batch: 19303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	3510C	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	3510C	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	3510C	

GC Semi VOA (Continued)

Prep Batch: 19303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	3510C	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	3510C	
LCS 180-19303/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 180-19303/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-19303/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 180-19303/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 180-19303/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 19311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	8082A	18835
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	8082A	18835
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	8082A	18835
LCS 180-18835/4-A	Lab Control Sample	Total/NA	Water	8082A	18835
LCSD 180-18835/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	18835
MB 180-18835/1-A	Method Blank	Total/NA	Water	8082A	18835

Prep Batch: 19343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	8151A	
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	8151A	
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	8151A	
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	8151A	
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	8151A	
LCS 180-19343/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 180-19343/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 180-19343/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 19528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8151A	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8151A	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8151A	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8151A	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8151A	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8151A	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8151A	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8151A	
180-5417-A-7-A MS	Matrix Spike	Total/NA	Sediment	8151A	
180-5417-A-7-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	
LCS 180-19528/2-A	Lab Control Sample	Total/NA	Sediment	8151A	
MB 180-19528/1-A	Method Blank	Total/NA	Sediment	8151A	

Analysis Batch: 19911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	8151A	19343
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	8151A	19343
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	8151A	19343
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	8151A	19343
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	8151A	19343
LCS 180-19343/2-A	Lab Control Sample	Total/NA	Water	8151A	19343
LCSD 180-19343/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	19343

GC Semi VOA (Continued)

Analysis Batch: 19911 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-19343/1-A	Method Blank	Total/NA	Water	8151A	19343

Analysis Batch: 19912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	8151A	19343
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	8151A	19343
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	8151A	19343
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	8151A	19343
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	8151A	19343
LCS 180-19343/2-A	Lab Control Sample	Total/NA	Water	8151A	19343
LCSD 180-19343/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	19343
MB 180-19343/1-A	Method Blank	Total/NA	Water	8151A	19343

Analysis Batch: 19915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8081A	19080
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8081A	19080
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8081A	19080
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8081A	19080
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8081A	19080
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8081A	19080
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8081A	19080
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8081A	19080
LCS 180-19080/2-B	Lab Control Sample	Total/NA	Sediment	8081A	19080
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	8081A	19080

Analysis Batch: 19916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	8081A	19303
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	8081A	19303
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	8081A	19303
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	8081A	19303
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	8081A	19303
LCS 180-19303/2-A	Lab Control Sample	Total/NA	Water	8081A	19303
LCSD 180-19303/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	19303
MB 180-19303/1-A	Method Blank	Total/NA	Water	8081A	19303

Analysis Batch: 20234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	8082A	19303
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	8082A	19303
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	8082A	19303
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	8082A	19303
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	8082A	19303
LCS 180-19303/4-A	Lab Control Sample	Total/NA	Water	8082A	19303
LCSD 180-19303/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	19303
MB 180-19303/1-A	Method Blank	Total/NA	Water	8082A	19303

Analysis Batch: 20292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8151A	19528
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8151A	19528

GC Semi VOA (Continued)

Analysis Batch: 20292 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8151A	19528
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8151A	19528
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8151A	19528
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8151A	19528
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8151A	19528
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8151A	19528
180-5417-A-7-A MS	Matrix Spike	Total/NA	Sediment	8151A	19528
180-5417-A-7-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	19528
LCS 180-19528/2-A	Lab Control Sample	Total/NA	Sediment	8151A	19528
MB 180-19528/1-A	Method Blank	Total/NA	Sediment	8151A	19528

Analysis Batch: 20293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8151A	19528
180-5417-A-7-A MS	Matrix Spike	Total/NA	Sediment	8151A	19528
180-5417-A-7-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	19528

Analysis Batch: 20521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-B-2-P MS	Matrix Spike	Total/NA	Sediment	8082	19080
180-5048-B-2-Q MSD	Matrix Spike Duplicate	Total/NA	Sediment	8082	19080
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	8082	19080
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	8082	19080
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	8082	19080
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	8082	19080
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	8082	19080
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	8082	19080
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	8082	19080
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	8082	19080
LCS 180-19080/5-B	Lab Control Sample	Total/NA	Sediment	8082	19080
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	8082	19080

Metals

Leach Batch: 18692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-A-4-F MS	Matrix Spike	SPLP East	Sediment	1312	
180-5172-A-4-G MSD	Matrix Spike Duplicate	SPLP East	Sediment	1312	
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	1312	
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	1312	
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	1312	
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	1312	
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	1312	
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	1312	
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	1312	
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	1312	
180-5219-8 MS	CH-2011-MU1-GNL	SPLP East	Sediment	1312	
180-5219-8 MSD	CH-2011-MU1-GNL	SPLP East	Sediment	1312	
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	1312	
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	1312	

Metals (Continued)

Prep Batch: 18829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	3050B	
180-5219-1 MS	CH-2011-MU1-GS	Total/NA	Sediment	3050B	
180-5219-1 MSD	CH-2011-MU1-GS	Total/NA	Sediment	3050B	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	3050B	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	3050B	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	3050B	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	3050B	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	3050B	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	3050B	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	3050B	
LCS 180-18829/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
MB 180-18829/1-A	Method Blank	Total/NA	Sediment	3050B	

Prep Batch: 19329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-A-4-F MS	Matrix Spike	SPLP East	Sediment	3010A	18692
180-5172-A-4-G MSD	Matrix Spike Duplicate	SPLP East	Sediment	3010A	18692
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	3010A	18692
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	3010A	18692
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	3010A	18692
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	3010A	18692
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	3010A	18692
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	3010A	18692
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	3010A	18692
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	3010A	18692
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	3010A	18692
LCS 180-19329/16-A	Lab Control Sample	Total/NA	Sediment	3010A	
MB 180-19329/15-A	Method Blank	Total/NA	Sediment	3010A	

Analysis Batch: 19544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-A-4-F MS	Matrix Spike	SPLP East	Sediment	6010B	19329
180-5172-A-4-G MSD	Matrix Spike Duplicate	SPLP East	Sediment	6010B	19329
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	6010B	19329
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	6010B	19329
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	6010B	19329
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	6010B	19329
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	6010B	19329
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	6010B	19329
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	6010B	19329
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	6010B	19329
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	6010B	19329
LCS 180-19329/16-A	Lab Control Sample	Total/NA	Sediment	6010B	19329
MB 180-19329/15-A	Method Blank	Total/NA	Sediment	6010B	19329

Prep Batch: 19610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	7470A	18692
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	7470A	18692
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	7470A	18692
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	7470A	18692
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	7470A	18692

Metals (Continued)

Prep Batch: 19610 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	7470A	18692
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	7470A	18692
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	7470A	18692
180-5219-8 MS	CH-2011-MU1-GNL	SPLP East	Sediment	7470A	18692
180-5219-8 MSD	CH-2011-MU1-GNL	SPLP East	Sediment	7470A	18692
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	7470A	18692
LCS 180-19610/2-A	Lab Control Sample	Total/NA	Sediment	7470A	
MB 180-19610/1-A	Method Blank	Total/NA	Sediment	7470A	

Analysis Batch: 19656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	7470A	19610
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	7470A	19610
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	7470A	19610
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	7470A	19610
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	7470A	19610
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	7470A	19610
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	7470A	19610
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	7470A	19610
180-5219-8 MS	CH-2011-MU1-GNL	SPLP East	Sediment	7470A	19610
180-5219-8 MSD	CH-2011-MU1-GNL	SPLP East	Sediment	7470A	19610
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	7470A	19610
LCS 180-19610/2-A	Lab Control Sample	Total/NA	Sediment	7470A	19610
MB 180-19610/1-A	Method Blank	Total/NA	Sediment	7470A	19610

Prep Batch: 19737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-B-1-E MS	Matrix Spike	Total/NA	Sediment	7471A	
180-5172-B-1-F MSD	Matrix Spike Duplicate	Total/NA	Sediment	7471A	
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	7471A	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	7471A	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	7471A	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	7471A	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	7471A	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	7471A	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	7471A	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	7471A	
LCS 180-19737/2-A	Lab Control Sample	Total/NA	Sediment	7471A	
MB 180-19737/1-A	Method Blank	Total/NA	Sediment	7471A	

Analysis Batch: 19765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-B-1-E MS	Matrix Spike	Total/NA	Sediment	7471A	19737
180-5172-B-1-F MSD	Matrix Spike Duplicate	Total/NA	Sediment	7471A	19737
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	7471A	19737
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	7471A	19737
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	7471A	19737
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	7471A	19737
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	7471A	19737
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	7471A	19737
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	7471A	19737
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	7471A	19737

Metals (Continued)

Analysis Batch: 19765 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-19737/2-A	Lab Control Sample	Total/NA	Sediment	7471A	19737
MB 180-19737/1-A	Method Blank	Total/NA	Sediment	7471A	19737

Prep Batch: 20148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	3005A	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	3005A	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	3005A	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	3005A	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	3005A	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	3005A	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	3005A	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	3005A	
180-5463-C-1-B MS	Matrix Spike	Dissolved	Water	3005A	
180-5463-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	
LCS 180-20148/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-20148/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 20157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	6020	18829
180-5219-1 MS	CH-2011-MU1-GS	Total/NA	Sediment	6020	18829
180-5219-1 MSD	CH-2011-MU1-GS	Total/NA	Sediment	6020	18829
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	6020	18829
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	6020	18829
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	6020	18829
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	6020	18829
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	6020	18829
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	6020	18829
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	6020	18829
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	6020	18829
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	6020	18829
LCS 180-18829/2-A	Lab Control Sample	Total/NA	Sediment	6020	18829
MB 180-18829/1-A	Method Blank	Total/NA	Sediment	6020	18829

Analysis Batch: 20559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	6020	20148
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	6020	20148
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	6020	20148
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	6020	20148
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	6020	20148
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	6020	20148
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	6020	20148
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	6020	20148
180-5463-C-1-B MS	Matrix Spike	Dissolved	Water	6020	20148
180-5463-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	6020	20148
LCS 180-20148/2-A	Lab Control Sample	Total Recoverable	Water	6020	20148
MB 180-20148/1-A	Method Blank	Total Recoverable	Water	6020	20148

Metals (Continued)

Prep Batch: 20832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	7470A	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	7470A	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	7470A	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	7470A	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	7470A	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	7470A	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	7470A	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	7470A	
180-5663-B-5-E MS	Matrix Spike	Total/NA	Water	7470A	
180-5663-B-5-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
LCS 180-20832/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 180-20832/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 20883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	7470A	20832
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	7470A	20832
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	7470A	20832
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	7470A	20832
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	7470A	20832
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	7470A	20832
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	7470A	20832
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	7470A	20832
180-5663-B-5-E MS	Matrix Spike	Total/NA	Water	7470A	20832
180-5663-B-5-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	20832
LCS 180-20832/2-A	Lab Control Sample	Total/NA	Water	7470A	20832
MB 180-20832/1-A	Method Blank	Total/NA	Water	7470A	20832

General Chemistry

Analysis Batch: 18622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	Moisture	
180-5219-1 DU	CH-2011-MU1-GS	Total/NA	Sediment	Moisture	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	Moisture	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	Moisture	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	Moisture	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	Moisture	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	Moisture	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	Moisture	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	Moisture	

Leach Batch: 18695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	1312	
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	1312	
180-5219-2 MS	CH-2011-MU2-GN	SPLP East	Sediment	1312	
180-5219-2 MSD	CH-2011-MU2-GN	SPLP East	Sediment	1312	
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	1312	
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	1312	
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	1312	
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	1312	

General Chemistry (Continued)

Leach Batch: 18695 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	1312	
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	1312	
180-5219-8 MS	CH-2011-MU1-GNL	SPLP East	Sediment	1312	
180-5219-8 MSD	CH-2011-MU1-GNL	SPLP East	Sediment	1312	
LB 180-18695/14-A LB	Method Blank	SPLP East	Sediment	1312	

Analysis Batch: 18748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	SM 2540C	
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	SM 2540C	
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	SM 2540C	
180-5266-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 180-18748/1	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 180-18748/2	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 18900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	SM 2540C	
180-5306-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 180-18900/1	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 180-18900/2	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 18905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP East	Sediment	7196A	
180-5219-2	CH-2011-MU2-GN	SPLP East	Sediment	7196A	
180-5219-2 MS	CH-2011-MU2-GN	SPLP East	Sediment	7196A	
180-5219-2 MSD	CH-2011-MU2-GN	SPLP East	Sediment	7196A	
180-5219-3	CH-2011-MU2-GS	SPLP East	Sediment	7196A	
180-5219-4	CH-2011-MU3-GN	SPLP East	Sediment	7196A	
180-5219-5	CH-2011-MU3-GS	SPLP East	Sediment	7196A	
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP East	Sediment	7196A	
180-5219-7	CH-2011-MU1-GNU	SPLP East	Sediment	7196A	
180-5219-8	CH-2011-MU1-GNL	SPLP East	Sediment	7196A	
180-5219-8 MS	CH-2011-MU1-GNL	SPLP East	Sediment	7196A	
180-5219-8 MSD	CH-2011-MU1-GNL	SPLP East	Sediment	7196A	
LB 180-18695/14-A LB	Method Blank	SPLP East	Sediment	7196A	
LCS 180-18905/3	Lab Control Sample	Total/NA	Sediment	7196A	
MB 180-18905/4	Method Blank	Total/NA	Sediment	7196A	

Analysis Batch: 18939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	9040B	
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	9040B	
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	9040B	
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	9040B	
180-5309-B-1 DU	Duplicate	Total/NA	Water	9040B	
LCS 180-18939/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 18943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	300.0	

General Chemistry (Continued)

Analysis Batch: 18943 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	300.0	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	300.0	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	300.0	
LCS 180-18943/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 180-18943/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 180-18943/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 18972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	7196A	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	7196A	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	7196A	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	7196A	
180-5219-12 MS	CH-2011-MU3-GN	Dissolved	SET, Dissolved	7196A	
180-5219-12 MSD	CH-2011-MU3-GN	Dissolved	SET, Dissolved	7196A	
LCS 180-18972/3	Lab Control Sample	Total/NA	Water	7196A	
MB 180-18972/4	Method Blank	Total/NA	Water	7196A	

Analysis Batch: 19036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	9040B	
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	9040B	
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	9040B	
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	9040B	
180-5353-B-1 DU	Duplicate	Total/NA	Water	9040B	
LCS 180-19036/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 19040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	SM 2540C	
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	SM 2540C	
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	SM 2540C	
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	SM 2540C	
180-5353-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 180-19040/1	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 180-19040/2	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 19042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	7196A	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	7196A	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	7196A	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	7196A	
180-5219-16 MS	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	7196A	
180-5219-16 MSD	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	7196A	
LCS 180-19042/3	Lab Control Sample	Total/NA	Water	7196A	
MB 180-19042/4	Method Blank	Total/NA	Water	7196A	

Analysis Batch: 19044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	300.0	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	300.0	

General Chemistry (Continued)

Analysis Batch: 19044 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	300.0	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	300.0	
LCS 180-19044/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 180-19044/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 180-19044/6	Method Blank	Total/NA	Water	300.0	

Prep Batch: 19741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5272-J-4-B MS	Matrix Spike	Total/NA	Water	Distill/Ammonia	
180-5272-J-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Ammonia	
LCS 180-19741/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 180-19741/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Prep Batch: 19805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	3060A	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	3060A	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	3060A	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	3060A	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	3060A	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	3060A	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	3060A	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	3060A	
180-5238-B-12-H MSS	Matrix Spike	Total/NA	Sediment	3060A	
180-5238-B-12-I MSI	Matrix Spike	Total/NA	Sediment	3060A	
180-5238-B-12-J DU	Duplicate	Total/NA	Sediment	3060A	
LCSI 180-19805/3-A	Lab Control Sample	Total/NA	Sediment	3060A	
LCSS 180-19805/2-A	Lab Control Sample	Total/NA	Sediment	3060A	
MB 180-19805/1-A	Method Blank	Total/NA	Sediment	3060A	

Leach Batch: 19896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Soluble	Sediment	DI Leach	
180-5219-2	CH-2011-MU2-GN	Soluble	Sediment	DI Leach	
180-5219-3	CH-2011-MU2-GS	Soluble	Sediment	DI Leach	
180-5219-4	CH-2011-MU3-GN	Soluble	Sediment	DI Leach	
180-5219-5	CH-2011-MU3-GS	Soluble	Sediment	DI Leach	
180-5219-6	CH-2011-MU3-GS(DUP)	Soluble	Sediment	DI Leach	
180-5219-7	CH-2011-MU1-GNU	Soluble	Sediment	DI Leach	
180-5219-8	CH-2011-MU1-GNL	Soluble	Sediment	DI Leach	
LB3 180-19896/9-A LB3	Method Blank	Soluble	Sediment	DI Leach	

Prep Batch: 20007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	Distill/Ammonia	

General Chemistry (Continued)

Prep Batch: 20007 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5366-J-1-B MS	Matrix Spike	Total/NA	Water	Distill/Ammonia	
180-5366-J-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Ammonia	
LCS 180-20007/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 180-20007/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 20017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Soluble	Sediment	300.0	
180-5219-2	CH-2011-MU2-GN	Soluble	Sediment	300.0	
180-5219-3	CH-2011-MU2-GS	Soluble	Sediment	300.0	
180-5219-4	CH-2011-MU3-GN	Soluble	Sediment	300.0	
180-5219-5	CH-2011-MU3-GS	Soluble	Sediment	300.0	
180-5219-6	CH-2011-MU3-GS(DUP)	Soluble	Sediment	300.0	
180-5219-7	CH-2011-MU1-GNU	Soluble	Sediment	300.0	
180-5219-8	CH-2011-MU1-GNL	Soluble	Sediment	300.0	
LB3 180-19896/9-A LB3	Method Blank	Soluble	Sediment	300.0	
LCS 180-20017/5	Lab Control Sample	Total/NA	Sediment	300.0	
LCSD 180-20017/7	Lab Control Sample Dup	Total/NA	Sediment	300.0	
MB 180-20017/6	Method Blank	Total/NA	Sediment	300.0	

Analysis Batch: 20027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Total/NA	SET, Dissolved	350.1	19741
180-5219-10	CH-2011-MU2-GN	Total/NA	SET, Dissolved	350.1	19741
180-5219-11	CH-2011-MU2-GS	Total/NA	SET, Dissolved	350.1	19741
180-5219-12	CH-2011-MU3-GN	Total/NA	SET, Dissolved	350.1	19741
180-5272-J-4-B MS	Matrix Spike	Total/NA	Water	350.1	19741
180-5272-J-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	19741
LCS 180-19741/2-A	Lab Control Sample	Total/NA	Water	350.1	19741
MB 180-19741/1-A	Method Blank	Total/NA	Water	350.1	19741

Analysis Batch: 20353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-13	CH-2011-MU3-GS	Total/NA	SET, Dissolved	350.1	20007
180-5219-14	CH-2011-MU3-GS(DUP)	Total/NA	SET, Dissolved	350.1	20007
180-5219-15	CH-2011-MU1-GNU	Total/NA	SET, Dissolved	350.1	20007
180-5219-16	CH-2011-MU1-GNL	Total/NA	SET, Dissolved	350.1	20007
180-5366-J-1-B MS	Matrix Spike	Total/NA	Water	350.1	20007
180-5366-J-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	20007
LCS 180-20007/2-A	Lab Control Sample	Total/NA	Water	350.1	20007
MB 180-20007/1-A	Method Blank	Total/NA	Water	350.1	20007

Analysis Batch: 20497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	7196A	19805
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	7196A	19805
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	7196A	19805
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	7196A	19805
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	7196A	19805
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	7196A	19805
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	7196A	19805
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	7196A	19805

General Chemistry (Continued)

Analysis Batch: 20497 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5238-B-12-H MSS	Matrix Spike	Total/NA	Sediment	7196A	19805
180-5238-B-12-I MSI	Matrix Spike	Total/NA	Sediment	7196A	19805
180-5238-B-12-J DU	Duplicate	Total/NA	Sediment	7196A	19805
LCSI 180-19805/3-A	Lab Control Sample	Total/NA	Sediment	7196A	19805
LCSS 180-19805/2-A	Lab Control Sample	Total/NA	Sediment	7196A	19805
MB 180-19805/1-A	Method Blank	Total/NA	Sediment	7196A	19805

Prep Batch: 21082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	9012A	
180-5219-1 MS	CH-2011-MU1-GS	Total/NA	Sediment	9012A	
180-5219-1 MSD	CH-2011-MU1-GS	Total/NA	Sediment	9012A	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	9012A	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	9012A	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	9012A	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	9012A	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	9012A	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	9012A	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	9012A	
LCS 240-21082/2-A	Lab Control Sample	Total/NA	Sediment	9012A	
MB 240-21082/1-A	Method Blank	Total/NA	Sediment	9012A	

Prep Batch: 21100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	Distill/CN	
180-5219-1 MS	CH-2011-MU1-GS	Total/NA	Sediment	Distill/CN	
180-5219-1 MSD	CH-2011-MU1-GS	Total/NA	Sediment	Distill/CN	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	Distill/CN	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	Distill/CN	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	Distill/CN	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	Distill/CN	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	Distill/CN	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	Distill/CN	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	Distill/CN	
LCS 240-21100/3-A	Lab Control Sample	Total/NA	Sediment	Distill/CN	
MB 240-21100/2-A	Method Blank	Total/NA	Sediment	Distill/CN	

Analysis Batch: 21102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	9012A	21082
180-5219-1 MS	CH-2011-MU1-GS	Total/NA	Sediment	9012A	21082
180-5219-1 MSD	CH-2011-MU1-GS	Total/NA	Sediment	9012A	21082
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	9012A	21082
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	9012A	21082
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	9012A	21082
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	9012A	21082
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	9012A	21082
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	9012A	21082
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	9012A	21082
LCS 240-21082/2-A	Lab Control Sample	Total/NA	Sediment	9012A	21082
MB 240-21082/1-A	Method Blank	Total/NA	Sediment	9012A	21082

General Chemistry (Continued)

Analysis Batch: 21197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	335.1	21100
180-5219-1 MS	CH-2011-MU1-GS	Total/NA	Sediment	335.1	21100
180-5219-1 MSD	CH-2011-MU1-GS	Total/NA	Sediment	335.1	21100
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	335.1	21100
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	335.1	21100
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	335.1	21100
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	335.1	21100
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	335.1	21100
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	335.1	21100
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	335.1	21100
LCS 240-21100/3-A	Lab Control Sample	Total/NA	Sediment	335.1	21100
MB 240-21100/2-A	Method Blank	Total/NA	Sediment	335.1	21100

Prep Batch: 21273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	365.2/365.3/365	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	365.2/365.3/365	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	365.2/365.3/365	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	365.2/365.3/365	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	365.2/365.3/365	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	365.2/365.3/365	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	365.2/365.3/365	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	365.2/365.3/365	
240-5104-D-1-G MS	Matrix Spike	Total/NA	Sediment	365.2/365.3/365	
240-5104-D-1-H MSD	Matrix Spike Duplicate	Total/NA	Sediment	365.2/365.3/365	
LCS 240-21273/11-A	Lab Control Sample	Total/NA	Sediment	365.2/365.3/365	
MB 240-21273/10-A	Method Blank	Total/NA	Sediment	365.2/365.3/365	

Analysis Batch: 21316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	365.1	21273
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	365.1	21273
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	365.1	21273
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	365.1	21273
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	365.1	21273
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	365.1	21273
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	365.1	21273
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	365.1	21273
240-5104-D-1-G MS	Matrix Spike	Total/NA	Sediment	365.1	21273
240-5104-D-1-H MSD	Matrix Spike Duplicate	Total/NA	Sediment	365.1	21273
LCS 240-21273/11-A	Lab Control Sample	Total/NA	Sediment	365.1	21273
MB 240-21273/10-A	Method Blank	Total/NA	Sediment	365.1	21273

Analysis Batch: 21417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	9012A	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	9012A	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	9012A	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	9012A	
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	9012A	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	9012A	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	9012A	

General Chemistry (Continued)

Analysis Batch: 21417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	9012A	

Leach Batch: 21620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP	Sediment	1312	
180-5219-2	CH-2011-MU2-GN	SPLP	Sediment	1312	
180-5219-3	CH-2011-MU2-GS	SPLP	Sediment	1312	
180-5219-4	CH-2011-MU3-GN	SPLP	Sediment	1312	
180-5219-5	CH-2011-MU3-GS	SPLP	Sediment	1312	
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP	Sediment	1312	
180-5219-7	CH-2011-MU1-GNU	SPLP	Sediment	1312	
180-5219-8	CH-2011-MU1-GNL	SPLP	Sediment	1312	
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	1312	
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	1312	

Prep Batch: 21648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP	Sediment	9012A	21620
180-5219-2	CH-2011-MU2-GN	SPLP	Sediment	9012A	21620
180-5219-3	CH-2011-MU2-GS	SPLP	Sediment	9012A	21620
180-5219-4	CH-2011-MU3-GN	SPLP	Sediment	9012A	21620
180-5219-5	CH-2011-MU3-GS	SPLP	Sediment	9012A	21620
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP	Sediment	9012A	21620
180-5219-7	CH-2011-MU1-GNU	SPLP	Sediment	9012A	21620
180-5219-8	CH-2011-MU1-GNL	SPLP	Sediment	9012A	21620
240-5399-D-40-B MS	Matrix Spike	SPLP	Sediment	9012A	
240-5399-D-40-C MSD	Matrix Spike Duplicate	SPLP	Sediment	9012A	
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	9012A	21620
LCS 240-21648/2-A	Lab Control Sample	Total/NA	Sediment	9012A	
MB 240-21648/1-A	Method Blank	Total/NA	Sediment	9012A	

Analysis Batch: 21689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP	Sediment	9012A	21648
180-5219-2	CH-2011-MU2-GN	SPLP	Sediment	9012A	21648
180-5219-3	CH-2011-MU2-GS	SPLP	Sediment	9012A	21648
180-5219-4	CH-2011-MU3-GN	SPLP	Sediment	9012A	21648
180-5219-5	CH-2011-MU3-GS	SPLP	Sediment	9012A	21648
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP	Sediment	9012A	21648
180-5219-7	CH-2011-MU1-GNU	SPLP	Sediment	9012A	21648
180-5219-8	CH-2011-MU1-GNL	SPLP	Sediment	9012A	21648
240-5399-D-40-B MS	Matrix Spike	SPLP	Sediment	9012A	21648
240-5399-D-40-C MSD	Matrix Spike Duplicate	SPLP	Sediment	9012A	21648
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	9012A	21648
LCS 240-21648/2-A	Lab Control Sample	Total/NA	Sediment	9012A	21648
MB 240-21648/1-A	Method Blank	Total/NA	Sediment	9012A	21648
MRL 240-21689/6 MRL	Lab Control Sample	Total/NA	Sediment	9012A	

Prep Batch: 21848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP	Sediment	Distill/CN	21620
180-5219-1 MS	CH-2011-MU1-GS	SPLP	Sediment	Distill/CN	

General Chemistry (Continued)

Prep Batch: 21848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1 MSD	CH-2011-MU1-GS	SPLP	Sediment	Distill/CN	
180-5219-2	CH-2011-MU2-GN	SPLP	Sediment	Distill/CN	21620
180-5219-3	CH-2011-MU2-GS	SPLP	Sediment	Distill/CN	21620
180-5219-4	CH-2011-MU3-GN	SPLP	Sediment	Distill/CN	21620
180-5219-5	CH-2011-MU3-GS	SPLP	Sediment	Distill/CN	21620
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP	Sediment	Distill/CN	21620
180-5219-7	CH-2011-MU1-GNU	SPLP	Sediment	Distill/CN	21620
180-5219-8	CH-2011-MU1-GNL	SPLP	Sediment	Distill/CN	21620
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	Distill/CN	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	Distill/CN	
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	Distill/CN	21620
LCS 240-21848/1-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 240-21848/2-A	Method Blank	Total/NA	Water	Distill/CN	
MB 240-21848/3-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 21886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP	Sediment	335.1	21848
180-5219-1 MS	CH-2011-MU1-GS	SPLP	Sediment	335.1	21848
180-5219-1 MSD	CH-2011-MU1-GS	SPLP	Sediment	335.1	21848
180-5219-2	CH-2011-MU2-GN	SPLP	Sediment	335.1	21848
180-5219-3	CH-2011-MU2-GS	SPLP	Sediment	335.1	21848
180-5219-4	CH-2011-MU3-GN	SPLP	Sediment	335.1	21848
180-5219-5	CH-2011-MU3-GS	SPLP	Sediment	335.1	21848
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP	Sediment	335.1	21848
180-5219-7	CH-2011-MU1-GNU	SPLP	Sediment	335.1	21848
180-5219-8	CH-2011-MU1-GNL	SPLP	Sediment	335.1	21848
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	335.1	21848
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	335.1	21848
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	335.1	21848
LCS 240-21848/1-A	Lab Control Sample	Total/NA	Water	335.1	21848
MB 240-21848/2-A	Method Blank	Total/NA	Water	335.1	21848
MB 240-21848/3-A	Method Blank	Total/NA	Water	335.1	21848
MRL 240-21886/6 MRL	Lab Control Sample	Total/NA	Water	335.1	

Prep Batch: 22035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	9012A	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	Distill/CN	
180-5219-10 MS	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	
180-5219-10 MSD	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	9012A	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	9012A	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	Distill/CN	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	9012A	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	Distill/CN	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	9012A	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	Distill/CN	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	9012A	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	Distill/CN	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	9012A	

General Chemistry (Continued)

Prep Batch: 22035 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	Distill/CN	
180-5219-16 MS	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	Distill/CN	
180-5219-16 MSD	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	Distill/CN	
LCS 240-22035/2-A	Lab Control Sample	Total/NA	Water	9012A	
LCS 240-22035/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 240-22035/1-A	Method Blank	Total/NA	Water	9012A	
MB 240-22035/1-A	Method Blank	Total/NA	Water	Distill/CN	
MB 240-22035/3-A	Method Blank	Total/NA	Water	Distill/CN	
MB 240-22035/4-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 22036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-22036/6 MRL	Lab Control Sample	Total/NA	Water	9012A	

Analysis Batch: 22062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	9012A	22035
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	22035
180-5219-10 MS	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	22035
180-5219-10 MSD	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	22035
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	9012A	22035
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	9012A	22035
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	9012A	22035
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	9012A	22035
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	9012A	22035
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	9012A	22035
LCS 240-22035/2-A	Lab Control Sample	Total/NA	Water	9012A	22035
MB 240-22035/1-A	Method Blank	Total/NA	Water	9012A	22035

Analysis Batch: 22063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	335.1	22035
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	335.1	22035
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	335.1	22035
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	335.1	22035
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	335.1	22035
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	335.1	22035
180-5219-16 MS	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	335.1	22035
180-5219-16 MSD	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	335.1	22035
LCS 240-22035/2-A	Lab Control Sample	Total/NA	Water	335.1	22035
MB 240-22035/1-A	Method Blank	Total/NA	Water	335.1	22035
MB 240-22035/3-A	Method Blank	Total/NA	Water	335.1	22035
MB 240-22035/4-A	Method Blank	Total/NA	Water	335.1	22035

Analysis Batch: 23961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	SPLP	Sediment	9012A	
180-5219-2	CH-2011-MU2-GN	SPLP	Sediment	9012A	
180-5219-3	CH-2011-MU2-GS	SPLP	Sediment	9012A	
180-5219-4	CH-2011-MU3-GN	SPLP	Sediment	9012A	
180-5219-5	CH-2011-MU3-GS	SPLP	Sediment	9012A	
180-5219-6	CH-2011-MU3-GS(DUP)	SPLP	Sediment	9012A	

General Chemistry (Continued)

Analysis Batch: 23961 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-7	CH-2011-MU1-GNU	SPLP	Sediment	9012A	
180-5219-8	CH-2011-MU1-GNL	SPLP	Sediment	9012A	

Analysis Batch: 23975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-9	CH-2011-MU1-GS	Dissolved	SET, Dissolved	9012A	
180-5219-10	CH-2011-MU2-GN	Dissolved	SET, Dissolved	9012A	
180-5219-11	CH-2011-MU2-GS	Dissolved	SET, Dissolved	9012A	
180-5219-12	CH-2011-MU3-GN	Dissolved	SET, Dissolved	9012A	
180-5219-13	CH-2011-MU3-GS	Dissolved	SET, Dissolved	9012A	
180-5219-14	CH-2011-MU3-GS(DUP)	Dissolved	SET, Dissolved	9012A	
180-5219-15	CH-2011-MU1-GNU	Dissolved	SET, Dissolved	9012A	
180-5219-16	CH-2011-MU1-GNL	Dissolved	SET, Dissolved	9012A	

Organic Prep

Analysis Batch: 18782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-1	CH-2011-MU1-GS	Total/NA	Sediment	35 ILL C-395	
180-5219-2	CH-2011-MU2-GN	Total/NA	Sediment	35 ILL C-395	
180-5219-3	CH-2011-MU2-GS	Total/NA	Sediment	35 ILL C-395	
180-5219-4	CH-2011-MU3-GN	Total/NA	Sediment	35 ILL C-395	

Analysis Batch: 18932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5219-5	CH-2011-MU3-GS	Total/NA	Sediment	35 ILL C-395	
180-5219-6	CH-2011-MU3-GS(DUP)	Total/NA	Sediment	35 ILL C-395	
180-5219-7	CH-2011-MU1-GNU	Total/NA	Sediment	35 ILL C-395	
180-5219-8	CH-2011-MU1-GNL	Total/NA	Sediment	35 ILL C-395	

180-5219

.2 .80 1.0 .60 .90 .30 2.30 1.00 2.20 2.40 1.40 2.30 1.30 2.40 2.40 2.00 #2

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

5/15/2012

TestAmerica Laboratory location:

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Client Contact			
Company Name: Future Net Group, Inc	Client Project Manager: Dr. Ali Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn St.	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email: alia@futurenetgroup.com	Analysis Turnaround Time (in BUS days)	
Phone: (313)-544-7117		TAT if different from below ____	
Project Name: Calumet Harbor	Method of Shipment/Carrier:	☒ 3 weeks	
Project Number: 11655-004	Shipping/Tracking No:	☐ 2 weeks	
PO#		☐ 1 week	
		☐ 2 days	
		☐ 1 day	

COC No: 1 of 1 COCs

For lab use only: Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite-C/Grab-G	Analyses: VOCs	Bulk Chemistry	Grain Size	SPLP	Elutriate	Sample Specific Notes / Special Instructions:
CH-2011-MU1-GS	10/22	5:15		X	X										N	C	X	X	X	X	X	VOCs sample delivered to Chicago Lab
CH-2011-MU2-GN	"	4:00																				
CH-2011-MU2-GS	"	9:15																				
CH-2011-MU3-GN	"	9:00																				
CH-2011-MU3-GS	"	11:15																				
CH-2011-MU3-GS (Dup)	"	11:15																				
CH-2011-MU1-GNU	10/23	10:00																				
CH-2011-MU1-GNL	10/23	11:15																				

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:
Check the SOW for complete analytical list required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/24 9:00AM		TARPH	10/25/11 1000
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

FedEx Express **US Airbill** FedEx Tracking Number 8741 9090 2377

From
Date 10/24 11:11 Sender's FedEx Account Number [redacted] 427 870103
Sender's Name Ali Al Saffar Phone 313 544-7117
Company FutureNet Group, Inc.
Address 12801 Auburn Dept./Floor/Suite/Room
City Detroit State MI ZIP 48223
Your Internal Billing Reference 11655-004

To
Recipient's Name Sample Receiving Phone 412 963-7058
Company Test America
Address 301 Alpha Drive Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address RIDC Park
Use this line for the HOLD location address or for continuation of your shipping address.
City Pittsburg State PA ZIP 15238

01 ☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.
31 ☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8741 9090 2377

0200 Form ID No. **FedEx Retrieval Copy**

4a Express Package Service * To most locations. *Packages up to 150 lbs.*

01 ☒ FedEx Priority Overnight Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
05 ☐ FedEx Standard Overnight Next business afternoon.* Saturday Delivery NOT available.
06 ☐ FedEx First Overnight Earliest next business morning delivery to select locations.*
03 ☐ FedEx 2Day Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
20 ☐ FedEx Express Saver Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. *Packages over 150 lbs.*

70 ☐ FedEx 1Day Freight Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.
80 ☐ FedEx 2Day Freight Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
83 ☐ FedEx 3Day Freight Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☐ No Signature Required Package may be left without obtaining a signature for delivery.
10 ☐ Direct Signature Someone at recipient's address may sign for delivery. *Fee applies.*
34 ☐ Indirect Signature If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?
One box must be checked.
☒ No 04 ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. 06 ☐ Dry Ice Dry Ice, 9, UN 1845 ___ x ___ kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Obtain recip. Acct. No. ☐
Enter FedEx Acct. No. or Credit Card No. below.
1 ☐ Sender Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check
[redacted] 7-8 [redacted] Credit Card Auth.

Total Packages 9 Total Weight 601 lbs.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

606

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fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx Express US Airbill

FedEx Tracking Number 8741 9090 2403 0200

Form ID No.

FedEx Retrieval Copy

1 From

Date 10/24/2011 Sender's FedEx Account Number 402 7870 103

Sender's Name Ali Al Saffar Phone 313 544-7117

Company FutureNet Group, Inc.

Address 12801 Auburn Dept./Floor/Suite/Room

City Detroit State MI ZIP 48223

2 Your Internal Billing Reference 11655-004

3 To

Recipient's Name Sample Recieving Phone 412 963-7058

Company Test America

Address 301 Alpha Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address KIDC Park

Use this line for the HOLD location address or for continuation of your shipping address.

City Pittsburg State PA ZIP 15238

01 ☐ HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4a Express Package Service * To most locations. Packages up to 150 lb.

01 ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

06 ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.*

03 ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lb.

70 ☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 1Day Freight Booking No.

80 ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

83 ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 09 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☒ Sender — Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☒ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 626 lbs. Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

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0.2 #2

180-5219

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

TestAmerica Laboratory location:

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Client Contact			
Company Name: FNG	Client Project Manager: Dr. Ali Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn St.	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email: ali@fatureng.com		
Phone: (313) 544-7117			
Project Name: Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-004	Shipping/Tracking No:		
PO#			

COC No: 1 of 1 COCs

For lab use only: Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No.:

Analysis Turnaround Time (in BUS days)
TAT if different from below
☐ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite-C/Grab-G	Analyses: VOCs	Sample Specific Notes / Special Instructions:
CH-2011-MU4-GS	10/22	5:15			X												X	
CH-2011-MU2-GN	"	9:00			X													
CH-2011-MU2-GS	"	1:15			X													
CH-2011-MU2-GN	"	9:00			X													
CH-2011-MU2-GS	"	11:15			X													
CH-2011-MU2-GS(DUP)	"	11:15			X													
CH-2011-MU1-GNU	10/23	10:00			X													
CH-2011-MU1-GNL	10/23	11:15			X													

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:
Check the SOW for required analytes and reporting limit

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/24 1256		TAL	10-24-11/1250
			Received by:		
	TestAmerica	10/25/11 1600		ROAK	10/26/11
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

5/15/2012

ORIGIN ID: JOTA (708) 534-5200
BOTTLE PREP
TESTAMERICA LABS
2417 BOND ST

UNIVERSITY PARK, IL 60466
UNITED STATES US

SHIP DATE: 25OCT11
ACTWGT: 84.0 LB MAN
CAD: 0033264/CAFE2509

BILL RECIPIENT

TO SAMPLE RECEIPT
TEST AMERICA
301 ALPHA DR.
STE. 3
PITTSBURG PA 15238

DEPT: PM

FedEx Express

WED - 26 OCT A2
FIRST OVERNIGHT

2 of 2
MPS# 0263 6607 6570 2824
Mstr# 6607 6570 2813 0201

15238
PA-US PIT

N1 AGCA

Part # 156140-434 RIT2 02/11

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-1

Login Number: 5219
List Number: 1
Creator: Gamber, Tom

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-1

Login Number: 5219
List Number: 1
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 10/28/11 12:58 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-1

Login Number: 5219
List Number: 2
Creator: Livengood, Chris

List Source: TestAmerica Canton
List Creation: 10/31/11 12:17 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-1

Login Number: 5219
List Number: 3
Creator: Ferrel, Matthew

List Source: TestAmerica Canton
List Creation: 11/02/11 01:20 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-1

Login Number: 5219
List Number: 4
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 11/04/11 09:44 AM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-5172-1
Client Project/Site: Calument Harbor
Revision: 4

For:
FutureNet Group, Inc
12801 Auburn Street
Detroit, Michigan 48223

Attn: Jim Finetti

Authorized for release by:
5/15/2012 4:55:27 PM

Carrie Gamber
Customer Service Manager
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 180-5172-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-5172-1 REVISED

NOTE: This report has been revised to report the corrected units on the non-amenable cyanide sediment samples.

NOTE: This report has been revised to report all fraction of amenable cyanide.

NOTE: This report has been revised to include the hexavalent chromium ORP page.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
Many samples were analyzed at a dilution due to the sample matrix.

The matrix spike and matrix spike duplicate recovered outside QC limits for several compounds and were also analyzed at a dilution.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Many samples were analyzed at a dilution for Total Phosphorus.

Method(s) 335.1 and 9012A: The following samples were received with greater than 50% of holding time expired: CH-2011-MU1-G3 (180-5172-3), CH-2011-MU2-G1 (180-5172-5). As such, the laboratory had insufficient time remaining to perform the analysis within holding time.

Method(s) 7196A: The matrix soluble spike and post digestion spike (MSS/PDS) recoveries for batch 20176 were outside of control limits. The associated laboratory control sample (LCSS/LCSI) recoveries met acceptance criteria, which demonstrates that the analytical system was operating in control. This condition is most likely due to a matrix interference. An ORP was performed for sample 180-5172-b-7, and the chart is included in the report. This is the first analysis of the batch; a reanalysis will be performed in accordance with the SOP.

Method(s) 7196A: The matrix soluble spike and post digestion spike (MSS/PDS) recoveries for batch 20323 were outside of control limits. The associated laboratory control sample (LCSS/LCSI) recoveries met acceptance criteria, which demonstrates that the analytical system was operating in control. This condition is most likely due to a matrix interference. An ORP was performed for sample 180-5172-b-7, and the chart is included in the report. This is the second analysis of the batch in accordance with the SOP.

The matrix spikes recovered low outside QC limits for the non-amenable cyanide.

No other analytical or quality issues were noted.

Geotechnical
No analytical or quality issues were noted.

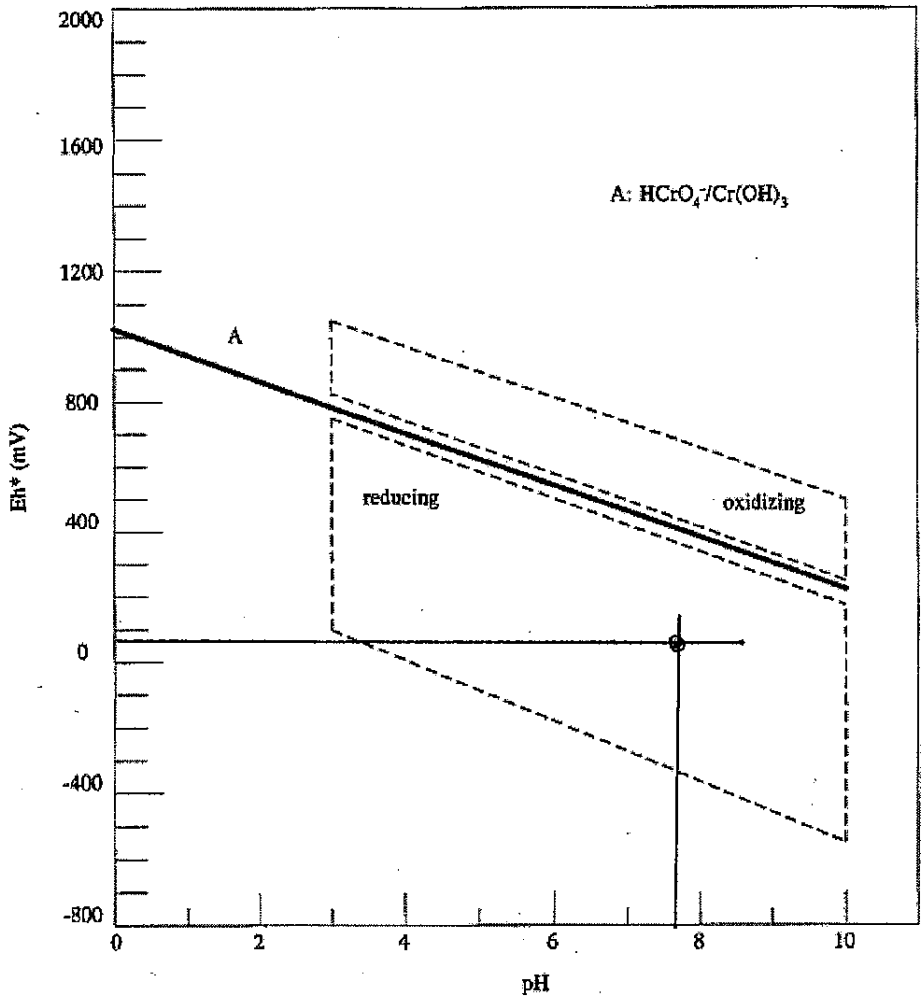
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Pittsburgh- ORP Form

Analyst: Janea Patterson	Date: 11-10-11
Lot#: 180-5172	Sample #: ~~12~~ JP 11-10-11 #7
Eh value (mV): 65	pH: 7.53

FIGURE 2
Eh/pH PHASE DIAGRAM

The dashed lines define Eh-pH boundaries commonly encountered in soils and sediments.



* Note the Eh values plotted on this diagram are corrected for the reference electrode voltage: 244 mV units must be added to the measured value when a separate calomel electrode is used, or 199 mV units must be added if a combination platinum electrode is used.

X:\Forms\Wet Chem Cover Sheets\Eh_pH_Diagram_3060Aform_R0_021910.doc – Rev. 0, 02/19/10

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
*	LCS or LCSD exceeds the control limits

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HF	Field parameter with a holding time of 15 minutes
H	Sample was prepped or analyzed beyond the specified holding time
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
TestAmerica Pittsburgh	California	NELAC	9	4224CA
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	L-A-B	DoD ELAP		L2314
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAC	1	203011
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	New York	NELAC	2	11182
TestAmerica Pittsburgh	North Carolina DENR	State Program	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	Federal		P330-10-00139
TestAmerica Pittsburgh	USDA	Federal		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia DEP	State Program	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sample Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-5172-1	CH-2011-MU1-G1	Sediment	10/21/11 10:00	10/22/11 09:45
180-5172-2	CH-2011-MU1-G2	Sediment	10/21/11 11:00	10/22/11 09:45
180-5172-3	CH-2011-MU1-G3	Sediment	10/21/11 11:30	10/22/11 09:45
180-5172-4	CH-2011-MU1-COMP	Sediment	10/21/11 11:30	10/22/11 09:45
180-5172-5	CH-2011-MU2-G1	Sediment	10/21/11 13:15	10/22/11 09:45
180-5172-6	CH-2011-MU2-G2	Sediment	10/21/11 15:30	10/22/11 09:45
180-5172-7	CH-2011-MU2-G3	Sediment	10/21/11 17:10	10/22/11 09:45
180-5172-8	CH-2011-MU2-COMP	Sediment	10/21/11 17:10	10/22/11 09:45
180-5172-9	CH-2011-MU1-COMP	SET, Dissolved	10/26/11 15:30	10/26/11 15:45
180-5172-10	CH-2011-MU2-COMP	SET, Dissolved	10/26/11 15:30	10/26/11 15:45
180-5172-12	CH-2011-MU1-COMP	Sediment	10/21/11 11:30	10/22/11 09:45
180-5172-13	CH-2011-MU2-COMP	Sediment	10/21/11 17:10	10/22/11 09:45
180-5172-14	CH-2011-MU1-COMP	Water	10/21/11 11:30	10/22/11 09:45
180-5172-15	CH-2011-MU2-COMP	Water	10/21/11 17:10	10/22/11 09:45

Method Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL PIT
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	TAL PIT
8081A	Organochlorine Pesticides (GC)	SW846	TAL PIT
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
8151A	Herbicides (GC)	SW846	TAL PIT
6010B	Metals (ICP)	SW846	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
7471A	Mercury (CVAA)	SW846	TAL PIT
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
335.1	Cyanide, Amenable	MCAWW	TAL NC
350.1	Nitrogen, Ammonia	MCAWW	TAL PIT
365.1	Phosphorus, Total	EPA	TAL NC
7196A	Chromium, Hexavalent	SW846	TAL PIT
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9012A	Cyanide, Amenable	SW846	TAL NC
9040B	pH	SW846	TAL PIT
Moisture	Percent Moisture	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
35 ILL C-395	Illinois Elutriate Test	ILL-EPA	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

ILL-EPA = Illinois Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G1
Date Collected: 10/21/11 10:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-1
Matrix: Sediment
Percent Solids: 48.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		8.6	0.81	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Bromomethane	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Chloroethane	ND		8.6	2.7	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Trichlorofluoromethane	ND		8.6	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,1-Dichloroethene	ND		8.6	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Acetone	ND		34	8.6	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Carbon disulfide	ND		8.6	0.88	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Methylene Chloride	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
trans-1,2-Dichloroethene	ND		8.6	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Methyl tert-butyl ether	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,1-Dichloroethane	ND		8.6	0.99	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
cis-1,2-Dichloroethene	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
cis-1,3-Dichloropropene	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
2-Butanone (MEK)	ND		8.6	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Chloroform	ND		8.6	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,1,1-Trichloroethane	ND		8.6	0.84	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Carbon tetrachloride	ND		8.6	0.77	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Benzene	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
trans-1,3-Dichloropropene	ND		8.6	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2-Dichloroethane	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Trichloroethene	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2-Dichloropropane	ND		8.6	0.93	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Bromodichloromethane	ND		8.6	0.97	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
4-Methyl-2-pentanone (MIBK)	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Toluene	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,1,2-Trichloroethane	ND		8.6	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Tetrachloroethene	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Dibromochloromethane	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2-Dibromoethane	ND		8.6	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Chlorobenzene	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,1,1,2-Tetrachloroethane	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Ethylbenzene	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
m-Xylene & p-Xylene	ND		17	2.5	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
o-Xylene	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Xylenes, Total	ND		26	3.9	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Styrene	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Bromoform	ND		8.6	0.76	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Isopropylbenzene	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
N-Propylbenzene	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,1,2,2-Tetrachloroethane	ND		8.6	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,3,5-Trimethylbenzene	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2,4-Trimethylbenzene	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,3-Dichlorobenzene	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,4-Dichlorobenzene	ND		8.6	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2-Dichlorobenzene	ND		8.6	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2-Dibromo-3-Chloropropane	ND		8.6	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
1,2,4-Trichlorobenzene	ND		8.6	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Hexachlorobutadiene	ND		8.6	1.9	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Cyclohexane	ND		8.6	0.64	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Acrolein	ND		170	12	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Vinyl acetate	ND		8.6	0.61	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G1

Date Collected: 10/21/11 10:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-1

Matrix: Sediment
Percent Solids: 48.3

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butyl alcohol	ND		340	57	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1
Hexane	**3.2**	**J B**	8.6	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 10:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*63*		*52 - 124*	*10/24/11 03:58*	*10/24/11 10:29*	*1*
Toluene-d8 (Surr)	*109*		*72 - 127*	*10/24/11 03:58*	*10/24/11 10:29*	*1*
4-Bromofluorobenzene (Surr)	*78*		*63 - 120*	*10/24/11 03:58*	*10/24/11 10:29*	*1*
Dibromofluoromethane (Surr)	*87*		*68 - 121*	*10/24/11 03:58*	*10/24/11 10:29*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**71**	**J**	140	13	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Acenaphthylene	**36**	**J**	140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Anthracene	**140**		140	13	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Atrazine	ND		680	67	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Benzo[a]anthracene	**340**		140	17	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Benzo[b]fluoranthene	**500**		140	22	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Benzo[k]fluoranthene	ND		140	28	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Benzo[a]pyrene	**330**		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Bis(2-chloroethyl)ether	ND		140	18	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Bis(2-ethylhexyl) phthalate	**110**	**J**	1400	110	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Butyl benzyl phthalate	ND		680	94	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Carbazole	**26**	**J**	140	13	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Chrysene	**420**		140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2-Chloronaphthalene	ND		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2-Chlorophenol	ND		680	56	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,4-Dichlorophenol	ND		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,4-Dimethylphenol	ND		680	110	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,4-Dinitrophenol	ND		3500	820	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,4-Dinitrotoluene	ND		680	55	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,6-Dinitrotoluene	ND		680	71	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2-Methylnaphthalene	**52**	**J**	140	12	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2-Methylphenol	ND		680	48	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2-Nitroaniline	ND		3500	310	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,2'-oxybis[1-chloropropane]	ND		140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,4,5-Trichlorophenol	ND		680	73	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
2,4,6-Trichlorophenol	ND		680	100	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Methylphenol, 3 & 4	ND		680	67	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
4-Chloroaniline	ND		680	55	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Dibenz(a,h)anthracene	**44**	**J**	140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Dibenzofuran	ND		680	67	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Di-n-butyl phthalate	ND		680	86	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Diethyl phthalate	ND		680	75	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Dimethyl phthalate	ND		680	75	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Di-n-octyl phthalate	ND		680	72	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
3,3'-Dichlorobenzidine	ND		680	72	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Fluoranthene	**630**		140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Fluorene	**91**	**J**	140	18	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Hexachlorobenzene	ND		140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Hexachlorocyclopentadiene	ND		680	74	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Hexachloroethane	ND		680	49	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G1

Date Collected: 10/21/11 10:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-1

Matrix: Sediment
Percent Solids: 48.3

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**170**		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Isophorone	ND		680	52	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Naphthalene	**62**	**J**	140	12	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Nitrobenzene	ND		1400	57	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
N-Nitrosodiphenylamine	ND		680	63	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
N-Nitrosodi-n-propylamine	ND		140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Pyrene	**650**		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Phenol	ND		140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Phenanthrene	**510**		140	22	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Pentachlorophenol	ND		680	61	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Benzyl alcohol	ND		680	83	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20
Benzoic acid	ND		3500	280	ug/Kg	☼	10/27/11 04:00	10/27/11 20:56	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*10/27/11 04:00*	*10/27/11 20:56*	*20*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*57*	*D*	*21 - 116*	*10/27/11 04:00*	*10/27/11 20:56*	*20*
2-Fluorophenol	*62*	*D*	*28 - 107*	*10/27/11 04:00*	*10/27/11 20:56*	*20*
Phenol-d5	*73*	*D*	*30 - 112*	*10/27/11 04:00*	*10/27/11 20:56*	*20*
Nitrobenzene-d5	*70*	*D*	*27 - 110*	*10/27/11 04:00*	*10/27/11 20:56*	*20*
2-Fluorobiphenyl	*76*	*D*	*28 - 108*	*10/27/11 04:00*	*10/27/11 20:56*	*20*
Terphenyl-d14	*76*	*D*	*21 - 130*	*10/27/11 04:00*	*10/27/11 20:56*	*20*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		210	210	mg/Kg	☼	10/30/11 13:42	10/30/11 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*81*		*40 - 140*	*10/30/11 13:42*	*10/30/11 17:02*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.7	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
alpha-BHC	ND		1.7	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
alpha-Chlordane	ND		1.7	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
beta-BHC	ND		1.7	0.44	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
2,4'-DDD	**6.8**		1.7	0.10	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
2,4'-DDE	ND		1.7	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
2,4'-DDT	ND		1.7	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
4,4'-DDD	**2.9**	**p**	1.7	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
4,4'-DDE	**2.8**	**p**	1.7	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
4,4'-DDT	**5.8**		1.7	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Chlordane (technical)	ND		17	0.75	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Dieldrin	ND		1.7	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Endosulfan I	ND		1.7	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Endosulfan II	ND		1.7	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Endosulfan sulfate	ND		1.7	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Endrin	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Endrin aldehyde	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Endrin ketone	ND		1.7	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
gamma-BHC (Lindane)	**2.5**		1.7	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G1

Date Collected: 10/21/11 10:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-1

Matrix: Sediment
Percent Solids: 48.3

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		1.7	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Heptachlor	ND		1.7	0.38	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Heptachlor epoxide	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Methoxychlor	ND		3.4	0.36	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1
Toxaphene	ND		69	11	ug/Kg	☼	10/31/11 04:38	11/03/11 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*77*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:48*	*1*
DCB Decachlorobiphenyl (Surr)	*77*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:48*	*1*
Tetrachloro-m-xylene	*58*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:48*	*1*
Tetrachloro-m-xylene	*62*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:48*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**21**		17	2.5	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
PCB-1221	ND		17	3.3	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
PCB-1232	ND		17	2.9	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
PCB-1242	ND		17	2.8	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
PCB-1248	ND		17	1.6	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
PCB-1254	**67**		17	2.4	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
PCB-1260	ND		17	2.4	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1
Polychlorinated biphenyls, Total	**88**		17	3.8	ug/Kg	☼	10/31/11 04:38	11/08/11 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*35 - 140*	*10/31/11 04:38*	*11/08/11 23:19*	*1*
DCB Decachlorobiphenyl (Surr)	*85*		*35 - 140*	*10/31/11 04:38*	*11/08/11 23:19*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		41	5.2	ug/Kg	☼	10/25/11 04:50	11/07/11 18:55	20
2,4-D	ND		160	11	ug/Kg	☼	10/25/11 04:50	11/07/11 18:55	20
Dalapon	ND		190	15	ug/Kg	☼	10/25/11 04:50	11/07/11 18:55	20
Dinoseb	ND		25	9.4	ug/Kg	☼	10/25/11 04:50	11/07/11 18:55	20
Silvex (2,4,5-TP)	ND		41	4.3	ug/Kg	☼	10/25/11 04:50	11/07/11 18:55	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*54*		*42 - 140*	*10/25/11 04:50*	*11/07/11 18:31*	*20*
2,4-Dichlorophenylacetic acid	*54*		*42 - 140*	*10/25/11 04:50*	*11/07/11 18:55*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.14**		0.097	0.0038	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Arsenic	**7.1**		0.097	0.017	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Boron	**16**	**B**	0.48	0.036	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Barium	**33**		0.97	0.010	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Beryllium	**0.49**		0.097	0.0072	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Calcium	**70000**		9.7	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Cadmium	**0.52**		0.097	0.0068	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Cobalt	**7.5**		0.048	0.0014	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Chromium	**22**	**B**	0.19	0.0059	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Copper	**26**		0.19	0.032	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Iron	**21000**	**B**	4.8	0.34	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G1

Lab Sample ID: 180-5172-1

Date Collected: 10/21/11 10:00
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 48.3

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	1900		9.7	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Magnesium	33000	B	9.7	0.18	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Manganese	570		0.48	0.010	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Sodium	160		9.7	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Nickel	17		0.097	0.011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Lead	41	B	0.097	0.0037	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Antimony	0.28	B	0.19	0.0025	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Selenium	0.58		0.48	0.049	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Thallium	0.36		0.097	0.0019	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Vanadium	21	B	0.097	0.0076	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1
Zinc	100		0.48	0.063	mg/Kg	☼	10/26/11 09:54	11/08/11 22:13	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.095		0.034	0.011	mg/Kg	☼	11/04/11 13:24	11/04/11 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	1.4		1.1	0.21	mg/Kg	☼	11/04/11 13:08	11/04/11 16:35	1
Total Phosphate	380		110	1.1	mg/Kg	☼	11/10/11 08:45	11/10/11 14:34	5
Cr (VI)	ND		0.83	0.21	mg/Kg	☼	11/07/11 08:30	11/09/11 13:35	1
Cr (VI)	ND		0.83	0.21	mg/Kg	☼	11/07/11 08:30	11/09/11 14:05	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			11/18/11 11:46	1
Cyanide, Total	0.32	J	0.98	0.20	mg/Kg	☼	11/04/11 10:57	11/04/11 13:32	1
Percent Moisture	52		0.10	0.10	%			10/25/11 08:45	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.67	J	1.0	0.13	mg/Kg	☼		11/07/11 14:27	1
Fluoride	1.7		1.0	0.30	mg/Kg	☼		11/07/11 14:27	1
Chloride	24	B	20	4.4	mg/Kg	☼		11/07/11 14:27	1
Sulfate	190	B	20	2.4	mg/Kg	☼		11/07/11 14:27	1

Client Sample ID: CH-2011-MU1-G2

Lab Sample ID: 180-5172-2

Date Collected: 10/21/11 11:00
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.4	0.51	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Bromomethane	ND		5.4	0.80	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Chloroethane	ND		5.4	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Trichlorofluoromethane	ND		5.4	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,1-Dichloroethene	ND		5.4	0.92	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Acetone	13	J	22	5.4	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Carbon disulfide	ND		5.4	0.56	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Methylene Chloride	ND		5.4	0.73	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
trans-1,2-Dichloroethene	ND		5.4	0.65	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Methyl tert-butyl ether	ND		5.4	0.81	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,1-Dichloroethane	ND		5.4	0.63	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
cis-1,2-Dichloroethene	ND		5.4	0.77	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
cis-1,3-Dichloropropene	ND		5.4	0.74	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G2

Date Collected: 10/21/11 11:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-2

Matrix: Sediment

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		5.4	0.96	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Chloroform	ND		5.4	0.64	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,1,1-Trichloroethane	ND		5.4	0.53	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Carbon tetrachloride	ND		5.4	0.49	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Benzene	ND		5.4	0.74	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
trans-1,3-Dichloropropene	ND		5.4	0.65	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2-Dichloroethane	ND		5.4	0.67	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Trichloroethene	ND		5.4	0.72	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2-Dichloropropane	ND		5.4	0.59	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Bromodichloromethane	ND		5.4	0.61	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.4	0.71	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Toluene	ND		5.4	0.79	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,1,2-Trichloroethane	ND		5.4	0.91	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Tetrachloroethene	ND		5.4	0.74	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Dibromochloromethane	ND		5.4	0.77	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2-Dibromoethane	ND		5.4	0.94	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Chlorobenzene	ND		5.4	0.83	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,1,1,2-Tetrachloroethane	ND		5.4	0.81	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Ethylbenzene	ND		5.4	0.70	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
m-Xylene & p-Xylene	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
o-Xylene	ND		5.4	0.85	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Xylenes, Total	ND		16	2.4	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Styrene	ND		5.4	0.77	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Bromoform	ND		5.4	0.48	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Isopropylbenzene	ND		5.4	0.74	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
N-Propylbenzene	ND		5.4	0.83	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,1,2,2-Tetrachloroethane	ND		5.4	0.78	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,3,5-Trimethylbenzene	ND		5.4	0.73	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2,4-Trimethylbenzene	ND		5.4	0.71	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,3-Dichlorobenzene	ND		5.4	0.71	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,4-Dichlorobenzene	ND		5.4	0.69	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2-Dichlorobenzene	ND		5.4	0.87	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2-Dibromo-3-Chloropropane	ND		5.4	0.82	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
1,2,4-Trichlorobenzene	ND		5.4	0.96	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Hexachlorobutadiene	ND		5.4	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Cyclohexane	ND		5.4	0.40	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Acrolein	ND		110	7.7	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Vinyl acetate	ND		5.4	0.39	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
n-Butyl alcohol	ND		220	36	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1
Hexane	**1.1**	**J B**	5.4	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 10:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*66*		*52 - 124*	*10/24/11 03:58*	*10/24/11 10:51*	*1*
Toluene-d8 (Surr)	*122*		*72 - 127*	*10/24/11 03:58*	*10/24/11 10:51*	*1*
4-Bromofluorobenzene (Surr)	*71*		*63 - 120*	*10/24/11 03:58*	*10/24/11 10:51*	*1*
Dibromofluoromethane (Surr)	*86*		*68 - 121*	*10/24/11 03:58*	*10/24/11 10:51*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**67**	**J**	140	13	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Acenaphthylene	**51**	**J**	140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G2

Date Collected: 10/21/11 11:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-2

Matrix: Sediment
Percent Solids: 48.8

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	**160**		140	13	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Atrazine	ND		670	66	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Benzo[a]anthracene	**430**		140	17	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Benzo[b]fluoranthene	**580**		140	21	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Benzo[k]fluoranthene	ND		140	28	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Benzo[a]pyrene	**450**		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Bis(2-chloroethyl)ether	ND		140	18	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Bis(2-ethylhexyl) phthalate	**120**	**J**	1400	110	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Butyl benzyl phthalate	ND		670	93	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Carbazole	**28**	**J**	140	13	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Chrysene	**460**		140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2-Chloronaphthalene	ND		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2-Chlorophenol	ND		670	56	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,4-Dichlorophenol	ND		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,4-Dimethylphenol	ND		670	110	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,4-Dinitrophenol	ND		3500	810	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,4-Dinitrotoluene	ND		670	55	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,6-Dinitrotoluene	ND		670	70	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2-Methylnaphthalene	**57**	**J**	140	12	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2-Methylphenol	ND		670	48	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2-Nitroaniline	ND		3500	310	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,2'-oxybis[1-chloropropane]	ND		140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,4,5-Trichlorophenol	ND		670	73	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
2,4,6-Trichlorophenol	ND		670	100	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Methylphenol, 3 & 4	ND		670	67	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
4-Chloroaniline	ND		670	55	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Dibenz(a,h)anthracene	**63**	**J**	140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Dibenzofuran	ND		670	67	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Di-n-butyl phthalate	ND		670	85	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Diethyl phthalate	ND		670	74	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Dimethyl phthalate	ND		670	74	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Di-n-octyl phthalate	ND		670	72	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
3,3'-Dichlorobenzidine	ND		670	72	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Fluoranthene	**680**		140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Fluorene	**80**	**J**	140	18	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Hexachlorobenzene	ND		140	15	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Hexachlorocyclopentadiene	ND		670	73	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Hexachloroethane	ND		670	49	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Indeno[1,2,3-cd]pyrene	**210**		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Isophorone	ND		670	51	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Naphthalene	**72**	**J**	140	12	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Nitrobenzene	ND		1400	57	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
N-Nitrosodiphenylamine	ND		670	63	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
N-Nitrosodi-n-propylamine	ND		140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Pyrene	**750**		140	14	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Phenol	ND		140	16	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Phenanthrene	**500**		140	22	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Pentachlorophenol	ND		670	61	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Benzyl alcohol	ND		670	82	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20
Benzoic acid	ND		3500	280	ug/Kg	☼	10/27/11 04:00	10/27/11 21:20	20

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G2

Date Collected: 10/21/11 11:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-2

Matrix: Sediment
Percent Solids: 48.8

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
DMF	0.00	J N	ug/Kg	☼		68-12-2	10/27/11 04:00	10/27/11 21:20	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	72	D	21 - 116	10/27/11 04:00	10/27/11 21:20	20
2-Fluorophenol	72	D	28 - 107	10/27/11 04:00	10/27/11 21:20	20
Phenol-d5	85	D	30 - 112	10/27/11 04:00	10/27/11 21:20	20
Nitrobenzene-d5	80	D	27 - 110	10/27/11 04:00	10/27/11 21:20	20
2-Fluorobiphenyl	80	D	28 - 108	10/27/11 04:00	10/27/11 21:20	20
Terphenyl-d14	83	D	21 - 130	10/27/11 04:00	10/27/11 21:20	20

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		200	200	mg/Kg	☼	10/30/11 13:42	10/30/11 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	76		40 - 140	10/30/11 13:42	10/30/11 17:14	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.7	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
alpha-BHC	ND		1.7	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
alpha-Chlordane	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
beta-BHC	ND		1.7	0.44	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
2,4'-DDD	**5.6**		1.7	0.10	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
2,4'-DDE	ND		1.7	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
2,4'-DDT	ND		1.7	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
4,4'-DDD	**3.1**	**p**	1.7	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
4,4'-DDE	**2.9**	**p**	1.7	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
4,4'-DDT	**4.6**		1.7	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Chlordane (technical)	ND		17	0.74	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Dieldrin	ND		1.7	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Endosulfan I	ND		1.7	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Endosulfan II	ND		1.7	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Endosulfan sulfate	ND		1.7	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Endrin	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Endrin aldehyde	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Endrin ketone	ND		1.7	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
gamma-BHC (Lindane)	**3.1**		1.7	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
gamma-Chlordane	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Heptachlor	ND		1.7	0.37	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Heptachlor epoxide	ND		1.7	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Methoxychlor	ND		3.3	0.35	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1
Toxaphene	ND		68	11	ug/Kg	☼	10/31/11 04:38	11/03/11 15:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	79		45 - 130	10/31/11 04:38	11/03/11 15:07	1
DCB Decachlorobiphenyl (Surr)	80		45 - 130	10/31/11 04:38	11/03/11 15:07	1
Tetrachloro-m-xylene	61		45 - 130	10/31/11 04:38	11/03/11 15:07	1
Tetrachloro-m-xylene	67		45 - 130	10/31/11 04:38	11/03/11 15:07	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**24**		17	2.5	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G2

Date Collected: 10/21/11 11:00
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-2

Matrix: Sediment
Percent Solids: 48.8

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		17	3.2	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1
PCB-1232	ND		17	2.9	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1
PCB-1242	ND		17	2.7	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1
PCB-1248	ND		17	1.6	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1
PCB-1254	**64**		17	2.4	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1
PCB-1260	ND		17	2.4	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1
Polychlorinated biphenyls, Total	**88**		17	3.7	ug/Kg	☼	10/31/11 04:38	11/08/11 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*35 - 140*	*10/31/11 04:38*	*11/08/11 23:47*	*1*
DCB Decachlorobiphenyl (Surr)	*86*		*35 - 140*	*10/31/11 04:38*	*11/08/11 23:47*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		41	5.1	ug/Kg	☼	10/25/11 04:50	11/07/11 19:19	20
2,4-D	ND		160	11	ug/Kg	☼	10/25/11 04:50	11/07/11 19:19	20
Dalapon	ND		180	14	ug/Kg	☼	10/25/11 04:50	11/07/11 19:19	20
Dinoseb	ND		24	9.3	ug/Kg	☼	10/25/11 04:50	11/07/11 19:19	20
Silvex (2,4,5-TP)	ND		41	4.3	ug/Kg	☼	10/25/11 04:50	11/07/11 19:19	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*59*		*42 - 140*	*10/25/11 04:50*	*11/07/11 18:55*	*20*
2,4-Dichlorophenylacetic acid	*52*		*42 - 140*	*10/25/11 04:50*	*11/07/11 19:19*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.11**		0.099	0.0039	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Arsenic	**6.2**		0.099	0.018	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Boron	**14**	**B**	0.49	0.037	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Barium	**28**		0.99	0.011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Beryllium	**0.43**		0.099	0.0074	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Calcium	**66000**		9.9	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Cadmium	**0.44**		0.099	0.0069	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Cobalt	**6.7**		0.049	0.0015	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Chromium	**20**	**B**	0.20	0.0060	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Copper	**23**		0.20	0.033	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Iron	**19000**	**B**	4.9	0.35	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Potassium	**1600**		9.9	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Magnesium	**31000**	**B**	9.9	0.19	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Manganese	**500**		0.49	0.010	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Sodium	**150**		9.9	1.4	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Nickel	**15**		0.099	0.011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Lead	**39**	**B**	0.099	0.0038	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Antimony	**0.25**	**B**	0.20	0.0026	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Selenium	**0.44**	**J**	0.49	0.050	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Thallium	**0.31**		0.099	0.0020	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Vanadium	**19**	**B**	0.099	0.0078	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1
Zinc	**92**		0.49	0.064	mg/Kg	☼	10/26/11 09:54	11/08/11 22:17	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.083**		0.034	0.011	mg/Kg	☼	11/04/11 13:24	11/04/11 18:09	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G2

Lab Sample ID: 180-5172-2

Date Collected: 10/21/11 11:00
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 48.8

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.86**	**J**	1.0	0.20	mg/Kg	☼	11/04/11 13:08	11/04/11 16:35	1
Total Phosphate	**390**		99	0.98	mg/Kg	☼	11/10/11 08:45	11/10/11 14:37	5
Cr (VI)	ND		0.82	0.20	mg/Kg	☼	11/07/11 08:30	11/09/11 13:36	1
Cr (VI)	ND		0.81	0.20	mg/Kg	☼	11/07/11 08:30	11/09/11 14:06	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			11/18/11 11:46	1
Cyanide, Total	**0.24**	**J**	1.0	0.20	mg/Kg	☼	11/04/11 10:57	11/04/11 13:32	1
Percent Moisture	**51**		0.10	0.10	%			10/25/11 08:45	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.49**	**J**	1.0	0.12	mg/Kg	☼		11/07/11 14:41	1
Fluoride	**2.9**		1.0	0.30	mg/Kg	☼		11/07/11 14:41	1
Chloride	**26**	**B**	20	4.4	mg/Kg	☼		11/07/11 14:41	1
Sulfate	**40**	**B**	20	2.4	mg/Kg	☼		11/07/11 14:41	1

Client Sample ID: CH-2011-MU1-G3

Lab Sample ID: 180-5172-3

Date Collected: 10/21/11 11:30
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 51.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		9.7	0.91	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Bromomethane	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Chloroethane	ND		9.7	3.0	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Trichlorofluoromethane	ND		9.7	1.8	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,1-Dichloroethene	ND		9.7	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Acetone	**24**	**J**	39	9.7	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Carbon disulfide	ND		9.7	0.99	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Methylene Chloride	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
trans-1,2-Dichloroethene	ND		9.7	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Methyl tert-butyl ether	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,1-Dichloroethane	ND		9.7	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
cis-1,2-Dichloroethene	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
cis-1,3-Dichloropropene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
2-Butanone (MEK)	ND		9.7	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Chloroform	ND		9.7	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,1,1-Trichloroethane	ND		9.7	0.94	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Carbon tetrachloride	ND		9.7	0.86	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Benzene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
trans-1,3-Dichloropropene	ND		9.7	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2-Dichloroethane	ND		9.7	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Trichloroethene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2-Dichloropropane	ND		9.7	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Bromodichloromethane	ND		9.7	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
4-Methyl-2-pentanone (MIBK)	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Toluene	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,1,2-Trichloroethane	ND		9.7	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Tetrachloroethene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Dibromochloromethane	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2-Dibromoethane	ND		9.7	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Chlorobenzene	ND		9.7	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G3

Date Collected: 10/21/11 11:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-3

Matrix: Sediment
Percent Solids: 51.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Ethylbenzene	ND		9.7	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
m-Xylene & p-Xylene	ND		19	2.8	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
o-Xylene	ND		9.7	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Xylenes, Total	ND		29	4.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Styrene	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Bromoform	ND		9.7	0.86	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Isopropylbenzene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
N-Propylbenzene	ND		9.7	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,1,2,2-Tetrachloroethane	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,3,5-Trimethylbenzene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2,4-Trimethylbenzene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,3-Dichlorobenzene	ND		9.7	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,4-Dichlorobenzene	ND		9.7	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2-Dichlorobenzene	ND		9.7	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2-Dibromo-3-Chloropropane	ND		9.7	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
1,2,4-Trichlorobenzene	ND		9.7	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Hexachlorobutadiene	ND		9.7	2.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Cyclohexane	ND		9.7	0.72	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Acrolein	ND		190	14	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Vinyl acetate	ND		9.7	0.68	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
n-Butyl alcohol	ND		390	64	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1
Hexane	ND		9.7	1.9	ug/Kg	☼	10/24/11 03:58	10/24/11 11:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*66*		*52 - 124*	*10/24/11 03:58*	*10/24/11 11:13*	*1*
Toluene-d8 (Surr)	*122*		*72 - 127*	*10/24/11 03:58*	*10/24/11 11:13*	*1*
4-Bromofluorobenzene (Surr)	*73*		*63 - 120*	*10/24/11 03:58*	*10/24/11 11:13*	*1*
Dibromofluoromethane (Surr)	*88*		*68 - 121*	*10/24/11 03:58*	*10/24/11 11:13*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**67**		65	6.2	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Acenaphthylene	**50**	**J**	65	7.4	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Anthracene	**170**		65	6.3	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Atrazine	ND		320	31	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Benzo[a]anthracene	**440**		65	8.1	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Benzo[b]fluoranthene	**480**		65	10	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Benzo[k]fluoranthene	**260**		65	13	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Benzo[a]pyrene	**550**		65	6.4	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Bis(2-chloroethyl)ether	ND		65	8.6	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Bis(2-ethylhexyl) phthalate	**130**	**J**	640	52	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Butyl benzyl phthalate	ND		320	44	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Carbazole	**28**	**J**	65	5.9	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Chrysene	**550**		65	7.7	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2-Chloronaphthalene	ND		65	6.7	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2-Chlorophenol	ND		320	26	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,4-Dichlorophenol	ND		65	6.5	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,4-Dimethylphenol	ND		320	50	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,4-Dinitrophenol	ND		1600	380	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,4-Dinitrotoluene	ND		320	26	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G3

Date Collected: 10/21/11 11:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-3

Matrix: Sediment
Percent Solids: 51.5

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		320	33	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2-Methylnaphthalene	**54**	**J**	65	5.8	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2-Methylphenol	ND		320	22	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2-Nitroaniline	ND		1600	140	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,2'-oxybis[1-chloropropane]	ND		65	6.9	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,4,5-Trichlorophenol	ND		320	34	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
2,4,6-Trichlorophenol	ND		320	48	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Methylphenol, 3 & 4	**150**	**J**	320	32	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
4-Chloroaniline	ND		320	26	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Dibenz(a,h)anthracene	**68**		65	7.2	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Dibenzofuran	**48**	**J**	320	32	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Di-n-butyl phthalate	ND		320	40	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Diethyl phthalate	ND		320	35	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Dimethyl phthalate	ND		320	35	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Di-n-octyl phthalate	ND		320	34	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
3,3'-Dichlorobenzidine	ND		320	34	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Fluoranthene	**770**		65	6.9	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Fluorene	**93**		65	8.5	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Hexachlorobenzene	ND		65	6.9	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Hexachlorocyclopentadiene	ND		320	35	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Hexachloroethane	ND		320	23	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Indeno[1,2,3-cd]pyrene	**290**		65	6.6	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Isophorone	ND		320	24	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Naphthalene	**69**		65	5.5	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Nitrobenzene	ND		640	27	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
N-Nitrosodiphenylamine	ND		320	30	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
N-Nitrosodi-n-propylamine	ND		65	7.6	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Pyrene	**920**		65	6.5	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Phenol	ND		65	7.6	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Phenanthrene	**580**		65	10	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Pentachlorophenol	ND		320	29	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Benzyl alcohol	ND		320	39	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10
Benzoic acid	ND		1600	130	ug/Kg	☼	10/27/11 04:00	10/27/11 21:44	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*10/27/11 04:00*	*10/27/11 21:44*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*54*		*21 - 116*	*10/27/11 04:00*	*10/27/11 21:44*	*10*
2-Fluorophenol	*50*		*28 - 107*	*10/27/11 04:00*	*10/27/11 21:44*	*10*
Phenol-d5	*60*		*30 - 112*	*10/27/11 04:00*	*10/27/11 21:44*	*10*
Nitrobenzene-d5	*56*		*27 - 110*	*10/27/11 04:00*	*10/27/11 21:44*	*10*
2-Fluorobiphenyl	*53*		*28 - 108*	*10/27/11 04:00*	*10/27/11 21:44*	*10*
Terphenyl-d14	*59*		*21 - 130*	*10/27/11 04:00*	*10/27/11 21:44*	*10*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		190	190	mg/Kg	☼	10/30/11 13:42	10/30/11 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*79*		*40 - 140*	*10/30/11 13:42*	*10/30/11 17:26*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G3

Date Collected: 10/21/11 11:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-3

Matrix: Sediment
Percent Solids: 51.5

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.7	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
alpha-BHC	ND		1.7	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
alpha-Chlordane	ND		1.7	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
beta-BHC	ND		1.7	0.42	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
2,4'-DDD	**7.0**		1.7	0.097	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
2,4'-DDE	ND		1.7	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
2,4'-DDT	ND		1.7	0.14	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
4,4'-DDD	**4.4**	**p**	1.7	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
4,4'-DDE	**3.9**	**p**	1.7	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
4,4'-DDT	**5.7**		1.7	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Chlordane (technical)	ND		17	0.71	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Dieldrin	ND		1.7	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Endosulfan I	ND		1.7	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Endosulfan II	ND		1.7	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Endosulfan sulfate	ND		1.7	0.17	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Endrin	ND		1.7	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Endrin aldehyde	ND		1.7	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Endrin ketone	ND		1.7	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
gamma-BHC (Lindane)	**3.8**		1.7	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
gamma-Chlordane	ND		1.7	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Heptachlor	ND		1.7	0.36	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Heptachlor epoxide	**0.49**	**J p**	1.7	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Methoxychlor	ND		3.2	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1
Toxaphene	ND		65	11	ug/Kg	☼	10/31/11 04:38	11/03/11 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*86*		*45 - 130*	*10/31/11 04:38*	*11/03/11 15:26*	*1*
DCB Decachlorobiphenyl (Surr)	*83*		*45 - 130*	*10/31/11 04:38*	*11/03/11 15:26*	*1*
Tetrachloro-m-xylene	*65*		*45 - 130*	*10/31/11 04:38*	*11/03/11 15:26*	*1*
Tetrachloro-m-xylene	*70*		*45 - 130*	*10/31/11 04:38*	*11/03/11 15:26*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**29**		16	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
PCB-1221	ND		16	3.1	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
PCB-1232	ND		16	2.8	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
PCB-1242	ND		16	2.6	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
PCB-1248	ND		16	1.5	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
PCB-1254	**70**		16	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
PCB-1260	ND		16	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1
Polychlorinated biphenyls, Total	**99**		16	3.5	ug/Kg	☼	10/31/11 04:38	11/09/11 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*35 - 140*	*10/31/11 04:38*	*11/09/11 00:15*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 00:15*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		39	4.9	ug/Kg	☼	10/25/11 04:50	11/07/11 19:44	20
2,4-D	ND		150	11	ug/Kg	☼	10/25/11 04:50	11/07/11 19:44	20
Dalapon	ND		170	14	ug/Kg	☼	10/25/11 04:50	11/07/11 19:44	20
Dinoseb	ND		23	8.8	ug/Kg	☼	10/25/11 04:50	11/07/11 19:44	20

Client Sample ID: CH-2011-MU1-G3

Date Collected: 10/21/11 11:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-3

Matrix: Sediment
Percent Solids: 51.5

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	ND		39	4.1	ug/Kg	☼	10/25/11 04:50	11/07/11 19:44	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*66*		*42 - 140*	*10/25/11 04:50*	*11/07/11 19:19*	*20*
2,4-Dichlorophenylacetic acid	*68*		*42 - 140*	*10/25/11 04:50*	*11/07/11 19:44*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 19:34	1
Arsenic	**0.0033**	**J**	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 19:34	1
Boron	**0.28**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 19:34	1
Barium	**0.014**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 19:34	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 19:34	1
Calcium	**22**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 19:34	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 19:34	1
Cobalt	**0.00051**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 19:34	1
Chromium	**0.0027**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 19:34	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 19:34	1
Iron	**0.89**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 19:34	1
Potassium	**0.98**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 19:34	1
Magnesium	**2.3**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 19:34	1
Manganese	**0.0081**	**J**	0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 19:34	1
Sodium	**19**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 19:34	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 19:34	1
Lead	**0.0028**	**J**	0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 19:34	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 19:34	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 19:34	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 19:34	1
Vanadium	**0.0035**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 19:34	1
Zinc	**0.0094**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 19:34	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.12**		0.096	0.0038	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Arsenic	**6.8**		0.096	0.017	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Boron	**14**	**B**	0.48	0.036	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Barium	**30**		0.96	0.010	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Beryllium	**0.46**		0.096	0.0072	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Calcium	**75000**		9.6	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Cadmium	**0.53**		0.096	0.0067	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Cobalt	**7.4**		0.048	0.0014	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Chromium	**21**	**B**	0.19	0.0059	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Copper	**25**		0.19	0.032	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Iron	**20000**	**B**	4.8	0.34	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Potassium	**1700**		9.6	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Magnesium	**37000**	**B**	9.6	0.18	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Manganese	**550**		0.48	0.0099	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Sodium	**160**		9.6	1.3	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Nickel	**17**		0.096	0.011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Lead	**38**	**B**	0.096	0.0037	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Antimony	**0.38**	**B**	0.19	0.0025	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Selenium	**0.54**		0.48	0.048	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-G3

Lab Sample ID: 180-5172-3

Date Collected: 10/21/11 11:30
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 51.5

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.33		0.096	0.0019	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Vanadium	21	B	0.096	0.0076	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1
Zinc	98		0.48	0.062	mg/Kg	☼	10/26/11 09:54	11/08/11 22:36	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:51	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.032	0.011	mg/Kg	☼	11/04/11 13:24	11/04/11 18:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.86	J H	0.97	0.19	mg/Kg	☼	11/14/11 13:04	11/14/11 18:30	1
Total Phosphate	370		110	1.0	mg/Kg	☼	11/10/11 08:45	11/10/11 14:37	5
Cr (VI)	ND		0.77	0.19	mg/Kg	☼	11/07/11 08:30	11/09/11 13:37	1
Cr (VI)	ND		0.78	0.20	mg/Kg	☼	11/07/11 08:30	11/09/11 14:07	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			11/14/11 18:32	1
Cyanide, Total	ND	H	1.0	0.20	mg/Kg	☼	11/08/11 14:34	11/09/11 14:57	1
Percent Moisture	49		0.10	0.10	%			10/25/11 08:45	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.47	J	0.95	0.12	mg/Kg	☼		11/07/11 14:55	1
Fluoride	2.1		0.95	0.28	mg/Kg	☼		11/07/11 14:55	1
Chloride	23	B	19	4.2	mg/Kg	☼		11/07/11 14:55	1
Sulfate	55	B	19	2.2	mg/Kg	☼		11/07/11 14:55	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.081		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 11:57	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:34	1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-4

Date Collected: 10/21/11 11:30
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 19:10	1
Arsenic	0.0035	J	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 19:10	1
Boron	0.31		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 19:10	1
Barium	0.014	J	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 19:10	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 19:10	1
Calcium	22	B	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 19:10	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 19:10	1
Cobalt	0.0012	J B	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 19:10	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-4

Date Collected: 10/21/11 11:30
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**0.0032**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 19:10	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 19:10	1
Iron	**0.93**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 19:10	1
Potassium	**1.1**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 19:10	1
Magnesium	**2.5**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 19:10	1
Manganese	**0.0090**	**J**	0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 19:10	1
Sodium	**18**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 19:10	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 19:10	1
Lead	**0.0026**	**J**	0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 19:10	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 19:10	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 19:10	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 19:10	1
Vanadium	**0.0031**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 19:10	1
Zinc	**0.0081**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 19:10	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:52	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.12**		0.050	0.025	mg/L		11/03/11 13:42	11/03/11 16:47	5
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 11:57	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:35	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	**y**				ug/L			10/26/11 10:52	1

Client Sample ID: CH-2011-MU2-G1

Lab Sample ID: 180-5172-5

Date Collected: 10/21/11 13:15
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 53.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		8.1	0.76	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Bromomethane	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Chloroethane	ND		8.1	2.5	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Trichlorofluoromethane	ND		8.1	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,1-Dichloroethene	ND		8.1	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Acetone	**19**	**J**	33	8.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Carbon disulfide	ND		8.1	0.83	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Methylene Chloride	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
trans-1,2-Dichloroethene	ND		8.1	0.97	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Methyl tert-butyl ether	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,1-Dichloroethane	ND		8.1	0.94	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
cis-1,2-Dichloroethene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
cis-1,3-Dichloropropene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G1

Date Collected: 10/21/11 13:15
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-5

Matrix: Sediment
Percent Solids: 53.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		8.1	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Chloroform	ND		8.1	0.95	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,1,1-Trichloroethane	ND		8.1	0.79	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Carbon tetrachloride	ND		8.1	0.73	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Benzene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
trans-1,3-Dichloropropene	ND		8.1	0.97	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2-Dichloroethane	ND		8.1	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Trichloroethene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2-Dichloropropane	ND		8.1	0.89	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Bromodichloromethane	ND		8.1	0.91	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
4-Methyl-2-pentanone (MIBK)	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Toluene	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,1,2-Trichloroethane	ND		8.1	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Tetrachloroethene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Dibromochloromethane	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2-Dibromoethane	ND		8.1	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Chlorobenzene	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,1,1,2-Tetrachloroethane	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Ethylbenzene	ND		8.1	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
m-Xylene & p-Xylene	ND		16	2.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
o-Xylene	ND		8.1	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Xylenes, Total	ND		24	3.7	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Styrene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Bromoform	ND		8.1	0.72	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Isopropylbenzene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
N-Propylbenzene	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,1,2,2-Tetrachloroethane	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,3,5-Trimethylbenzene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2,4-Trimethylbenzene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,3-Dichlorobenzene	ND		8.1	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,4-Dichlorobenzene	ND		8.1	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2-Dichlorobenzene	ND		8.1	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2-Dibromo-3-Chloropropane	ND		8.1	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
1,2,4-Trichlorobenzene	ND		8.1	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Hexachlorobutadiene	ND		8.1	1.8	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Cyclohexane	ND		8.1	0.60	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Acrolein	ND		160	11	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Vinyl acetate	ND		8.1	0.58	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
n-Butyl alcohol	ND		330	54	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1
Hexane	ND		8.1	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 11:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*67*		*52 - 124*	*10/24/11 03:58*	*10/24/11 11:58*	*1*
Toluene-d8 (Surr)	*121*		*72 - 127*	*10/24/11 03:58*	*10/24/11 11:58*	*1*
4-Bromofluorobenzene (Surr)	*73*		*63 - 120*	*10/24/11 03:58*	*10/24/11 11:58*	*1*
Dibromofluoromethane (Surr)	*89*		*68 - 121*	*10/24/11 03:58*	*10/24/11 11:58*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**59**	**J**	63	6.0	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Acenaphthylene	**36**	**J**	63	7.2	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G1
Date Collected: 10/21/11 13:15
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-5
Matrix: Sediment
Percent Solids: 53.2

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	**130**		63	6.1	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Atrazine	ND		310	31	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Benzo[a]anthracene	**370**		63	7.9	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Benzo[b]fluoranthene	**410**		63	9.9	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Benzo[k]fluoranthene	**150**		63	13	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Benzo[a]pyrene	**400**		63	6.3	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Bis(2-chloroethyl)ether	ND		63	8.4	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Bis(2-ethylhexyl) phthalate	**140**	**J**	630	51	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Butyl benzyl phthalate	ND		310	43	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Carbazole	**26**	**J**	63	5.8	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Chrysene	**420**		63	7.5	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2-Chloronaphthalene	ND		63	6.5	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2-Chlorophenol	ND		310	26	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,4-Dichlorophenol	ND		63	6.3	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,4-Dimethylphenol	ND		310	49	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,4-Dinitrophenol	ND		1600	370	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,4-Dinitrotoluene	ND		310	25	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,6-Dinitrotoluene	ND		310	32	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2-Methylnaphthalene	**51**	**J**	63	5.6	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2-Methylphenol	ND		310	22	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2-Nitroaniline	ND		1600	140	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,2'-oxybis[1-chloropropane]	ND		63	6.8	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,4,5-Trichlorophenol	ND		310	33	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
2,4,6-Trichlorophenol	ND		310	47	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Methylphenol, 3 & 4	**150**	**J**	310	31	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
4-Chloroaniline	ND		310	25	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Dibenz(a,h)anthracene	**64**		63	7.0	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Dibenzofuran	**38**	**J**	310	31	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Di-n-butyl phthalate	ND		310	39	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Diethyl phthalate	ND		310	34	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Dimethyl phthalate	ND		310	34	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Di-n-octyl phthalate	ND		310	33	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
3,3'-Dichlorobenzidine	ND		310	33	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Fluoranthene	**610**		63	6.7	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Fluorene	**74**		63	8.3	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Hexachlorobenzene	ND		63	6.7	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Hexachlorocyclopentadiene	ND		310	34	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Hexachloroethane	ND		310	23	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Indeno[1,2,3-cd]pyrene	**210**		63	6.5	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Isophorone	ND		310	24	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Naphthalene	**63**		63	5.4	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Nitrobenzene	ND		630	26	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
N-Nitrosodiphenylamine	ND		310	29	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
N-Nitrosodi-n-propylamine	ND		63	7.4	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Pyrene	**660**		63	6.3	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Phenol	ND		63	7.4	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Phenanthrene	**470**		63	10	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Pentachlorophenol	ND		310	28	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Benzyl alcohol	ND		310	38	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10
Benzoic acid	ND		1600	130	ug/Kg	☼	10/27/11 04:00	10/27/11 22:55	10

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G1

Date Collected: 10/21/11 13:15
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-5

Matrix: Sediment
Percent Solids: 53.2

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
DMF	0.00	J N	ug/Kg	☼		68-12-2	10/27/11 04:00	10/27/11 22:55	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	87		21 - 116	10/27/11 04:00	10/27/11 22:55	10
2-Fluorophenol	70		28 - 107	10/27/11 04:00	10/27/11 22:55	10
Phenol-d5	82		30 - 112	10/27/11 04:00	10/27/11 22:55	10
Nitrobenzene-d5	78		27 - 110	10/27/11 04:00	10/27/11 22:55	10
2-Fluorobiphenyl	77		28 - 108	10/27/11 04:00	10/27/11 22:55	10
Terphenyl-d14	83		21 - 130	10/27/11 04:00	10/27/11 22:55	10

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		190	190	mg/Kg	☼	10/30/11 13:42	10/30/11 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	76		40 - 140	10/30/11 13:42	10/30/11 17:39	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.6	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
alpha-BHC	ND		1.6	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
alpha-Chlordane	ND		1.6	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
beta-BHC	ND		1.6	0.41	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
2,4'-DDD	**3.6**		1.6	0.094	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
2,4'-DDE	ND		1.6	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
2,4'-DDT	ND		1.6	0.14	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
4,4'-DDD	**3.7**	**p**	1.6	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
4,4'-DDE	**4.3**		1.6	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
4,4'-DDT	**7.4**		1.6	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Chlordane (technical)	ND		16	0.69	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Dieldrin	ND		1.6	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Endosulfan I	ND		1.6	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Endosulfan II	ND		1.6	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Endosulfan sulfate	ND		1.6	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Endrin	ND		1.6	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Endrin aldehyde	ND		1.6	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Endrin ketone	ND		1.6	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
gamma-BHC (Lindane)	**3.1**		1.6	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
gamma-Chlordane	ND		1.6	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Heptachlor	ND		1.6	0.35	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Heptachlor epoxide	ND		1.6	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Methoxychlor	ND		3.1	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1
Toxaphene	ND		63	10	ug/Kg	☼	10/31/11 04:38	11/03/11 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	84		45 - 130	10/31/11 04:38	11/03/11 15:46	1
DCB Decachlorobiphenyl (Surr)	84		45 - 130	10/31/11 04:38	11/03/11 15:46	1
Tetrachloro-m-xylene	67		45 - 130	10/31/11 04:38	11/03/11 15:46	1
Tetrachloro-m-xylene	70		45 - 130	10/31/11 04:38	11/03/11 15:46	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**19**		16	2.3	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G1

Date Collected: 10/21/11 13:15
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-5

Matrix: Sediment
Percent Solids: 53.2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		16	3.0	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1
PCB-1232	ND		16	2.7	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1
PCB-1242	ND		16	2.6	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1
PCB-1248	ND		16	1.5	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1
PCB-1254	**40**		16	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1
PCB-1260	ND		16	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1
Polychlorinated biphenyls, Total	**59**		16	3.4	ug/Kg	☼	10/31/11 04:38	11/09/11 00:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*35 - 140*	*10/31/11 04:38*	*11/09/11 00:43*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*35 - 140*	*10/31/11 04:38*	*11/09/11 00:43*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		37	4.7	ug/Kg	☼	10/25/11 04:50	11/07/11 20:08	20
2,4-D	ND		150	10	ug/Kg	☼	10/25/11 04:50	11/07/11 20:08	20
Dalapon	ND		170	13	ug/Kg	☼	10/25/11 04:50	11/07/11 20:08	20
Dinoseb	ND		22	8.5	ug/Kg	☼	10/25/11 04:50	11/07/11 20:08	20
Silvex (2,4,5-TP)	ND		37	3.9	ug/Kg	☼	10/25/11 04:50	11/07/11 20:08	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*53*		*42 - 140*	*10/25/11 04:50*	*11/07/11 19:44*	*20*
2,4-Dichlorophenylacetic acid	*43*		*42 - 140*	*10/25/11 04:50*	*11/07/11 20:08*	*20*

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 19:40	1
Arsenic	**0.0031**	**J**	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 19:40	1
Boron	**0.25**		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 19:40	1
Barium	**0.0093**	**J**	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 19:40	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 19:40	1
Calcium	**19**	**B**	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 19:40	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 19:40	1
Cobalt	**0.00078**	**J B**	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 19:40	1
Chromium	**0.0036**	**J B**	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 19:40	1
Copper	**0.0034**	**J**	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 19:40	1
Iron	**1.1**		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 19:40	1
Potassium	**0.85**	**J**	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 19:40	1
Magnesium	**2.3**	**J**	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 19:40	1
Manganese	**0.013**	**J**	0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 19:40	1
Sodium	**18**		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 19:40	1
Nickel	**0.0023**	**J**	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 19:40	1
Lead	**0.0056**		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 19:40	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 19:40	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 19:40	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 19:40	1
Vanadium	**0.0051**	**J**	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 19:40	1
Zinc	**0.012**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 19:40	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.098**		0.088	0.0034	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G1

Date Collected: 10/21/11 13:15
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-5

Matrix: Sediment
Percent Solids: 53.2

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.088	0.016	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Boron	12	B	0.44	0.033	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Barium	24		0.88	0.0094	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Beryllium	0.37		0.088	0.0066	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Calcium	69000		8.8	1.2	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Cadmium	0.43		0.088	0.0062	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Cobalt	6.0		0.044	0.0013	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Chromium	17	B	0.18	0.0054	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Copper	21		0.18	0.029	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Iron	16000	B	4.4	0.31	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Potassium	1400		8.8	1.2	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Magnesium	34000	B	8.8	0.17	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Manganese	490		0.44	0.0091	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Sodium	140		8.8	1.2	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Nickel	14		0.088	0.010	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Lead	32	B	0.088	0.0034	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Antimony	0.26	B	0.18	0.0023	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Selenium	0.45		0.44	0.044	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Thallium	0.27		0.088	0.0018	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Vanadium	17	B	0.088	0.0070	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1
Zinc	83		0.44	0.057	mg/Kg	☼	10/26/11 09:54	11/08/11 22:40	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:54	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.031	0.010	mg/Kg	☼	11/04/11 13:24	11/04/11 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.69	J H	0.90	0.18	mg/Kg	☼	11/14/11 13:04	11/14/11 18:30	1
Total Phosphate	400		98	0.97	mg/Kg	☼	11/10/11 08:45	11/10/11 14:39	5
Cr (VI)	ND		0.76	0.19	mg/Kg	☼	11/07/11 08:30	11/09/11 13:39	1
Cr (VI)	ND		0.75	0.19	mg/Kg	☼	11/07/11 08:30	11/09/11 14:09	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			11/14/11 18:32	1
Cyanide, Total	0.26	J H	0.98	0.20	mg/Kg	☼	11/08/11 14:34	11/09/11 14:57	1
Percent Moisture	47		0.10	0.10	%			10/25/11 08:45	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.94	0.12	mg/Kg	☼		11/07/11 15:09	1
Fluoride	ND		0.94	0.28	mg/Kg	☼		11/07/11 15:09	1
Chloride	20	B	19	4.2	mg/Kg	☼		11/07/11 15:09	1
Sulfate	150	B	19	2.2	mg/Kg	☼		11/07/11 15:09	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.053		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:19	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 11:57	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G1

Lab Sample ID: 180-5172-5
Date Collected: 10/21/11 13:15
Matrix: Sediment
Date Received: 10/22/11 09:45

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:36	1

Client Sample ID: CH-2011-MU2-G2

Lab Sample ID: 180-5172-6
Date Collected: 10/21/11 15:30
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 64.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		7.3	0.68	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Bromomethane	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Chloroethane	ND		7.3	2.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Trichlorofluoromethane	ND		7.3	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,1-Dichloroethene	ND		7.3	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Acetone	**17**	**J**	29	7.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Carbon disulfide	ND		7.3	0.75	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Methylene Chloride	ND		7.3	0.98	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
trans-1,2-Dichloroethene	ND		7.3	0.87	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Methyl tert-butyl ether	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,1-Dichloroethane	ND		7.3	0.84	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
cis-1,2-Dichloroethene	ND		7.3	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
cis-1,3-Dichloropropene	ND		7.3	0.99	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
2-Butanone (MEK)	ND		7.3	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Chloroform	ND		7.3	0.85	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,1,1-Trichloroethane	ND		7.3	0.71	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Carbon tetrachloride	ND		7.3	0.65	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Benzene	ND		7.3	0.98	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
trans-1,3-Dichloropropene	ND		7.3	0.87	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2-Dichloroethane	ND		7.3	0.89	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Trichloroethene	ND		7.3	0.96	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2-Dichloropropane	ND		7.3	0.79	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Bromodichloromethane	ND		7.3	0.82	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
4-Methyl-2-pentanone (MIBK)	ND		7.3	0.95	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Toluene	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,1,2-Trichloroethane	ND		7.3	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Tetrachloroethene	ND		7.3	0.99	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Dibromochloromethane	ND		7.3	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2-Dibromoethane	ND		7.3	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Chlorobenzene	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,1,1,2-Tetrachloroethane	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Ethylbenzene	ND		7.3	0.94	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
m-Xylene & p-Xylene	ND		15	2.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
o-Xylene	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Xylenes, Total	ND		22	3.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Styrene	ND		7.3	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Bromoform	ND		7.3	0.64	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Isopropylbenzene	ND		7.3	0.99	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
N-Propylbenzene	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,1,2,2-Tetrachloroethane	ND		7.3	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,3,5-Trimethylbenzene	ND		7.3	0.97	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2,4-Trimethylbenzene	ND		7.3	0.95	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,3-Dichlorobenzene	ND		7.3	0.95	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G2

Date Collected: 10/21/11 15:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-6

Matrix: Sediment
Percent Solids: 64.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		7.3	0.93	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2-Dichlorobenzene	ND		7.3	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2-Dibromo-3-Chloropropane	ND		7.3	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
1,2,4-Trichlorobenzene	ND		7.3	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Hexachlorobutadiene	ND		7.3	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Cyclohexane	ND		7.3	0.54	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Acrolein	ND		150	10	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Vinyl acetate	ND		7.3	0.51	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
n-Butyl alcohol	ND		290	48	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1
Hexane	ND		7.3	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*65*		*52 - 124*	*10/24/11 03:58*	*10/24/11 12:20*	*1*
Toluene-d8 (Surr)	*112*		*72 - 127*	*10/24/11 03:58*	*10/24/11 12:20*	*1*
4-Bromofluorobenzene (Surr)	*71*		*63 - 120*	*10/24/11 03:58*	*10/24/11 12:20*	*1*
Dibromofluoromethane (Surr)	*87*		*68 - 121*	*10/24/11 03:58*	*10/24/11 12:20*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**63**		52	5.0	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Acenaphthylene	**35**	**J**	52	5.9	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Anthracene	**150**		52	5.1	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Atrazine	ND		260	25	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Benzo[a]anthracene	**410**		52	6.5	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Benzo[b]fluoranthene	**560**		52	8.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Benzo[k]fluoranthene	ND		52	10	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Benzo[a]pyrene	**430**		52	5.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Bis(2-chloroethyl)ether	ND		52	7.0	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Bis(2-ethylhexyl) phthalate	**71**	**J**	520	42	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Butyl benzyl phthalate	ND		260	35	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Carbazole	**31**	**J**	52	4.8	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Chrysene	**420**		52	6.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2-Chloronaphthalene	ND		52	5.4	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2-Chlorophenol	ND		260	21	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,4-Dichlorophenol	ND		52	5.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,4-Dimethylphenol	ND		260	41	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,4-Dinitrophenol	ND		1300	310	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,4-Dinitrotoluene	ND		260	21	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,6-Dinitrotoluene	ND		260	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2-Methylnaphthalene	**36**	**J**	52	4.7	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2-Methylphenol	ND		260	18	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2-Nitroaniline	ND		1300	120	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,2'-oxybis[1-chloropropane]	ND		52	5.6	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,4,5-Trichlorophenol	ND		260	28	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
2,4,6-Trichlorophenol	ND		260	39	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Methylphenol, 3 & 4	**110**	**J**	260	25	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
4-Chloroaniline	ND		260	21	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Dibenz(a,h)anthracene	**67**		52	5.8	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Dibenzofuran	**33**	**J**	260	26	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Di-n-butyl phthalate	ND		260	32	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Diethyl phthalate	ND		260	28	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G2
Date Collected: 10/21/11 15:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-6
Matrix: Sediment
Percent Solids: 64.1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		260	28	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Di-n-octyl phthalate	ND		260	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
3,3'-Dichlorobenzidine	ND		260	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Fluoranthene	**670**		52	5.5	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Fluorene	**67**		52	6.8	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Hexachlorobenzene	ND		52	5.5	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Hexachlorocyclopentadiene	ND		260	28	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Hexachloroethane	ND		260	19	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Indeno[1,2,3-cd]pyrene	**230**		52	5.3	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Isophorone	ND		260	20	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Naphthalene	**46**	**J**	52	4.5	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Nitrobenzene	ND		520	22	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
N-Nitrosodiphenylamine	ND		260	24	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
N-Nitrosodi-n-propylamine	ND		52	6.1	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Pyrene	**750**		52	5.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Phenol	ND		52	6.1	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Phenanthrene	**510**		52	8.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Pentachlorophenol	ND		260	23	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Benzyl alcohol	ND		260	31	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10
Benzoic acid	ND		1300	110	ug/Kg	☼	10/27/11 04:00	10/27/11 23:20	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*10/27/11 04:00*	*10/27/11 23:20*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*79*		*21 - 116*	*10/27/11 04:00*	*10/27/11 23:20*	*10*
2-Fluorophenol	*62*		*28 - 107*	*10/27/11 04:00*	*10/27/11 23:20*	*10*
Phenol-d5	*78*		*30 - 112*	*10/27/11 04:00*	*10/27/11 23:20*	*10*
Nitrobenzene-d5	*60*		*27 - 110*	*10/27/11 04:00*	*10/27/11 23:20*	*10*
2-Fluorobiphenyl	*68*		*28 - 108*	*10/27/11 04:00*	*10/27/11 23:20*	*10*
Terphenyl-d14	*83*		*21 - 130*	*10/27/11 04:00*	*10/27/11 23:20*	*10*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		160	160	mg/Kg	☼	10/30/11 13:42	10/30/11 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*82*		*40 - 140*	*10/30/11 13:42*	*10/30/11 17:51*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.3	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
alpha-BHC	ND		1.3	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
alpha-Chlordane	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
beta-BHC	ND		1.3	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
2,4'-DDD	**2.5**		1.3	0.077	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
2,4'-DDE	ND		1.3	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
2,4'-DDT	ND		1.3	0.11	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
4,4'-DDD	**2.3**	**p**	1.3	0.17	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
4,4'-DDE	**2.8**		1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
4,4'-DDT	**1.6**		1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Chlordane (technical)	ND		13	0.57	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G2

Date Collected: 10/21/11 15:30
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-6

Matrix: Sediment
Percent Solids: 64.1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	ND		1.3	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Endosulfan I	ND		1.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Endosulfan II	ND		1.3	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Endosulfan sulfate	ND		1.3	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Endrin	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Endrin aldehyde	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Endrin ketone	ND		1.3	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
gamma-BHC (Lindane)	**2.4**		1.3	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
gamma-Chlordane	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Heptachlor	ND		1.3	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Heptachlor epoxide	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Methoxychlor	ND		2.5	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1
Toxaphene	ND		52	8.6	ug/Kg	☼	10/31/11 04:38	11/03/11 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:05*	*1*
DCB Decachlorobiphenyl (Surr)	*83*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:05*	*1*
Tetrachloro-m-xylene	*61*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:05*	*1*
Tetrachloro-m-xylene	*66*		*45 - 130*	*10/31/11 04:38*	*11/03/11 16:05*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**22**		13	1.9	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
PCB-1221	ND		13	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
PCB-1232	ND		13	2.2	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
PCB-1242	ND		13	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
PCB-1248	ND		13	1.2	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
PCB-1254	**30**		13	1.8	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
PCB-1260	ND		13	1.8	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1
Polychlorinated biphenyls, Total	**52**		13	2.8	ug/Kg	☼	10/31/11 04:38	11/09/11 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*35 - 140*	*10/31/11 04:38*	*11/09/11 01:11*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 01:11*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		31	3.9	ug/Kg	☼	10/25/11 04:50	11/07/11 20:33	20
2,4-D	ND		120	8.5	ug/Kg	☼	10/25/11 04:50	11/07/11 20:33	20
Dalapon	ND		140	11	ug/Kg	☼	10/25/11 04:50	11/07/11 20:33	20
Dinoseb	ND		19	7.1	ug/Kg	☼	10/25/11 04:50	11/07/11 20:33	20
Silvex (2,4,5-TP)	ND		31	3.3	ug/Kg	☼	10/25/11 04:50	11/07/11 20:33	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*57*		*42 - 140*	*10/25/11 04:50*	*11/07/11 20:08*	*20*
2,4-Dichlorophenylacetic acid	*54*		*42 - 140*	*10/25/11 04:50*	*11/07/11 20:33*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.058**	**J**	0.076	0.0030	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Arsenic	**3.7**		0.076	0.014	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Boron	**9.1**	**B**	0.38	0.028	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G2

Lab Sample ID: 180-5172-6

Date Collected: 10/21/11 15:30
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 64.1

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	15		0.76	0.0081	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Beryllium	0.25		0.076	0.0057	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Calcium	78000		7.6	1.0	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Cadmium	0.32		0.076	0.0053	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Cobalt	4.6		0.038	0.0011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Chromium	12	B	0.15	0.0046	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Copper	13		0.15	0.025	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Iron	12000	B	3.8	0.27	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Potassium	990		7.6	1.0	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Magnesium	38000	B	7.6	0.14	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Manganese	410		0.38	0.0078	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Sodium	150		7.6	1.0	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Nickel	9.2		0.076	0.0086	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Lead	19	B	0.076	0.0029	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Antimony	0.17	B	0.15	0.0020	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Selenium	0.33	J	0.38	0.038	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Thallium	0.19		0.076	0.0015	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Vanadium	15	B	0.076	0.0060	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1
Zinc	63		0.38	0.049	mg/Kg	☼	10/26/11 09:54	11/08/11 22:44	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051		0.026	0.0085	mg/Kg	☼	11/04/11 13:24	11/04/11 18:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	0.30	J	0.82	0.16	mg/Kg	☼	11/04/11 13:08	11/04/11 16:35	1
Total Phosphate	300		81	0.80	mg/Kg	☼	11/10/11 08:45	11/10/11 14:39	5
Cr (VI)	ND		0.63	0.16	mg/Kg	☼	11/07/11 08:30	11/09/11 13:40	1
Cr (VI)	ND		0.62	0.16	mg/Kg	☼	11/07/11 08:30	11/09/11 14:10	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			11/18/11 11:46	1
Cyanide, Total	0.15	J	0.75	0.15	mg/Kg	☼	11/04/11 10:57	11/04/11 13:32	1
Percent Moisture	36		0.10	0.10	%			10/25/11 08:45	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.75	0.094	mg/Kg	☼		11/07/11 15:23	1
Fluoride	0.69	J	0.75	0.22	mg/Kg	☼		11/07/11 15:23	1
Chloride	16	B	15	3.3	mg/Kg	☼		11/07/11 15:23	1
Sulfate	69	B	15	1.8	mg/Kg	☼		11/07/11 15:23	1

Client Sample ID: CH-2011-MU2-G3

Lab Sample ID: 180-5172-7

Date Collected: 10/21/11 17:10
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 66.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		11	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Bromomethane	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Chloroethane	ND		11	3.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Trichlorofluoromethane	ND		11	2.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,1-Dichloroethene	ND		11	1.8	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G3

Date Collected: 10/21/11 17:10
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-7

Matrix: Sediment
Percent Solids: 66.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	J	42	11	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Carbon disulfide	ND		11	1.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Methylene Chloride	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
trans-1,2-Dichloroethene	ND		11	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Methyl tert-butyl ether	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,1-Dichloroethane	ND		11	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
cis-1,2-Dichloroethene	ND		11	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
cis-1,3-Dichloropropene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
2-Butanone (MEK)	ND		11	1.9	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Chloroform	ND		11	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,1,1-Trichloroethane	ND		11	1.0	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Carbon tetrachloride	ND		11	0.95	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Benzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
trans-1,3-Dichloropropene	ND		11	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2-Dichloroethane	ND		11	1.3	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Trichloroethene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2-Dichloropropane	ND		11	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Bromodichloromethane	ND		11	1.2	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
4-Methyl-2-pentanone (MIBK)	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Toluene	ND		11	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,1,2-Trichloroethane	ND		11	1.8	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Tetrachloroethene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Dibromochloromethane	ND		11	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2-Dibromoethane	ND		11	1.8	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Chlorobenzene	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,1,1,2-Tetrachloroethane	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Ethylbenzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
m-Xylene & p-Xylene	ND		21	3.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
o-Xylene	ND		11	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Xylenes, Total	ND		32	4.8	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Styrene	ND		11	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Bromoform	ND		11	0.94	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Isopropylbenzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
N-Propylbenzene	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,1,2,2-Tetrachloroethane	ND		11	1.5	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,3,5-Trimethylbenzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2,4-Trimethylbenzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,3-Dichlorobenzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,4-Dichlorobenzene	ND		11	1.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2-Dichlorobenzene	ND		11	1.7	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2-Dibromo-3-Chloropropane	ND		11	1.6	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
1,2,4-Trichlorobenzene	ND		11	1.9	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Hexachlorobutadiene	ND		11	2.4	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Cyclohexane	ND		11	0.79	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Acrolein	ND		210	15	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Vinyl acetate	ND		11	0.75	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
n-Butyl alcohol	ND		420	70	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1
Hexane	ND		11	2.1	ug/Kg	☼	10/24/11 03:58	10/24/11 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*69*		*52 - 124*	*10/24/11 03:58*	*10/24/11 12:42*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G3

Date Collected: 10/21/11 17:10
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-7

Matrix: Sediment
Percent Solids: 66.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	127		72 - 127	10/24/11 03:58	10/24/11 12:42	1
4-Bromofluorobenzene (Surr)	76		63 - 120	10/24/11 03:58	10/24/11 12:42	1
Dibromofluoromethane (Surr)	93		68 - 121	10/24/11 03:58	10/24/11 12:42	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**42**	**J**	50	4.8	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Acenaphthylene	**20**	**J**	50	5.8	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Anthracene	**94**		50	4.9	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Atrazine	ND		250	24	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Benzo[a]anthracene	**230**		50	6.3	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Benzo[b]fluoranthene	**250**		50	7.9	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Benzo[k]fluoranthene	**110**		50	10	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Benzo[a]pyrene	**260**		50	5.0	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Bis(2-chloroethyl)ether	ND		50	6.7	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Bis(2-ethylhexyl) phthalate	**79**	**J**	500	41	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Butyl benzyl phthalate	ND		250	34	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Carbazole	**18**	**J**	50	4.6	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Chrysene	**290**		50	6.0	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2-Chloronaphthalene	ND		50	5.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2-Chlorophenol	ND		250	21	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,4-Dichlorophenol	ND		50	5.0	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,4-Dimethylphenol	ND		250	39	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,4-Dinitrophenol	ND		1300	300	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,4-Dinitrotoluene	ND		250	20	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,6-Dinitrotoluene	ND		250	26	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2-Methylnaphthalene	**24**	**J**	50	4.5	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2-Methylphenol	ND		250	18	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2-Nitroaniline	ND		1300	110	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,2'-oxybis[1-chloropropane]	ND		50	5.4	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,4,5-Trichlorophenol	ND		250	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
2,4,6-Trichlorophenol	ND		250	38	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Methylphenol, 3 & 4	**130**	**J**	250	25	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
4-Chloroaniline	ND		250	20	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Dibenz(a,h)anthracene	**43**	**J**	50	5.6	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Dibenzofuran	**28**	**J**	250	25	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Di-n-butyl phthalate	ND		250	31	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Diethyl phthalate	ND		250	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Dimethyl phthalate	ND		250	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Di-n-octyl phthalate	ND		250	26	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
3,3'-Dichlorobenzidine	ND		250	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Fluoranthene	**420**		50	5.4	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Fluorene	**44**	**J**	50	6.6	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Hexachlorobenzene	ND		50	5.3	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Hexachlorocyclopentadiene	ND		250	27	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Hexachloroethane	ND		250	18	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Indeno[1,2,3-cd]pyrene	**130**		50	5.2	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Isophorone	ND		250	19	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Naphthalene	**28**	**J**	50	4.3	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Nitrobenzene	ND		500	21	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
N-Nitrosodiphenylamine	ND		250	23	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G3
Date Collected: 10/21/11 17:10
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-7
Matrix: Sediment
Percent Solids: 66.0

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		50	5.9	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Pyrene	**520**		50	5.1	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Phenol	ND		50	5.9	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Phenanthrene	**340**		50	8.0	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Pentachlorophenol	ND		250	22	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Benzyl alcohol	ND		250	30	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10
Benzoic acid	ND		1300	100	ug/Kg	☼	10/27/11 04:00	10/27/11 23:44	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*0.00*	*J N*	*ug/Kg*	☼		*68-12-2*	*10/27/11 04:00*	*10/27/11 23:44*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*81*		*21 - 116*	*10/27/11 04:00*	*10/27/11 23:44*	*10*
2-Fluorophenol	*64*		*28 - 107*	*10/27/11 04:00*	*10/27/11 23:44*	*10*
Phenol-d5	*76*		*30 - 112*	*10/27/11 04:00*	*10/27/11 23:44*	*10*
Nitrobenzene-d5	*69*		*27 - 110*	*10/27/11 04:00*	*10/27/11 23:44*	*10*
2-Fluorobiphenyl	*78*		*28 - 108*	*10/27/11 04:00*	*10/27/11 23:44*	*10*
Terphenyl-d14	*92*		*21 - 130*	*10/27/11 04:00*	*10/27/11 23:44*	*10*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		150	150	mg/Kg	☼	10/30/11 13:42	10/30/11 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*72*		*40 - 140*	*10/30/11 13:42*	*10/30/11 18:03*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.3	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
alpha-BHC	ND		1.3	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
alpha-Chlordane	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
beta-BHC	ND		1.3	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
2,4'-DDD	ND		1.3	0.075	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
2,4'-DDE	ND		1.3	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
2,4'-DDT	ND		1.3	0.11	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
4,4'-DDD	**1.7**	**p**	1.3	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
4,4'-DDE	**2.1**		1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
4,4'-DDT	**1.2**	**J**	1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Chlordane (technical)	ND		13	0.55	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Dieldrin	ND		1.3	0.21	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Endosulfan I	ND		1.3	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Endosulfan II	ND		1.3	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Endosulfan sulfate	ND		1.3	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Endrin	ND		1.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Endrin aldehyde	ND		1.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Endrin ketone	ND		1.3	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
gamma-BHC (Lindane)	**1.6**		1.3	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
gamma-Chlordane	ND		1.3	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Heptachlor	ND		1.3	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Heptachlor epoxide	ND		1.3	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Methoxychlor	ND		2.5	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1
Toxaphene	ND		50	8.3	ug/Kg	☼	10/31/11 04:38	11/03/11 16:24	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G3

Date Collected: 10/21/11 17:10
Date Received: 10/22/11 09:45

Lab Sample ID: 180-5172-7

Matrix: Sediment
Percent Solids: 66.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	80		45 - 130	10/31/11 04:38	11/03/11 16:24	1
DCB Decachlorobiphenyl (Surr)	81		45 - 130	10/31/11 04:38	11/03/11 16:24	1
Tetrachloro-m-xylene	61		45 - 130	10/31/11 04:38	11/03/11 16:24	1
Tetrachloro-m-xylene	67		45 - 130	10/31/11 04:38	11/03/11 16:24	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	9.3	J	12	1.9	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
PCB-1221	ND		12	2.4	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
PCB-1232	ND		12	2.1	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
PCB-1242	ND		12	2.0	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
PCB-1248	ND		12	1.2	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
PCB-1254	14		12	1.8	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
PCB-1260	ND		12	1.8	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1
Polychlorinated biphenyls, Total	23		12	2.7	ug/Kg	☼	10/31/11 04:38	11/09/11 01:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	65		35 - 140	10/31/11 04:38	11/09/11 01:39	1
DCB Decachlorobiphenyl (Surr)	89		35 - 140	10/31/11 04:38	11/09/11 01:39	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		30	3.8	ug/Kg	☼	10/25/11 04:50	11/07/11 20:57	20
2,4-D	ND		120	8.3	ug/Kg	☼	10/25/11 04:50	11/07/11 20:57	20
Dalapon	ND		140	11	ug/Kg	☼	10/25/11 04:50	11/07/11 20:57	20
Dinoseb	ND		18	6.9	ug/Kg	☼	10/25/11 04:50	11/07/11 20:57	20
Silvex (2,4,5-TP)	ND		30	3.2	ug/Kg	☼	10/25/11 04:50	11/07/11 20:57	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	57		42 - 140	10/25/11 04:50	11/07/11 20:33	20
2,4-Dichlorophenylacetic acid	56		42 - 140	10/25/11 04:50	11/07/11 20:57	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.055	J	0.070	0.0027	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Arsenic	3.9		0.070	0.013	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Boron	9.5	B	0.35	0.026	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Barium	17		0.70	0.0074	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Beryllium	0.27		0.070	0.0052	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Calcium	66000		7.0	0.92	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Cadmium	0.24		0.070	0.0049	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Cobalt	4.6		0.035	0.0010	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Chromium	11	B	0.14	0.0042	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Copper	12		0.14	0.023	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Iron	11000	B	3.5	0.25	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Potassium	1100		7.0	0.94	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Magnesium	31000	B	7.0	0.13	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Manganese	360		0.35	0.0072	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Sodium	140		7.0	0.95	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Nickel	9.3		0.070	0.0079	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Lead	17	B	0.070	0.0026	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Antimony	0.14	B	0.14	0.0018	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Selenium	0.27	J	0.35	0.035	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-G3

Lab Sample ID: 180-5172-7

Date Collected: 10/21/11 17:10
Matrix: Sediment
Date Received: 10/22/11 09:45
Percent Solids: 66.0

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.18		0.070	0.0014	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Vanadium	14	B	0.070	0.0055	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1
Zinc	52		0.35	0.045	mg/Kg	☼	10/26/11 09:54	11/08/11 22:49	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050		0.025	0.0083	mg/Kg	☼	11/04/11 13:24	11/04/11 18:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	1.0		0.76	0.15	mg/Kg	☼	11/04/11 13:08	11/04/11 16:35	1
Total Phosphate	350		73	0.72	mg/Kg	☼	11/10/11 08:45	11/10/11 14:39	5
Cr (VI)	ND		0.60	0.15	mg/Kg	☼	11/07/11 08:30	11/09/11 13:41	1
Cr (VI)	ND		0.61	0.15	mg/Kg	☼	11/07/11 08:30	11/09/11 14:11	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			11/18/11 11:46	1
Cyanide, Total	0.26	J	0.77	0.15	mg/Kg	☼	11/04/11 10:57	11/04/11 13:32	1
Percent Moisture	34		0.10	0.10	%			10/25/11 08:45	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.77	0.096	mg/Kg	☼		11/07/11 15:37	1
Fluoride	2.0		0.77	0.23	mg/Kg	☼		11/07/11 15:37	1
Chloride	17	B	15	3.4	mg/Kg	☼		11/07/11 15:37	1
Sulfate	22	B	15	1.8	mg/Kg	☼		11/07/11 15:37	1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-8

Date Collected: 10/21/11 17:10
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 19:46	1
Arsenic	0.0032	J	0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 19:46	1
Boron	0.34		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 19:46	1
Barium	0.012	J	0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 19:46	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 19:46	1
Calcium	19	B	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 19:46	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 19:46	1
Cobalt	0.0012	J B	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 19:46	1
Chromium	0.0048	J B	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 19:46	1
Copper	0.0035	J	0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 19:46	1
Iron	1.4		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 19:46	1
Potassium	1.0	J	5.0	0.75	mg/L		11/01/11 16:58	11/02/11 19:46	1
Magnesium	2.4	J	5.0	0.021	mg/L		11/01/11 16:58	11/02/11 19:46	1
Manganese	0.016		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 19:46	1
Sodium	20		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 19:46	1
Nickel	0.0019	J	0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 19:46	1
Lead	0.0052		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 19:46	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 19:46	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 19:46	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 19:46	1
Vanadium	0.0057	J	0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 19:46	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-8

Date Collected: 10/21/11 17:10
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	**0.014**	**J B**	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 19:46	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:56	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.042**		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:23	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/03/11 11:57	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:20	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:36	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	**y**				ug/L			10/26/11 10:52	1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-9

Date Collected: 10/26/11 15:30
Matrix: SET, Dissolved
Date Received: 10/26/11 15:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/02/11 19:00	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/02/11 19:00	1
Methylene Chloride	**2.7**		1.0	0.15	ug/L			11/02/11 19:00	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/02/11 19:00	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/02/11 19:00	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/02/11 19:00	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/02/11 19:00	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/02/11 19:00	1
Benzene	ND		1.0	0.11	ug/L			11/02/11 19:00	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/02/11 19:00	1
Trichloroethene	ND		1.0	0.14	ug/L			11/02/11 19:00	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/02/11 19:00	1
Toluene	**0.23**	**J**	1.0	0.15	ug/L			11/02/11 19:00	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/02/11 19:00	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/02/11 19:00	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/02/11 19:00	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/02/11 19:00	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/02/11 19:00	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/02/11 19:00	1
Styrene	ND		1.0	0.097	ug/L			11/02/11 19:00	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/02/11 19:00	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/02/11 19:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/02/11 19:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/02/11 19:00	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-9

Date Collected: 10/26/11 15:30

Matrix: SET, Dissolved

Date Received: 10/26/11 15:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*64 - 135*		*11/02/11 19:00*	*1*
Toluene-d8 (Surr)	*98*		*71 - 118*		*11/02/11 19:00*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 118*		*11/02/11 19:00*	*1*
Dibromofluoromethane (Surr)	*112*		*70 - 128*		*11/02/11 19:00*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:10	11/02/11 17:09	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 17:09	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 17:09	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:10	11/02/11 17:09	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:10	11/02/11 17:09	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*31*		*23 - 112*	*11/01/11 09:10*	*11/02/11 17:09*	*1*
2-Fluorobiphenyl	*25*		*19 - 107*	*11/01/11 09:10*	*11/02/11 17:09*	*1*
Terphenyl-d14	*20*		*10 - 132*	*11/01/11 09:10*	*11/02/11 17:09*	*1*
2,4,6-Tribromophenol	*36*		*16 - 122*	*11/01/11 09:10*	*11/02/11 17:09*	*1*
2-Fluorophenol	*30*		*10 - 111*	*11/01/11 09:10*	*11/02/11 17:09*	*1*
Phenol-d5	*29*		*15 - 112*	*11/01/11 09:10*	*11/02/11 17:09*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:20	1
Chlordane (technical)	ND		0.012	0.0016	ug/L		10/27/11 13:35	10/31/11 12:20	1
Endrin	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:20	1
gamma-BHC (Lindane)	**0.0029**		0.0012	0.00075	ug/L		10/27/11 13:35	10/31/11 12:20	1
gamma-Chlordane	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:20	1
Heptachlor	ND		0.0012	0.00093	ug/L		10/27/11 13:35	10/31/11 12:20	1
Heptachlor epoxide	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:20	1
Methoxychlor	ND		0.0024	0.00086	ug/L		10/27/11 13:35	10/31/11 12:20	1
Toxaphene	ND		0.094	0.018	ug/L		10/27/11 13:35	10/31/11 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:20*	*1*
Tetrachloro-m-xylene	*79*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:20*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:20*	*1*
DCB Decachlorobiphenyl (Surr)	*83*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:20*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0094	0.0024	ug/L		10/27/11 13:35	10/28/11 20:39	1
PCB-1221	ND		0.0094	0.0023	ug/L		10/27/11 13:35	10/28/11 20:39	1
PCB-1232	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 20:39	1
PCB-1242	ND		0.0094	0.0018	ug/L		10/27/11 13:35	10/28/11 20:39	1
PCB-1248	ND		0.0094	0.0021	ug/L		10/27/11 13:35	10/28/11 20:39	1
PCB-1254	ND		0.0094	0.0022	ug/L		10/27/11 13:35	10/28/11 20:39	1
PCB-1260	ND		0.0094	0.0013	ug/L		10/27/11 13:35	10/28/11 20:39	1
Polychlorinated biphenyls, Total	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*47 - 150*	*10/27/11 13:35*	*10/28/11 20:39*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU1-COMP

Date Collected: 10/26/11 15:30
Date Received: 10/26/11 15:45

Lab Sample ID: 180-5172-9

Matrix: SET, Dissolved

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*81*		*50 - 140*	*10/27/11 13:35*	*10/28/11 20:39*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		10/27/11 16:00	10/30/11 13:01	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		10/27/11 16:00	10/30/11 13:01	20
Dalapon	ND		4.7	0.65	ug/L		10/27/11 16:00	10/30/11 13:01	20
Dinoseb	ND		0.85	0.12	ug/L		10/27/11 16:00	10/30/11 13:01	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*69*		*32 - 140*	*10/27/11 16:00*	*10/30/11 13:01*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.30**	**J B**	2.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:56	1
Arsenic	**4.6**		1.0	0.29	ug/L		10/27/11 11:48	10/31/11 14:56	1
Beryllium	ND		1.0	0.037	ug/L		10/27/11 11:48	10/31/11 14:56	1
Boron	**63**		5.0	0.28	ug/L		10/27/11 11:48	10/31/11 14:56	1
Barium	**40**		10	0.098	ug/L		10/27/11 11:48	10/31/11 14:56	1
Cadmium	**0.21**	**J**	1.0	0.11	ug/L		10/27/11 11:48	10/31/11 14:56	1
Chromium	**5.2**	**B**	2.0	0.54	ug/L		10/27/11 11:48	10/31/11 14:56	1
Calcium	**32000**	**B**	100	2.8	ug/L		10/27/11 11:48	10/31/11 14:56	1
Cobalt	**0.42**	**J**	0.50	0.026	ug/L		10/27/11 11:48	10/31/11 14:56	1
Copper	**2.0**	**B**	2.0	0.24	ug/L		10/27/11 11:48	10/31/11 14:56	1
Iron	**360**	**B**	50	6.1	ug/L		10/27/11 11:48	10/31/11 14:56	1
Lead	**0.49**	**J B**	1.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:56	1
Manganese	**290**	**B**	5.0	0.039	ug/L		10/27/11 11:48	10/31/11 14:56	1
Nickel	**0.69**	**J**	1.0	0.17	ug/L		10/27/11 11:48	10/31/11 14:56	1
Selenium	ND		5.0	0.42	ug/L		10/27/11 11:48	10/31/11 14:56	1
Potassium	**1700**		100	5.8	ug/L		10/27/11 11:48	10/31/11 14:56	1
Silver	ND		1.0	0.036	ug/L		10/27/11 11:48	10/31/11 14:56	1
Magnesium	**8600**	**B**	100	1.2	ug/L		10/27/11 11:48	10/31/11 14:56	1
Thallium	**0.062**	**J**	1.0	0.015	ug/L		10/27/11 11:48	10/31/11 14:56	1
Zinc	**4.5**	**J**	5.0	0.96	ug/L		10/27/11 11:48	10/31/11 14:56	1
Sodium	**12000**		100	3.8	ug/L		10/27/11 11:48	10/31/11 14:56	1
Vanadium	**3.9**	**B**	1.0	0.082	ug/L		10/27/11 11:48	10/31/11 14:56	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/10/11 15:34	11/10/11 22:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	**3.7**	**B**	0.10	0.033	mg/L		11/08/11 13:45	11/09/11 13:21	1
pH	**7.56**	**HF**	0.100	0.100	SU			10/27/11 12:38	1
Total Dissolved Solids	**160**		10	10	mg/L			10/27/11 09:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.73**		0.050	0.043	mg/L			10/26/11 16:54	1
Fluoride	**0.22**	**B**	0.050	0.014	mg/L			10/26/11 16:54	1
Chloride	**15**		1.0	0.20	mg/L			10/26/11 16:54	1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-9

Date Collected: 10/26/11 15:30

Matrix: SET, Dissolved

Date Received: 10/26/11 15:45

General Chemistry - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**21**		1.0	0.21	mg/L			10/26/11 16:54	1
Cyanide, Non-amenable	**0.22**		0.050	0.025	mg/L		10/28/11 15:42	10/28/11 16:55	5
Cyanide, Amenable	ND		0.010	0.010	mg/L			10/28/11 16:55	1
Cyanide, Total	ND		0.010	0.0050	mg/L		10/28/11 13:17	10/28/11 15:38	1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-10

Date Collected: 10/26/11 15:30

Matrix: SET, Dissolved

Date Received: 10/26/11 15:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/02/11 19:24	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/02/11 19:24	1
Methylene Chloride	**2.3**		1.0	0.15	ug/L			11/02/11 19:24	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/02/11 19:24	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/02/11 19:24	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/02/11 19:24	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/02/11 19:24	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/02/11 19:24	1
Benzene	ND		1.0	0.11	ug/L			11/02/11 19:24	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/02/11 19:24	1
Trichloroethene	ND		1.0	0.14	ug/L			11/02/11 19:24	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/02/11 19:24	1
Toluene	**0.22**	**J**	1.0	0.15	ug/L			11/02/11 19:24	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/02/11 19:24	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/02/11 19:24	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/02/11 19:24	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/02/11 19:24	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/02/11 19:24	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/02/11 19:24	1
Styrene	ND		1.0	0.097	ug/L			11/02/11 19:24	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/02/11 19:24	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/02/11 19:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/02/11 19:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/02/11 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*		*11/02/11 19:24*	*1*
Toluene-d8 (Surr)	*96*		*71 - 118*		*11/02/11 19:24*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*		*11/02/11 19:24*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 128*		*11/02/11 19:24*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.97	0.087	ug/L		11/01/11 09:10	11/02/11 17:31	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 17:31	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 17:31	1
Hexachlorocyclopentadiene	ND		0.97	0.050	ug/L		11/01/11 09:10	11/02/11 17:31	1
Pentachlorophenol	ND		0.97	0.064	ug/L		11/01/11 09:10	11/02/11 17:31	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 17:31	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-10

Date Collected: 10/26/11 15:30

Matrix: SET, Dissolved

Date Received: 10/26/11 15:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*52*		*23 - 112*	*11/01/11 09:10*	*11/02/11 17:31*	*1*
2-Fluorobiphenyl	*46*		*19 - 107*	*11/01/11 09:10*	*11/02/11 17:31*	*1*
Terphenyl-d14	*35*		*10 - 132*	*11/01/11 09:10*	*11/02/11 17:31*	*1*
2,4,6-Tribromophenol	*59*		*16 - 122*	*11/01/11 09:10*	*11/02/11 17:31*	*1*
2-Fluorophenol	*48*		*10 - 111*	*11/01/11 09:10*	*11/02/11 17:31*	*1*
Phenol-d5	*47*		*15 - 112*	*11/01/11 09:10*	*11/02/11 17:31*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:39	1
Chlordane (technical)	ND		0.012	0.0016	ug/L		10/27/11 13:35	10/31/11 12:39	1
Endrin	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:39	1
gamma-BHC (Lindane)	**0.0017**		0.0012	0.00075	ug/L		10/27/11 13:35	10/31/11 12:39	1
gamma-Chlordane	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:39	1
Heptachlor	ND		0.0012	0.00093	ug/L		10/27/11 13:35	10/31/11 12:39	1
Heptachlor epoxide	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:39	1
Methoxychlor	ND		0.0024	0.00086	ug/L		10/27/11 13:35	10/31/11 12:39	1
Toxaphene	ND		0.094	0.018	ug/L		10/27/11 13:35	10/31/11 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:39*	*1*
Tetrachloro-m-xylene	*74*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:39*	*1*
DCB Decachlorobiphenyl (Surr)	*80*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:39*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:39*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0094	0.0024	ug/L		10/27/11 13:35	10/28/11 21:08	1
PCB-1221	ND		0.0094	0.0023	ug/L		10/27/11 13:35	10/28/11 21:08	1
PCB-1232	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 21:08	1
PCB-1242	ND		0.0094	0.0018	ug/L		10/27/11 13:35	10/28/11 21:08	1
PCB-1248	ND		0.0094	0.0021	ug/L		10/27/11 13:35	10/28/11 21:08	1
PCB-1254	ND		0.0094	0.0022	ug/L		10/27/11 13:35	10/28/11 21:08	1
PCB-1260	ND		0.0094	0.0013	ug/L		10/27/11 13:35	10/28/11 21:08	1
Polychlorinated biphenyls, Total	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*47 - 150*	*10/27/11 13:35*	*10/28/11 21:08*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*50 - 140*	*10/27/11 13:35*	*10/28/11 21:08*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		10/27/11 16:00	10/30/11 13:26	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		10/27/11 16:00	10/30/11 13:26	20
Dalapon	ND		4.7	0.65	ug/L		10/27/11 16:00	10/30/11 13:26	20
Dinoseb	ND		0.85	0.12	ug/L		10/27/11 16:00	10/30/11 13:26	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*54*		*32 - 140*	*10/27/11 16:00*	*10/30/11 13:26*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.37**	**J B**	2.0	0.019	ug/L		10/27/11 11:48	10/31/11 15:01	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-10

Date Collected: 10/26/11 15:30
Matrix: SET, Dissolved
Date Received: 10/26/11 15:45

Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.5		1.0	0.29	ug/L		10/27/11 11:48	10/31/11 15:01	1
Beryllium	ND		1.0	0.037	ug/L		10/27/11 11:48	10/31/11 15:01	1
Boron	25		5.0	0.28	ug/L		10/27/11 11:48	10/31/11 15:01	1
Barium	39		10	0.098	ug/L		10/27/11 11:48	10/31/11 15:01	1
Cadmium	ND		1.0	0.11	ug/L		10/27/11 11:48	10/31/11 15:01	1
Chromium	5.0	B	2.0	0.54	ug/L		10/27/11 11:48	10/31/11 15:01	1
Calcium	32000	B	100	2.8	ug/L		10/27/11 11:48	10/31/11 15:01	1
Cobalt	0.30	J	0.50	0.026	ug/L		10/27/11 11:48	10/31/11 15:01	1
Copper	0.98	J B	2.0	0.24	ug/L		10/27/11 11:48	10/31/11 15:01	1
Iron	18	J B	50	6.1	ug/L		10/27/11 11:48	10/31/11 15:01	1
Lead	0.11	J B	1.0	0.019	ug/L		10/27/11 11:48	10/31/11 15:01	1
Manganese	240	B	5.0	0.039	ug/L		10/27/11 11:48	10/31/11 15:01	1
Nickel	0.46	J	1.0	0.17	ug/L		10/27/11 11:48	10/31/11 15:01	1
Selenium	ND		5.0	0.42	ug/L		10/27/11 11:48	10/31/11 15:01	1
Potassium	1500		100	5.8	ug/L		10/27/11 11:48	10/31/11 15:01	1
Silver	ND		1.0	0.036	ug/L		10/27/11 11:48	10/31/11 15:01	1
Magnesium	8600	B	100	1.2	ug/L		10/27/11 11:48	10/31/11 15:01	1
Thallium	ND		1.0	0.015	ug/L		10/27/11 11:48	10/31/11 15:01	1
Zinc	4.1	J	5.0	0.96	ug/L		10/27/11 11:48	10/31/11 15:01	1
Sodium	6200		100	3.8	ug/L		10/27/11 11:48	10/31/11 15:01	1
Vanadium	4.5	B	1.0	0.082	ug/L		10/27/11 11:48	10/31/11 15:01	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/10/11 15:34	11/10/11 22:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	1.9	B	0.10	0.033	mg/L		11/08/11 13:45	11/09/11 13:23	1
pH	7.43	HF	0.100	0.100	SU			10/27/11 12:38	1
Total Dissolved Solids	130		10	10	mg/L			10/27/11 09:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.24		0.050	0.043	mg/L			10/26/11 17:08	1
Fluoride	0.088	B	0.050	0.014	mg/L			10/26/11 17:08	1
Chloride	13		1.0	0.20	mg/L			10/26/11 17:08	1
Sulfate	20		1.0	0.21	mg/L			10/26/11 17:08	1
Cyanide, Non-amenable	0.068		0.010	0.0050	mg/L		10/28/11 15:42	10/28/11 16:40	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			10/28/11 16:40	1
Cyanide, Total	ND		0.010	0.0050	mg/L		10/28/11 13:17	10/28/11 15:38	1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-12

Date Collected: 10/21/11 11:30
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/28/11 11:22	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-13

Date Collected: 10/21/11 17:10
Matrix: Sediment
Date Received: 10/22/11 09:45

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	y				ug/L			10/28/11 11:22	1

Client Sample ID: CH-2011-MU1-COMP

Lab Sample ID: 180-5172-14

Date Collected: 10/21/11 11:30
Matrix: Water
Date Received: 10/22/11 09:45

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 14:00	1

Client Sample ID: CH-2011-MU2-COMP

Lab Sample ID: 180-5172-15

Date Collected: 10/21/11 17:10
Matrix: Water
Date Received: 10/22/11 09:45

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 14:01	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-18340/1-A
Matrix: Sediment
Analysis Batch: 18348

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.0	0.47	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Bromomethane	ND		5.0	0.74	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Chloroethane	ND		5.0	1.5	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Trichlorofluoromethane	ND		5.0	0.92	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,1-Dichloroethene	ND		5.0	0.85	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Acetone	ND		20	5.0	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Carbon disulfide	ND		5.0	0.51	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Methylene Chloride	ND		5.0	0.67	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
trans-1,2-Dichloroethene	ND		5.0	0.60	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Methyl tert-butyl ether	ND		5.0	0.75	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,1-Dichloroethane	ND		5.0	0.58	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
cis-1,2-Dichloroethene	ND		5.0	0.70	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
cis-1,3-Dichloropropene	ND		5.0	0.68	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
2-Butanone (MEK)	ND		5.0	0.88	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Chloroform	ND		5.0	0.58	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,1,1-Trichloroethane	ND		5.0	0.49	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Carbon tetrachloride	ND		5.0	0.45	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Benzene	ND		5.0	0.68	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
trans-1,3-Dichloropropene	ND		5.0	0.60	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2-Dichloroethane	ND		5.0	0.61	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Trichloroethene	ND		5.0	0.66	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2-Dichloropropane	ND		5.0	0.54	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Bromodichloromethane	ND		5.0	0.56	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.65	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Toluene	ND		5.0	0.73	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,1,2-Trichloroethane	ND		5.0	0.83	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Tetrachloroethene	ND		5.0	0.68	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Dibromochloromethane	ND		5.0	0.71	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2-Dibromoethane	ND		5.0	0.86	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Chlorobenzene	ND		5.0	0.76	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.74	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Ethylbenzene	ND		5.0	0.64	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
m-Xylene & p-Xylene	ND		10	1.5	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
o-Xylene	ND		5.0	0.78	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Xylenes, Total	ND		15	2.2	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Styrene	ND		5.0	0.71	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Bromoform	ND		5.0	0.44	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
N-Propylbenzene	ND		5.0	0.76	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.72	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,3,5-Trimethylbenzene	ND		5.0	0.67	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2,4-Trimethylbenzene	ND		5.0	0.65	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,3-Dichlorobenzene	ND		5.0	0.66	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,4-Dichlorobenzene	ND		5.0	0.64	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2-Dichlorobenzene	ND		5.0	0.80	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.75	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
1,2,4-Trichlorobenzene	ND		5.0	0.88	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Hexachlorobutadiene	ND		5.0	1.1	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Cyclohexane	ND		5.0	0.37	ug/Kg		10/24/11 03:58	10/24/11 06:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-18340/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18348 — **Prep Batch: 18340**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		100	7.0	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Vinyl acetate	ND		5.0	0.35	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
n-Butyl alcohol	119	J	200	33	ug/Kg		10/24/11 03:58	10/24/11 06:21	1
Hexane	1.58	J	5.0	1.0	ug/Kg		10/24/11 03:58	10/24/11 06:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*52 - 124*	*10/24/11 03:58*	*10/24/11 06:21*	*1*
Toluene-d8 (Surr)	*97*		*72 - 127*	*10/24/11 03:58*	*10/24/11 06:21*	*1*
4-Bromofluorobenzene (Surr)	*83*		*63 - 120*	*10/24/11 03:58*	*10/24/11 06:21*	*1*
Dibromofluoromethane (Surr)	*91*		*68 - 121*	*10/24/11 03:58*	*10/24/11 06:21*	*1*

Lab Sample ID: LCS 180-18340/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18348 — **Prep Batch: 18340**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	40.0	31.4		ug/Kg		79	63 - 124
Bromomethane	40.0	26.0		ug/Kg		65	25 - 150
Chloroethane	40.0	24.4		ug/Kg		61	22 - 150
Trichlorofluoromethane	40.0	20.9		ug/Kg		52	20 - 150
1,1-Dichloroethene	40.0	38.5		ug/Kg		96	59 - 129
Acetone	40.0	28.2		ug/Kg		70	20 - 150
Carbon disulfide	40.0	31.1		ug/Kg		78	50 - 127
Methylene Chloride	40.0	34.6		ug/Kg		86	58 - 127
trans-1,2-Dichloroethene	40.0	41.4		ug/Kg		104	77 - 121
Methyl tert-butyl ether	40.0	32.4		ug/Kg		81	48 - 132
1,1-Dichloroethane	40.0	36.2		ug/Kg		91	66 - 124
cis-1,2-Dichloroethene	40.0	39.6		ug/Kg		99	80 - 118
cis-1,3-Dichloropropene	40.0	31.3		ug/Kg		78	73 - 120
2-Butanone (MEK)	40.0	28.9		ug/Kg		72	35 - 149
Chloroform	40.0	34.3		ug/Kg		86	72 - 120
1,1,1-Trichloroethane	40.0	31.9		ug/Kg		80	67 - 126
Carbon tetrachloride	40.0	29.3		ug/Kg		73	69 - 122
Benzene	40.0	36.3		ug/Kg		91	77 - 120
trans-1,3-Dichloropropene	40.0	30.7		ug/Kg		77	74 - 129
1,2-Dichloroethane	40.0	30.7		ug/Kg		77	61 - 127
Trichloroethene	40.0	40.8		ug/Kg		102	76 - 119
1,2-Dichloropropane	40.0	36.5		ug/Kg		91	72 - 122
Bromodichloromethane	40.0	29.2		ug/Kg		73	70 - 125
4-Methyl-2-pentanone (MIBK)	40.0	32.3		ug/Kg		81	44 - 148
Toluene	40.0	40.5		ug/Kg		101	78 - 124
1,1,2-Trichloroethane	40.0	39.6		ug/Kg		99	70 - 128
Tetrachloroethene	40.0	43.5		ug/Kg		109	78 - 129
Dibromochloromethane	40.0	32.9		ug/Kg		82	70 - 132
1,2-Dibromoethane	40.0	36.3		ug/Kg		91	70 - 131
Chlorobenzene	40.0	41.6		ug/Kg		104	79 - 120
1,1,1,2-Tetrachloroethane	40.0	36.5		ug/Kg		91	76 - 124
Ethylbenzene	40.0	38.7		ug/Kg		97	78 - 125
m-Xylene & p-Xylene	80.0	77.0		ug/Kg		96	75 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-18340/2-A
Matrix: Sediment
Analysis Batch: 18348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	40.0	37.5		ug/Kg		94	83 - 127
Styrene	40.0	37.8		ug/Kg		95	83 - 129
Bromoform	40.0	29.5		ug/Kg		74	53 - 140
Isopropylbenzene	40.0	36.8		ug/Kg		92	70 - 133
N-Propylbenzene	40.0	40.7		ug/Kg		102	80 - 120
1,1,2,2-Tetrachloroethane	40.0	37.0		ug/Kg		92	60 - 139
1,3,5-Trimethylbenzene	40.0	36.9		ug/Kg		92	68 - 133
1,2,4-Trimethylbenzene	40.0	36.6		ug/Kg		91	80 - 121
1,3-Dichlorobenzene	40.0	41.3		ug/Kg		103	75 - 118
1,4-Dichlorobenzene	40.0	42.2		ug/Kg		106	77 - 116
1,2-Dichlorobenzene	40.0	42.3		ug/Kg		106	71 - 124
1,2-Dibromo-3-Chloropropane	40.0	34.7		ug/Kg		87	35 - 136
1,2,4-Trichlorobenzene	40.0	42.9		ug/Kg		107	51 - 136
Hexachlorobutadiene	40.0	43.6		ug/Kg		109	42 - 150
Cyclohexane	40.0	35.8		ug/Kg		89	64 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*52 - 124*
Toluene-d8 (Surr)	*97*		*72 - 127*
4-Bromofluorobenzene (Surr)	*86*		*63 - 120*
Dibromofluoromethane (Surr)	*91*		*68 - 121*

Lab Sample ID: 180-5068-E-3-B MS
Matrix: Sediment
Analysis Batch: 18348

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18340

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	ND		313	232		ug/Kg	☼	74	63 - 124
Bromomethane	ND		313	217		ug/Kg	☼	69	25 - 150
Chloroethane	ND		313	204		ug/Kg	☼	65	22 - 150
Trichlorofluoromethane	ND		313	183		ug/Kg	☼	58	20 - 150
1,1-Dichloroethene	ND		313	315		ug/Kg	☼	101	59 - 129
Acetone	ND		313	191		ug/Kg	☼	61	20 - 150
Carbon disulfide	ND		313	258		ug/Kg	☼	82	50 - 127
Methylene Chloride	ND		313	287		ug/Kg	☼	92	58 - 127
trans-1,2-Dichloroethene	ND		313	324		ug/Kg	☼	103	77 - 121
Methyl tert-butyl ether	ND		313	254		ug/Kg	☼	81	48 - 132
1,1-Dichloroethane	ND		313	277		ug/Kg	☼	88	66 - 124
cis-1,2-Dichloroethene	ND		313	320		ug/Kg	☼	102	80 - 118
cis-1,3-Dichloropropene	ND		313	247		ug/Kg	☼	79	73 - 120
2-Butanone (MEK)	ND		313	219		ug/Kg	☼	70	35 - 149
Chloroform	ND		313	267		ug/Kg	☼	85	72 - 120
1,1,1-Trichloroethane	ND		313	256		ug/Kg	☼	82	67 - 126
Carbon tetrachloride	ND		313	232		ug/Kg	☼	74	69 - 122
Benzene	ND		313	283		ug/Kg	☼	90	77 - 120
trans-1,3-Dichloropropene	ND		313	245		ug/Kg	☼	78	74 - 129
1,2-Dichloroethane	ND		313	237		ug/Kg	☼	76	61 - 127
Trichloroethene	ND		313	314		ug/Kg	☼	100	76 - 119
1,2-Dichloropropane	ND		313	273		ug/Kg	☼	87	72 - 122

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-5068-E-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18348 — **Prep Batch: 18340**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromodichloromethane	ND		313	220		ug/Kg	☼	70	70 - 125
4-Methyl-2-pentanone (MIBK)	ND		313	253		ug/Kg	☼	81	44 - 148
Toluene	ND		313	317		ug/Kg	☼	101	78 - 124
1,1,2-Trichloroethane	ND		313	311		ug/Kg	☼	99	70 - 128
Tetrachloroethene	ND		313	334		ug/Kg	☼	107	78 - 129
Dibromochloromethane	ND		313	261		ug/Kg	☼	83	70 - 132
1,2-Dibromoethane	ND		313	280		ug/Kg	☼	89	70 - 131
Chlorobenzene	ND		313	327		ug/Kg	☼	104	79 - 120
1,1,1,2-Tetrachloroethane	ND		313	296		ug/Kg	☼	95	76 - 124
Ethylbenzene	ND		313	296		ug/Kg	☼	95	78 - 125
m-Xylene & p-Xylene	ND		626	601		ug/Kg	☼	96	75 - 126
o-Xylene	ND		313	296		ug/Kg	☼	95	83 - 127
Styrene	ND		313	295		ug/Kg	☼	94	83 - 129
Bromoform	ND		313	223		ug/Kg	☼	71	53 - 140
Isopropylbenzene	ND		313	290		ug/Kg	☼	93	70 - 133
N-Propylbenzene	ND		313	329		ug/Kg	☼	105	80 - 120
1,1,2,2-Tetrachloroethane	ND		313	284		ug/Kg	☼	91	60 - 139
1,3,5-Trimethylbenzene	ND		313	291		ug/Kg	☼	93	68 - 133
1,2,4-Trimethylbenzene	ND		313	286		ug/Kg	☼	91	80 - 121
1,3-Dichlorobenzene	ND		313	319		ug/Kg	☼	102	75 - 118
1,4-Dichlorobenzene	ND		313	326		ug/Kg	☼	104	77 - 116
1,2-Dichlorobenzene	ND		313	337		ug/Kg	☼	108	71 - 124
1,2-Dibromo-3-Chloropropane	ND		313	257		ug/Kg	☼	82	35 - 136
1,2,4-Trichlorobenzene	ND		313	327		ug/Kg	☼	104	51 - 136
Hexachlorobutadiene	ND		313	315		ug/Kg	☼	101	42 - 150
Cyclohexane	ND		313	289		ug/Kg	☼	92	64 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*52 - 124*
Toluene-d8 (Surr)	*98*		*72 - 127*
4-Bromofluorobenzene (Surr)	*84*		*63 - 120*
Dibromofluoromethane (Surr)	*88*		*68 - 121*

Lab Sample ID: 180-5068-F-3-A MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18348 — **Prep Batch: 18340**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	ND		272	196		ug/Kg	☼	72	63 - 124	17	27
Bromomethane	ND		272	187		ug/Kg	☼	69	25 - 150	15	40
Chloroethane	ND		272	175		ug/Kg	☼	64	22 - 150	15	40
Trichlorofluoromethane	ND		272	162		ug/Kg	☼	59	20 - 150	12	40
1,1-Dichloroethene	ND		272	268		ug/Kg	☼	99	59 - 129	16	25
Acetone	ND		272	188		ug/Kg	☼	69	20 - 150	2	40
Carbon disulfide	ND		272	220		ug/Kg	☼	81	50 - 127	16	23
Methylene Chloride	ND		272	235		ug/Kg	☼	87	58 - 127	20	28
trans-1,2-Dichloroethene	ND		272	279		ug/Kg	☼	103	77 - 121	15	20
Methyl tert-butyl ether	ND		272	216		ug/Kg	☼	79	48 - 132	16	36
1,1-Dichloroethane	ND		272	243		ug/Kg	☼	89	66 - 124	13	23

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-5068-F-3-A MSD | **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment | **Prep Type: Total/NA**
Analysis Batch: 18348 | **Prep Batch: 18340**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	ND		272	272		ug/Kg	☼	100	80 - 118	16	20
cis-1,3-Dichloropropene	ND		272	212		ug/Kg	☼	78	73 - 120	15	20
2-Butanone (MEK)	ND		272	202		ug/Kg	☼	74	35 - 149	8	36
Chloroform	ND		272	226		ug/Kg	☼	83	72 - 120	16	25
1,1,1-Trichloroethane	ND		272	216		ug/Kg	☼	79	67 - 126	17	31
Carbon tetrachloride	ND		272	198		ug/Kg	☼	73	69 - 122	16	22
Benzene	ND		272	249		ug/Kg	☼	92	77 - 120	13	20
trans-1,3-Dichloropropene	ND		272	208		ug/Kg	☼	76	74 - 129	17	20
1,2-Dichloroethane	ND		272	202		ug/Kg	☼	74	61 - 127	16	23
Trichloroethene	ND		272	277		ug/Kg	☼	102	76 - 119	13	21
1,2-Dichloropropane	ND		272	242		ug/Kg	☼	89	72 - 122	12	20
Bromodichloromethane	ND		272	197		ug/Kg	☼	72	70 - 125	11	21
4-Methyl-2-pentanone (MIBK)	ND		272	206		ug/Kg	☼	76	44 - 148	20	30
Toluene	ND		272	274		ug/Kg	☼	101	78 - 124	15	21
1,1,2-Trichloroethane	ND		272	270		ug/Kg	☼	99	70 - 128	14	22
Tetrachloroethene	ND		272	298		ug/Kg	☼	109	78 - 129	12	20
Dibromochloromethane	ND		272	219		ug/Kg	☼	81	70 - 132	17	20
1,2-Dibromoethane	ND		272	237		ug/Kg	☼	87	70 - 131	17	20
Chlorobenzene	ND		272	285		ug/Kg	☼	105	79 - 120	14	20
1,1,1,2-Tetrachloroethane	ND		272	253		ug/Kg	☼	93	76 - 124	16	22
Ethylbenzene	ND		272	256		ug/Kg	☼	94	78 - 125	14	21
m-Xylene & p-Xylene	ND		544	515		ug/Kg	☼	95	75 - 126	15	21
o-Xylene	ND		272	257		ug/Kg	☼	94	83 - 127	14	20
Styrene	ND		272	253		ug/Kg	☼	93	83 - 129	15	20
Bromoform	ND		272	192		ug/Kg	☼	71	53 - 140	15	23
Isopropylbenzene	ND		272	247		ug/Kg	☼	91	70 - 133	16	22
N-Propylbenzene	ND		272	291		ug/Kg	☼	107	80 - 120	12	20
1,1,2,2-Tetrachloroethane	ND		272	239		ug/Kg	☼	88	60 - 139	17	24
1,3,5-Trimethylbenzene	ND		272	250		ug/Kg	☼	92	68 - 133	15	21
1,2,4-Trimethylbenzene	ND		272	249		ug/Kg	☼	92	80 - 121	14	20
1,3-Dichlorobenzene	ND		272	279		ug/Kg	☼	103	75 - 118	13	20
1,4-Dichlorobenzene	ND		272	277		ug/Kg	☼	102	77 - 116	16	20
1,2-Dichlorobenzene	ND		272	288		ug/Kg	☼	106	71 - 124	16	22
1,2-Dibromo-3-Chloropropane	ND		272	218		ug/Kg	☼	80	35 - 136	17	40
1,2,4-Trichlorobenzene	ND		272	281		ug/Kg	☼	103	51 - 136	15	40
Hexachlorobutadiene	ND		272	279		ug/Kg	☼	102	42 - 150	12	40
Cyclohexane	ND		272	237		ug/Kg	☼	87	64 - 130	20	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*72*		*52 - 124*
Toluene-d8 (Surr)	*95*		*72 - 127*
4-Bromofluorobenzene (Surr)	*83*		*63 - 120*
Dibromofluoromethane (Surr)	*87*		*68 - 121*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-19457/5
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/02/11 09:38	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/02/11 09:38	1
Methylene Chloride	ND		1.0	0.15	ug/L			11/02/11 09:38	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/02/11 09:38	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/02/11 09:38	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/02/11 09:38	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/02/11 09:38	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/02/11 09:38	1
Benzene	ND		1.0	0.11	ug/L			11/02/11 09:38	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/02/11 09:38	1
Trichloroethene	ND		1.0	0.14	ug/L			11/02/11 09:38	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/02/11 09:38	1
Toluene	ND		1.0	0.15	ug/L			11/02/11 09:38	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/02/11 09:38	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/02/11 09:38	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/02/11 09:38	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/02/11 09:38	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/02/11 09:38	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/02/11 09:38	1
Styrene	ND		1.0	0.097	ug/L			11/02/11 09:38	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/02/11 09:38	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/02/11 09:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/02/11 09:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/02/11 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 135*		*11/02/11 09:38*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*11/02/11 09:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 118*		*11/02/11 09:38*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 128*		*11/02/11 09:38*	*1*

Lab Sample ID: LCS 180-19457/8
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	10.1		ug/L		101	53 - 138
1,1-Dichloroethene	10.0	9.99		ug/L		100	65 - 136
Methylene Chloride	10.0	8.95		ug/L		90	63 - 129
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	73 - 126
Methyl tert-butyl ether	10.0	8.95		ug/L		89	64 - 123
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	70 - 120
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	63 - 133
Carbon tetrachloride	10.0	11.2		ug/L		112	55 - 150
Benzene	10.0	9.95		ug/L		99	80 - 120
1,2-Dichloroethane	10.0	9.21		ug/L		92	68 - 132
Trichloroethene	10.0	10.1		ug/L		101	73 - 120
1,2-Dichloropropane	10.0	9.56		ug/L		96	76 - 124
Toluene	10.0	10.7		ug/L		107	80 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-19457/8
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	77 - 127
Tetrachloroethene	10.0	10.2		ug/L		102	70 - 135
1,2-Dibromoethane	10.0	9.85		ug/L		99	74 - 123
Chlorobenzene	10.0	10.3		ug/L		103	80 - 120
Ethylbenzene	10.0	10.4		ug/L		104	72 - 126
Styrene	10.0	10.2		ug/L		102	71 - 127
1,4-Dichlorobenzene	10.0	9.78		ug/L		98	77 - 120
1,2-Dichlorobenzene	10.0	9.74		ug/L		97	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.12		ug/L		91	37 - 133
1,2,4-Trichlorobenzene	10.0	9.53		ug/L		95	60 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*64 - 135*
Toluene-d8 (Surr)	*98*		*71 - 118*
4-Bromofluorobenzene (Surr)	*95*		*70 - 118*
Dibromofluoromethane (Surr)	*95*		*70 - 128*

Lab Sample ID: 180-5224-M-1 MS
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	ND		10.0	9.66		ug/L		97	53 - 138
1,1-Dichloroethene	ND		10.0	9.73		ug/L		97	65 - 136
Methylene Chloride	ND		10.0	8.39		ug/L		84	63 - 129
trans-1,2-Dichloroethene	ND		10.0	9.31		ug/L		93	73 - 126
Methyl tert-butyl ether	ND		10.0	8.88		ug/L		89	64 - 123
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L		102	70 - 120
1,1,1-Trichloroethane	ND		10.0	9.92		ug/L		99	63 - 133
Carbon tetrachloride	ND		10.0	11.1		ug/L		111	55 - 150
Benzene	ND		10.0	9.86		ug/L		99	80 - 120
1,2-Dichloroethane	ND		10.0	10.2		ug/L		102	68 - 132
Trichloroethene	ND		10.0	10.5		ug/L		105	73 - 120
1,2-Dichloropropane	ND		10.0	10.4		ug/L		104	76 - 124
Toluene	ND		10.0	10.1		ug/L		101	80 - 123
1,1,2-Trichloroethane	ND		10.0	9.56		ug/L		96	77 - 127
Tetrachloroethene	ND		10.0	9.50		ug/L		95	70 - 135
1,2-Dibromoethane	ND		10.0	9.41		ug/L		94	74 - 123
Chlorobenzene	ND		10.0	9.68		ug/L		97	80 - 120
Ethylbenzene	ND		10.0	10.0		ug/L		100	72 - 126
Styrene	ND		10.0	9.75		ug/L		97	71 - 127
1,4-Dichlorobenzene	ND		10.0	10.0		ug/L		100	77 - 120
1,2-Dichlorobenzene	ND		10.0	9.71		ug/L		97	77 - 120
1,2-Dibromo-3-Chloropropane	ND		10.0	8.85		ug/L		88	37 - 133
1,2,4-Trichlorobenzene	ND		10.0	10.1		ug/L		101	60 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 135*
Toluene-d8 (Surr)	*92*		*71 - 118*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-5224-M-1 MS
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*92*		*70 - 118*
Dibromofluoromethane (Surr)	*90*		*70 - 128*

Lab Sample ID: 180-5224-N-1 MSD
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	ND		10.0	10.6		ug/L		106	53 - 138	9	35
1,1-Dichloroethene	ND		10.0	10.5		ug/L		105	65 - 136	7	35
Methylene Chloride	ND		10.0	8.79		ug/L		88	63 - 129	5	35
trans-1,2-Dichloroethene	ND		10.0	9.95		ug/L		100	73 - 126	7	35
Methyl tert-butyl ether	ND		10.0	9.46		ug/L		95	64 - 123	6	35
cis-1,2-Dichloroethene	ND		10.0	9.62		ug/L		96	70 - 120	5	35
1,1,1-Trichloroethane	ND		10.0	10.2		ug/L		102	63 - 133	3	35
Carbon tetrachloride	ND		10.0	10.4		ug/L		104	55 - 150	6	35
Benzene	ND		10.0	9.89		ug/L		99	80 - 120	0	32
1,2-Dichloroethane	ND		10.0	10.2		ug/L		102	68 - 132	1	32
Trichloroethene	ND		10.0	10.1		ug/L		101	73 - 120	3	35
1,2-Dichloropropane	ND		10.0	9.19		ug/L		92	76 - 124	13	34
Toluene	ND		10.0	10.1		ug/L		101	80 - 123	1	35
1,1,2-Trichloroethane	ND		10.0	10.2		ug/L		102	77 - 127	7	35
Tetrachloroethene	ND		10.0	9.77		ug/L		98	70 - 135	3	35
1,2-Dibromoethane	ND		10.0	9.66		ug/L		97	74 - 123	3	35
Chlorobenzene	ND		10.0	10.3		ug/L		103	80 - 120	7	29
Ethylbenzene	ND		10.0	10.5		ug/L		105	72 - 126	5	33
Styrene	ND		10.0	10.9		ug/L		109	71 - 127	12	34
1,4-Dichlorobenzene	ND		10.0	9.48		ug/L		95	77 - 120	6	24
1,2-Dichlorobenzene	ND		10.0	9.65		ug/L		97	77 - 120	1	24
1,2-Dibromo-3-Chloropropane	ND		10.0	7.81		ug/L		78	37 - 133	12	35
1,2,4-Trichlorobenzene	ND		10.0	9.32		ug/L		93	60 - 127	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*93*		*64 - 135*
Toluene-d8 (Surr)	*94*		*71 - 118*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*
Dibromofluoromethane (Surr)	*96*		*70 - 128*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 180-18717/1-A
Matrix: Sediment
Analysis Batch: 18887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		3.4	0.32	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Acenaphthylene	ND		3.4	0.38	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Anthracene	ND		3.4	0.33	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Atrazine	ND		17	1.6	ug/Kg		10/27/11 04:00	10/27/11 17:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 180-18717/1-A
Matrix: Sediment
Analysis Batch: 18887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		3.4	0.42	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Benzo[b]fluoranthene	ND		3.4	0.52	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Benzo[k]fluoranthene	ND		3.4	0.67	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Benzo[a]pyrene	ND		3.4	0.33	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Bis(2-chloroethyl)ether	ND		3.4	0.45	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Bis(2-ethylhexyl) phthalate	ND		33	2.7	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Butyl benzyl phthalate	ND		17	2.3	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Carbazole	ND		3.4	0.31	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Chrysene	ND		3.4	0.40	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2-Chloronaphthalene	ND		3.4	0.35	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2-Chlorophenol	ND		17	1.4	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,4-Dichlorophenol	ND		3.4	0.33	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,4-Dimethylphenol	ND		17	2.6	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,4-Dinitrophenol	ND		85	20	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,4-Dinitrotoluene	ND		17	1.3	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,6-Dinitrotoluene	ND		17	1.7	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2-Methylnaphthalene	ND		3.4	0.30	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2-Methylphenol	ND		17	1.2	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2-Nitroaniline	ND		85	7.5	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,2'-oxybis[1-chloropropane]	ND		3.4	0.36	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,4,5-Trichlorophenol	ND		17	1.8	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
2,4,6-Trichlorophenol	ND		17	2.5	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Methylphenol, 3 & 4	ND		17	1.6	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
4-Chloroaniline	ND		17	1.3	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Dibenz(a,h)anthracene	ND		3.4	0.37	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Dibenzofuran	ND		17	1.6	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Di-n-butyl phthalate	ND		17	2.1	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Diethyl phthalate	ND		17	1.8	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Dimethyl phthalate	ND		17	1.8	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Di-n-octyl phthalate	ND		17	1.8	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
3,3'-Dichlorobenzidine	ND		17	1.8	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Fluoranthene	ND		3.4	0.36	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Fluorene	ND		3.4	0.44	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Hexachlorobenzene	ND		3.4	0.36	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Hexachlorocyclopentadiene	ND		17	1.8	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Hexachloroethane	ND		17	1.2	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Indeno[1,2,3-cd]pyrene	ND		3.4	0.34	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Isophorone	ND		17	1.3	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Naphthalene	ND		3.4	0.29	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Nitrobenzene	ND		33	1.4	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
N-Nitrosodiphenylamine	ND		17	1.5	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
N-Nitrosodi-n-propylamine	ND		3.4	0.39	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Pyrene	ND		3.4	0.34	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Phenol	ND		3.4	0.39	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Phenanthrene	ND		3.4	0.53	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Pentachlorophenol	ND		17	1.5	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Benzyl alcohol	ND		17	2.0	ug/Kg		10/27/11 04:00	10/27/11 17:46	1
Benzoic acid	ND		85	6.9	ug/Kg		10/27/11 04:00	10/27/11 17:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 180-18717/1-A
Matrix: Sediment
Analysis Batch: 18887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18717

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
DMF	0.000	J N	ug/Kg			68-12-2	10/27/11 04:00	10/27/11 17:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	64		21 - 116	10/27/11 04:00	10/27/11 17:46	1
2-Fluorophenol	57		28 - 107	10/27/11 04:00	10/27/11 17:46	1
Nitrobenzene-d5	55		27 - 110	10/27/11 04:00	10/27/11 17:46	1
2-Fluorobiphenyl	57		28 - 108	10/27/11 04:00	10/27/11 17:46	1
Terphenyl-d14	60		21 - 130	10/27/11 04:00	10/27/11 17:46	1
Phenol-d5	62		30 - 112	10/27/11 04:00	10/27/11 17:46	1

Lab Sample ID: LCS 180-18717/2-A
Matrix: Sediment
Analysis Batch: 18887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	206		ug/Kg		62	42 - 104
Acenaphthylene	333	210		ug/Kg		63	43 - 117
Anthracene	333	200		ug/Kg		60	43 - 111
Atrazine	333	386		ug/Kg		116	30 - 150
Benzo[a]anthracene	333	200		ug/Kg		60	45 - 110
Benzo[b]fluoranthene	333	199		ug/Kg		60	37 - 108
Benzo[k]fluoranthene	333	205		ug/Kg		62	39 - 115
Benzo[a]pyrene	333	223		ug/Kg		67	42 - 114
Bis(2-chloroethyl)ether	333	192		ug/Kg		58	40 - 100
Bis(2-ethylhexyl) phthalate	333	210		ug/Kg		63	41 - 121
Butyl benzyl phthalate	333	222		ug/Kg		66	40 - 117
Carbazole	333	197		ug/Kg		59	42 - 114
Chrysene	333	210		ug/Kg		63	44 - 108
2-Chloronaphthalene	333	194		ug/Kg		58	40 - 104
2-Chlorophenol	333	196		ug/Kg		59	40 - 105
2,4-Dichlorophenol	333	204		ug/Kg		61	44 - 110
2,4-Dimethylphenol	333	191		ug/Kg		57	39 - 106
2,4-Dinitrophenol	333	191		ug/Kg		57	19 - 140
2,4-Dinitrotoluene	333	208		ug/Kg		62	48 - 118
2,6-Dinitrotoluene	333	215		ug/Kg		65	47 - 119
2-Methylnaphthalene	333	201		ug/Kg		60	43 - 105
2-Methylphenol	333	201		ug/Kg		60	41 - 104
2-Nitroaniline	333	207		ug/Kg		62	41 - 118
2,2'-oxybis[1-chloropropane]	333	195		ug/Kg		59	37 - 105
2,4,5-Trichlorophenol	333	200		ug/Kg		60	42 - 110
2,4,6-Trichlorophenol	333	208		ug/Kg		62	43 - 111
Methylphenol, 3 & 4	667	519		ug/Kg		78	43 - 107
4-Chloroaniline	333	202		ug/Kg		61	33 - 102
Dibenz(a,h)anthracene	333	215		ug/Kg		64	34 - 131
Dibenzofuran	333	200		ug/Kg		60	42 - 106
Di-n-butyl phthalate	333	206		ug/Kg		62	44 - 120
Diethyl phthalate	333	211		ug/Kg		63	44 - 113
Dimethyl phthalate	333	206		ug/Kg		62	44 - 111
Di-n-octyl phthalate	333	236		ug/Kg		71	35 - 129

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 180-18717/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18887 — **Prep Batch: 18717**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	333	195		ug/Kg		59	24 - 113
Fluoranthene	333	195		ug/Kg		59	40 - 118
Fluorene	333	216		ug/Kg		65	43 - 110
Hexachlorobenzene	333	194		ug/Kg		58	42 - 110
Hexachlorocyclopentadiene	333	208		ug/Kg		63	10 - 150
Hexachloroethane	333	195		ug/Kg		58	40 - 102
Indeno[1,2,3-cd]pyrene	333	208		ug/Kg		62	34 - 130
Isophorone	333	194		ug/Kg		58	39 - 114
Naphthalene	333	195		ug/Kg		58	42 - 104
Nitrobenzene	333	187		ug/Kg		56	40 - 109
N-Nitrosodiphenylamine	333	203		ug/Kg		61	41 - 110
N-Nitrosodi-n-propylamine	333	178		ug/Kg		53	42 - 108
Pyrene	333	210		ug/Kg		63	39 - 113
Phenol	333	188		ug/Kg		57	39 - 105
Phenanthrene	333	192		ug/Kg		58	41 - 107
Pentachlorophenol	333	203		ug/Kg		61	18 - 125
Benzyl alcohol	333	216		ug/Kg		65	18 - 129
Benzoic acid	333	194		ug/Kg		58	10 - 93

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*72*		*21 - 116*
2-Fluorophenol	*63*		*28 - 107*
Nitrobenzene-d5	*58*		*27 - 110*
2-Fluorobiphenyl	*61*		*28 - 108*
Terphenyl-d14	*70*		*21 - 130*
Phenol-d5	*66*		*30 - 112*

Lab Sample ID: 180-5172-3 MS — **Client Sample ID: CH-2011-MU1-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18887 — **Prep Batch: 18717**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	67		643	536		ug/Kg	☼	73	42 - 104
Acenaphthylene	50	J	643	532		ug/Kg	☼	75	43 - 117
Anthracene	170		643	689		ug/Kg	☼	81	43 - 111
Atrazine	ND		643	860		ug/Kg	☼	134	30 - 150
Benzo[a]anthracene	440		643	994		ug/Kg	☼	87	45 - 110
Benzo[b]fluoranthene	480		643	1010		ug/Kg	☼	81	37 - 108
Benzo[k]fluoranthene	260		643	663		ug/Kg	☼	63	39 - 115
Benzo[a]pyrene	550		643	1060		ug/Kg	☼	79	42 - 114
Bis(2-chloroethyl)ether	ND		643	403		ug/Kg	☼	63	40 - 100
Bis(2-ethylhexyl) phthalate	130	J	643	568	J	ug/Kg	☼	67	41 - 121
Butyl benzyl phthalate	ND		643	465		ug/Kg	☼	72	40 - 117
Carbazole	28	J	643	540		ug/Kg	☼	80	42 - 114
Chrysene	550		643	1010		ug/Kg	☼	72	44 - 108
2-Chloronaphthalene	ND		643	436		ug/Kg	☼	68	40 - 104
2-Chlorophenol	ND		643	420		ug/Kg	☼	65	40 - 105
2,4-Dichlorophenol	ND		643	430		ug/Kg	☼	67	44 - 110
2,4-Dimethylphenol	ND		643	473		ug/Kg	☼	74	39 - 106

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5172-3 MS
Matrix: Sediment
Analysis Batch: 18887

Client Sample ID: CH-2011-MU1-G3
Prep Type: Total/NA
Prep Batch: 18717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrophenol	ND		643	ND	F	ug/Kg	☼	0	19 - 140
2,4-Dinitrotoluene	ND		643	441		ug/Kg	☼	69	48 - 118
2,6-Dinitrotoluene	ND		643	494		ug/Kg	☼	77	47 - 119
2-Methylnaphthalene	54	J	643	466		ug/Kg	☼	64	43 - 105
2-Methylphenol	ND		643	456		ug/Kg	☼	71	41 - 104
2-Nitroaniline	ND		643	484	J	ug/Kg	☼	75	41 - 118
2,2'-oxybis[1-chloropropane]	ND		643	367		ug/Kg	☼	57	37 - 105
2,4,5-Trichlorophenol	ND		643	397		ug/Kg	☼	62	42 - 110
2,4,6-Trichlorophenol	ND		643	439		ug/Kg	☼	68	43 - 111
Methylphenol, 3 & 4	150	J	1290	834		ug/Kg	☼	53	43 - 107
4-Chloroaniline	ND		643	419		ug/Kg	☼	65	33 - 102
Dibenz(a,h)anthracene	68		643	680		ug/Kg	☼	95	34 - 131
Dibenzofuran	48	J	643	502		ug/Kg	☼	71	42 - 106
Di-n-butyl phthalate	ND		643	452		ug/Kg	☼	70	44 - 120
Diethyl phthalate	ND		643	532		ug/Kg	☼	83	44 - 113
Dimethyl phthalate	ND		643	490		ug/Kg	☼	76	44 - 111
Di-n-octyl phthalate	ND		643	531		ug/Kg	☼	83	35 - 129
3,3'-Dichlorobenzidine	ND		643	217	J	ug/Kg	☼	34	24 - 113
Fluoranthene	770		643	1300		ug/Kg	☼	84	40 - 118
Fluorene	93		643	562		ug/Kg	☼	73	43 - 110
Hexachlorobenzene	ND		643	482		ug/Kg	☼	75	42 - 110
Hexachlorocyclopentadiene	ND		643	112	J	ug/Kg	☼	17	10 - 150
Hexachloroethane	ND		643	361		ug/Kg	☼	56	40 - 102
Indeno[1,2,3-cd]pyrene	290		643	849		ug/Kg	☼	88	34 - 130
Isophorone	ND		643	421		ug/Kg	☼	65	39 - 114
Naphthalene	69		643	488		ug/Kg	☼	65	42 - 104
Nitrobenzene	ND		643	411	J	ug/Kg	☼	64	40 - 109
N-Nitrosodiphenylamine	ND		643	622		ug/Kg	☼	97	41 - 110
N-Nitrosodi-n-propylamine	ND		643	401		ug/Kg	☼	62	42 - 108
Pyrene	920		643	1300		ug/Kg	☼	58	39 - 113
Phenol	ND		643	392		ug/Kg	☼	61	39 - 105
Phenanthrene	580		643	1200		ug/Kg	☼	96	41 - 107
Pentachlorophenol	ND		643	208	J	ug/Kg	☼	32	18 - 125
Benzyl alcohol	ND		643	428		ug/Kg	☼	66	18 - 129
Benzoic acid	ND		643	ND	F	ug/Kg	☼	0	10 - 93

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*77*		*21 - 116*
2-Fluorophenol	*61*		*28 - 107*
Nitrobenzene-d5	*65*		*27 - 110*
2-Fluorobiphenyl	*69*		*28 - 108*
Terphenyl-d14	*69*		*21 - 130*
Phenol-d5	*71*		*30 - 112*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5172-3 MSD
Matrix: Sediment
Analysis Batch: 18887

Client Sample ID: CH-2011-MU1-G3
Prep Type: Total/NA
Prep Batch: 18717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	67		643	590		ug/Kg	☼	81	42 - 104	10	34
Acenaphthylene	50	J	643	576		ug/Kg	☼	82	43 - 117	8	36
Anthracene	170		643	641		ug/Kg	☼	74	43 - 111	7	35
Atrazine	ND		643	905		ug/Kg	☼	141	30 - 150	5	40
Benzo[a]anthracene	440		643	1180	F	ug/Kg	☼	115	45 - 110	17	31
Benzo[b]fluoranthene	480		643	1110		ug/Kg	☼	97	37 - 108	10	28
Benzo[k]fluoranthene	260		643	679		ug/Kg	☼	65	39 - 115	2	42
Benzo[a]pyrene	550		643	1110		ug/Kg	☼	86	42 - 114	4	31
Bis(2-chloroethyl)ether	ND		643	431		ug/Kg	☼	67	40 - 100	7	33
Bis(2-ethylhexyl) phthalate	130	J	643	651		ug/Kg	☼	80	41 - 121	14	31
Butyl benzyl phthalate	ND		643	559		ug/Kg	☼	87	40 - 117	18	34
Carbazole	28	J	643	492		ug/Kg	☼	72	42 - 114	9	35
Chrysene	550		643	1090		ug/Kg	☼	84	44 - 108	8	31
2-Chloronaphthalene	ND		643	480		ug/Kg	☼	75	40 - 104	10	34
2-Chlorophenol	ND		643	454		ug/Kg	☼	71	40 - 105	8	37
2,4-Dichlorophenol	ND		643	480		ug/Kg	☼	75	44 - 110	11	27
2,4-Dimethylphenol	ND		643	514		ug/Kg	☼	80	39 - 106	8	42
2,4-Dinitrophenol	ND		643	ND	F	ug/Kg	☼	0	19 - 140	NC	43
2,4-Dinitrotoluene	ND		643	547		ug/Kg	☼	85	48 - 118	21	33
2,6-Dinitrotoluene	ND		643	538		ug/Kg	☼	84	47 - 119	9	30
2-Methylnaphthalene	54	J	643	516		ug/Kg	☼	72	43 - 105	10	34
2-Methylphenol	ND		643	494		ug/Kg	☼	77	41 - 104	8	37
2-Nitroaniline	ND		643	505	J	ug/Kg	☼	79	41 - 118	4	33
2,2'-oxybis[1-chloropropane]	ND		643	401		ug/Kg	☼	62	37 - 105	9	31
2,4,5-Trichlorophenol	ND		643	430		ug/Kg	☼	67	42 - 110	8	35
2,4,6-Trichlorophenol	ND		643	464		ug/Kg	☼	72	43 - 111	5	36
Methylphenol, 3 & 4	150	J	1290	907		ug/Kg	☼	59	43 - 107	8	36
4-Chloroaniline	ND		643	470		ug/Kg	☼	73	33 - 102	11	28
Dibenz(a,h)anthracene	68		643	706		ug/Kg	☼	99	34 - 131	4	32
Dibenzofuran	48	J	643	564		ug/Kg	☼	80	42 - 106	12	33
Di-n-butyl phthalate	ND		643	443		ug/Kg	☼	69	44 - 120	2	34
Diethyl phthalate	ND		643	572		ug/Kg	☼	89	44 - 113	7	32
Dimethyl phthalate	ND		643	541		ug/Kg	☼	84	44 - 111	10	34
Di-n-octyl phthalate	ND		643	563		ug/Kg	☼	87	35 - 129	6	33
3,3'-Dichlorobenzidine	ND		643	265	J	ug/Kg	☼	41	24 - 113	20	30
Fluoranthene	770		643	1230		ug/Kg	☼	72	40 - 118	6	23
Fluorene	93		643	594		ug/Kg	☼	78	43 - 110	6	37
Hexachlorobenzene	ND		643	482		ug/Kg	☼	75	42 - 110	0	29
Hexachlorocyclopentadiene	ND		643	104	J	ug/Kg	☼	16	10 - 150	7	33
Hexachloroethane	ND		643	405		ug/Kg	☼	63	40 - 102	11	34
Indeno[1,2,3-cd]pyrene	290		643	837		ug/Kg	☼	86	34 - 130	1	30
Isophorone	ND		643	458		ug/Kg	☼	71	39 - 114	8	33
Naphthalene	69		643	526		ug/Kg	☼	71	42 - 104	7	25
Nitrobenzene	ND		643	452	J	ug/Kg	☼	70	40 - 109	9	31
N-Nitrosodiphenylamine	ND		643	626		ug/Kg	☼	97	41 - 110	1	32
N-Nitrosodi-n-propylamine	ND		643	414		ug/Kg	☼	64	42 - 108	3	32
Pyrene	920		643	1490		ug/Kg	☼	87	39 - 113	13	28
Phenol	ND		643	419		ug/Kg	☼	65	39 - 105	7	40
Phenanthrene	580		643	1100		ug/Kg	☼	81	41 - 107	8	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5172-3 MSD — **Client Sample ID: CH-2011-MU1-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18887 — **Prep Batch: 18717**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	ND		643	207	J	ug/Kg	☼	32	18 - 125	1	34
Benzyl alcohol	ND		643	475		ug/Kg	☼	74	18 - 129	11	41
Benzoic acid	ND		643	ND	F	ug/Kg	☼	0	10 - 93	NC	36

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*77*		*21 - 116*
2-Fluorophenol	*65*		*28 - 107*
Nitrobenzene-d5	*67*		*27 - 110*
2-Fluorobiphenyl	*73*		*28 - 108*
Terphenyl-d14	*82*		*21 - 130*
Phenol-d5	*76*		*30 - 112*

Lab Sample ID: MB 180-19224/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		1.0	0.089	ug/L		11/01/11 09:10	11/02/11 13:05	1
Benzo[a]pyrene	ND		0.20	0.013	ug/L		11/01/11 09:10	11/02/11 13:05	1
Bis(2-ethylhexyl) phthalate	ND		2.0	1.3	ug/L		11/01/11 09:10	11/02/11 13:05	1
Hexachlorocyclopentadiene	ND		1.0	0.052	ug/L		11/01/11 09:10	11/02/11 13:05	1
Phenol	ND		0.20	0.058	ug/L		11/01/11 09:10	11/02/11 13:05	1
Pentachlorophenol	ND		1.0	0.066	ug/L		11/01/11 09:10	11/02/11 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*79*		*16 - 122*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
2-Fluorophenol	*77*		*10 - 111*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Nitrobenzene-d5	*68*		*23 - 112*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
2-Fluorobiphenyl	*67*		*19 - 107*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Terphenyl-d14	*66*		*10 - 132*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Phenol-d5	*77*		*15 - 112*	*11/01/11 09:10*	*11/02/11 13:05*	*1*

Lab Sample ID: LCS 180-19224/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	20.0	24.7		ug/L		124	30 - 150
Benzo[a]pyrene	20.0	14.4		ug/L		72	26 - 108
Bis(2-ethylhexyl) phthalate	20.0	13.3		ug/L		67	20 - 116
Hexachlorocyclopentadiene	20.0	16.5		ug/L		83	36 - 115
Phenol	20.0	14.1		ug/L		71	32 - 95
Pentachlorophenol	20.0	15.2		ug/L		76	15 - 111

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*92*		*16 - 122*
2-Fluorophenol	*81*		*10 - 111*
Nitrobenzene-d5	*74*		*23 - 112*
2-Fluorobiphenyl	*71*		*19 - 107*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 180-19224/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	74		10 - 132
Phenol-d5	81		15 - 112

Lab Sample ID: LCSD 180-19224/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	20.0	25.8		ug/L		129	30 - 150	4	35
Benzo[a]pyrene	20.0	14.5		ug/L		73	26 - 108	1	40
Bis(2-ethylhexyl) phthalate	20.0	13.7		ug/L		68	20 - 116	3	40
Hexachlorocyclopentadiene	20.0	17.9		ug/L		89	36 - 115	8	47
Phenol	20.0	14.8		ug/L		74	32 - 95	5	39
Pentachlorophenol	20.0	15.2		ug/L		76	15 - 111	0	42

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol	92		16 - 122
2-Fluorophenol	82		10 - 111
Nitrobenzene-d5	76		23 - 112
2-Fluorobiphenyl	74		19 - 107
Terphenyl-d14	76		10 - 132
Phenol-d5	83		15 - 112

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: LB 180-19073/1-A LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		100	100	mg/Kg		10/30/11 13:42	10/30/11 20:05	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	81		40 - 140	10/30/11 13:42	10/30/11 20:05	1

Lab Sample ID: LCS 180-19073/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene glycol	200	136		mg/Kg		68	40 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Bis (2-ethoxyethyl) ether (Surr)	83		40 - 140

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: LCSD 180-19073/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene glycol	200	138		mg/Kg		69	40 - 140	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Bis (2-ethoxyethyl) ether (Surr)	*83*		*40 - 140*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0013	0.00098	ug/L		10/27/11 13:35	10/31/11 13:55	1
Chlordane (technical)	ND		0.013	0.0017	ug/L		10/27/11 13:35	10/31/11 13:55	1
Endrin	ND		0.0013	0.00096	ug/L		10/27/11 13:35	10/31/11 13:55	1
gamma-BHC (Lindane)	ND		0.0013	0.00080	ug/L		10/27/11 13:35	10/31/11 13:55	1
gamma-Chlordane	ND		0.0013	0.00096	ug/L		10/27/11 13:35	10/31/11 13:55	1
Heptachlor	ND		0.0013	0.00099	ug/L		10/27/11 13:35	10/31/11 13:55	1
Heptachlor epoxide	ND		0.0013	0.00097	ug/L		10/27/11 13:35	10/31/11 13:55	1
Methoxychlor	ND		0.0025	0.00091	ug/L		10/27/11 13:35	10/31/11 13:55	1
Toxaphene	ND		0.10	0.019	ug/L		10/27/11 13:35	10/31/11 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
Tetrachloro-m-xylene	*79*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:55*	*1*

Lab Sample ID: LCS 180-18835/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	0.0250	0.0188		ug/L		75	59 - 114
Endrin	0.0250	0.0193		ug/L		77	31 - 138
gamma-BHC (Lindane)	0.0250	0.0186		ug/L		75	57 - 110
gamma-Chlordane	0.0250	0.0186		ug/L		75	60 - 114
Heptachlor	0.0250	0.0183		ug/L		73	63 - 120
Heptachlor epoxide	0.0250	0.0188		ug/L		75	60 - 120
Methoxychlor	0.0250	0.0174		ug/L		69	35 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*60 - 111*
Tetrachloro-m-xylene	*82*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*80*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*100*		*56 - 122*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 180-18835/3-A
Matrix: Water
Analysis Batch: 19205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18835

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-Chlordane	0.0250	0.0193		ug/L		77	59 - 114	2	21
Endrin	0.0250	0.0193		ug/L		77	31 - 138	0	24
gamma-BHC (Lindane)	0.0250	0.0189		ug/L		76	57 - 110	2	21
gamma-Chlordane	0.0250	0.0186		ug/L		74	60 - 114	0	21
Heptachlor	0.0250	0.0187		ug/L		75	63 - 120	2	25
Heptachlor epoxide	0.0250	0.0189		ug/L		76	60 - 120	1	20
Methoxychlor	0.0250	0.0178		ug/L		71	35 - 137	3	27

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*80*		*60 - 111*
Tetrachloro-m-xylene	*82*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*83*		*56 - 122*

Lab Sample ID: MB 180-19080/1-B
Matrix: Sediment
Analysis Batch: 19915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
alpha-BHC	ND		0.85	0.14	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
alpha-Chlordane	ND		0.85	0.17	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
beta-BHC	ND		0.85	0.22	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDD	ND		0.85	0.050	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDE	ND		0.85	0.077	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDT	ND		0.85	0.072	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDD	ND		0.85	0.11	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDE	ND		0.85	0.13	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDT	ND		0.85	0.12	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Chlordane (technical)	ND		8.5	0.37	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Dieldrin	ND		0.85	0.14	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan I	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan II	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan sulfate	ND		0.85	0.087	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin aldehyde	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin ketone	ND		0.85	0.13	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
gamma-BHC (Lindane)	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
gamma-Chlordane	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Heptachlor	ND		0.85	0.19	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Heptachlor epoxide	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Methoxychlor	ND		1.7	0.17	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Toxaphene	ND		34	5.6	ug/Kg		10/31/11 04:38	11/03/11 19:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*
Tetrachloro-m-xylene	*71*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*
Tetrachloro-m-xylene	*75*		*45 - 130*	*10/31/11 04:38*	*11/03/11 19:15*	*1*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 180-19080/2-B
Matrix: Sediment
Analysis Batch: 19915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	16.7	14.7		ug/Kg		88	70 - 123
alpha-BHC	16.7	15.0		ug/Kg		90	59 - 127
alpha-Chlordane	16.7	14.6		ug/Kg		88	71 - 130
beta-BHC	16.7	14.1		ug/Kg		84	70 - 138
4,4'-DDD	16.7	14.2		ug/Kg		85	70 - 135
4,4'-DDE	16.7	15.0		ug/Kg		90	70 - 133
4,4'-DDT	16.7	14.7		ug/Kg		88	61 - 126
Dieldrin	16.7	15.1		ug/Kg		91	70 - 123
Endosulfan I	16.7	14.4		ug/Kg		87	70 - 126
Endosulfan II	16.7	13.6		ug/Kg		81	70 - 128
Endosulfan sulfate	16.7	12.6		ug/Kg		76	55 - 140
Endrin	16.7	14.6		ug/Kg		88	70 - 127
Endrin aldehyde	16.7	11.5		ug/Kg		69	65 - 122
Endrin ketone	16.7	14.2		ug/Kg		85	70 - 132
gamma-BHC (Lindane)	16.7	14.5		ug/Kg		87	66 - 124
gamma-Chlordane	16.7	14.2		ug/Kg		85	68 - 123
Heptachlor	16.7	14.2		ug/Kg		85	70 - 128
Heptachlor epoxide	16.7	14.4		ug/Kg		87	69 - 131
Methoxychlor	16.7	13.6		ug/Kg		82	70 - 143

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 130*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 130*
Tetrachloro-m-xylene	*96*		*45 - 130*
Tetrachloro-m-xylene	*94*		*45 - 130*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-19080/1-B
Matrix: Sediment
Analysis Batch: 20521

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1221	ND		8.3	1.6	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1232	ND		8.3	1.4	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1242	ND		8.3	1.4	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1248	ND		8.3	0.79	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1254	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1260	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
Polychlorinated biphenyls, Total	ND		8.3	1.8	ug/Kg		10/31/11 04:38	11/09/11 03:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 03:31*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 03:31*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 180-19080/5-B — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	667	586		ug/Kg		88	55 - 130
PCB-1260	667	577		ug/Kg		87	54 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*96*		*35 - 140*
DCB Decachlorobiphenyl (Surr)	*98*		*35 - 140*

Lab Sample ID: 180-5048-B-2-P MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	22		1170	904		ug/Kg	☼	75	55 - 130
PCB-1260	ND		1170	915		ug/Kg	☼	78	54 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*62*		*35 - 140*
DCB Decachlorobiphenyl (Surr)	*87*		*35 - 140*

Lab Sample ID: 180-5048-B-2-Q MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	22		1160	902		ug/Kg	☼	76	55 - 130	0	35
PCB-1260	ND		1160	914		ug/Kg	☼	79	54 - 130	0	29

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*61*		*35 - 140*
DCB Decachlorobiphenyl (Surr)	*86*		*35 - 140*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.010	0.0025	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1221	ND		0.010	0.0025	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1232	ND		0.010	0.0029	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1242	ND		0.010	0.0019	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1248	ND		0.010	0.0023	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1254	ND		0.010	0.0023	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1260	ND		0.010	0.0014	ug/L		10/27/11 13:35	10/28/11 23:05	1
Polychlorinated biphenyls, Total	ND		0.010	0.0029	ug/L		10/27/11 13:35	10/28/11 23:05	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		47 - 150	10/27/11 13:35	10/28/11 23:05	1
DCB Decachlorobiphenyl (Surr)	85		50 - 140	10/27/11 13:35	10/28/11 23:05	1

Lab Sample ID: LCS 180-18835/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.756		ug/L		76	60 - 110
PCB-1260	1.00	0.741		ug/L		74	60 - 111

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	89		47 - 150
DCB Decachlorobiphenyl (Surr)	86		50 - 140

Lab Sample ID: LCSD 180-18835/5-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.00	0.793		ug/L		79	60 - 110	5	27
PCB-1260	1.00	0.770		ug/L		77	60 - 111	4	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	93		47 - 150
DCB Decachlorobiphenyl (Surr)	89		50 - 140

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 180-18467/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19978 — **Prep Batch: 18467**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	63		42 - 140	10/25/11 04:50	11/07/11 16:29	20

Lab Sample ID: MB 180-18467/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19973 — **Prep Batch: 18467**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.5	ug/Kg		10/25/11 04:50	11/07/11 16:53	20
2,4-D	ND		80	5.5	ug/Kg		10/25/11 04:50	11/07/11 16:53	20
Dalapon	ND		90	7.1	ug/Kg		10/25/11 04:50	11/07/11 16:53	20
Dinoseb	ND		12	4.5	ug/Kg		10/25/11 04:50	11/07/11 16:53	20
Silvex (2,4,5-TP)	ND		20	2.1	ug/Kg		10/25/11 04:50	11/07/11 16:53	20

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: MB 180-18467/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19973 — **Prep Batch: 18467**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	63		42 - 140	10/25/11 04:50	11/07/11 16:53	20

Lab Sample ID: LCS 180-18467/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19978 — **Prep Batch: 18467**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	80.0	45.3		ug/Kg		57	30 - 140
2,4-D	320	162		ug/Kg		51	30 - 140
Dalapon	160	95.4		ug/Kg		60	36 - 120
Dinoseb	48.0	5.67	J p	ug/Kg		12	10 - 140
Silvex (2,4,5-TP)	80.0	53.0		ug/Kg		66	40 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	77		42 - 140

Lab Sample ID: LCS 180-18467/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19973 — **Prep Batch: 18467**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	79		42 - 140

Lab Sample ID: 180-5109-A-10-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19978 — **Prep Batch: 18467**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		141	63.4		ug/Kg	☼	45	30 - 140
2,4-D	ND		565	226		ug/Kg	☼	40	30 - 140
Dalapon	ND		283	146	J	ug/Kg	☼	52	36 - 120

Lab Sample ID: 180-5109-A-10-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19973 — **Prep Batch: 18467**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dinoseb	ND		84.8	14.1	J p	ug/Kg	☼	17	10 - 140
Silvex (2,4,5-TP)	ND		141	77.0		ug/Kg	☼	54	40 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	64		42 - 140

Lab Sample ID: 180-5109-A-10-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19978 — **Prep Batch: 18467**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		142	73.3		ug/Kg	☼	52	30 - 140	15	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 180-5109-A-10-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19978 — **Prep Batch: 18467**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	ND		566	264		ug/Kg	☼	47	30 - 140	16	30
Dalapon	ND		283	152	J	ug/Kg	☼	54	36 - 120	4	30
Silvex (2,4,5-TP)	ND		142	80.3		ug/Kg	☼	57	40 - 130	NC	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*67*		*42 - 140*

Lab Sample ID: 180-5109-A-10-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19973 — **Prep Batch: 18467**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dinoseb	ND		84.9	13.6	J p	ug/Kg	☼	16	10 - 140	3	30

Lab Sample ID: MB 180-18845/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		4.0	0.45	ug/L		10/27/11 16:00	10/30/11 14:16	20
Dalapon	ND		5.0	0.69	ug/L		10/27/11 16:00	10/30/11 14:16	20
Dinoseb	ND		0.90	0.13	ug/L		10/27/11 16:00	10/30/11 14:16	20
Silvex (2,4,5-TP)	ND		1.0	0.11	ug/L		10/27/11 16:00	10/30/11 14:16	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*42*		*32 - 140*	*10/27/11 16:00*	*10/30/11 14:16*	*20*

Lab Sample ID: LCS 180-18845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	16.0	7.64		ug/L		48	32 - 140
Dalapon	8.00	4.09	J	ug/L		51	32 - 140
Dinoseb	2.40	1.54		ug/L		64	10 - 140
Silvex (2,4,5-TP)	4.00	2.52		ug/L		63	32 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*53*		*32 - 140*

Lab Sample ID: LCSD 180-18845/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	16.0	9.44		ug/L		59	32 - 140	21	30
Dalapon	8.00	5.32		ug/L		66	32 - 140	26	30
Dinoseb	2.40	1.74		ug/L		73	10 - 140	12	30
Silvex (2,4,5-TP)	4.00	3.09		ug/L		77	32 - 140	20	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 180-18845/3-A
Matrix: Water
Analysis Batch: 19089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18845

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*66*		*32 - 140*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 180-19329/15-A
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 18:40	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 18:40	1
Boron	ND		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Barium	ND		0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 18:40	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 18:40	1
Calcium	0.0134	J	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 18:40	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Cobalt	0.00106	J	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 18:40	1
Chromium	ND		0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 18:40	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 18:40	1
Iron	ND		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 18:40	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 18:40	1
Magnesium	ND		5.0	0.021	mg/L		11/01/11 16:58	11/02/11 18:40	1
Manganese	ND		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 18:40	1
Sodium	ND		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 18:40	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 18:40	1
Lead	ND		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 18:40	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 18:40	1
Vanadium	ND		0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 18:40	1
Zinc	0.00523	J	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 18:40	1

Lab Sample ID: LCS 180-19329/16-A
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.0500	0.0518		mg/L		104	
Arsenic	2.00	2.02		mg/L		101	
Boron	1.00	1.01		mg/L		101	
Barium	2.00	2.07		mg/L		104	
Beryllium	0.0500	0.0515		mg/L		103	
Calcium	50.0	51.0		mg/L		102	
Cadmium	0.0500	0.0492		mg/L		98	
Cobalt	0.500	0.495		mg/L		99	
Chromium	0.200	0.206		mg/L		103	
Copper	0.250	0.261		mg/L		104	
Iron	1.00	0.922		mg/L		92	
Potassium	50.0	49.5		mg/L		99	

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 180-19329/16-A
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	50.0	50.3		mg/L		101	
Manganese	0.500	0.510		mg/L		102	
Sodium	50.0	50.5		mg/L		101	
Nickel	0.500	0.495		mg/L		99	
Lead	0.500	0.498		mg/L		100	
Antimony	0.500	0.512		mg/L		102	
Selenium	2.00	1.95		mg/L		98	
Thallium	2.00	2.03		mg/L		101	
Vanadium	0.500	0.517		mg/L		103	
Zinc	0.500	0.517		mg/L		103	

Lab Sample ID: LB 180-18692/14-B LB
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Method Blank
Prep Type: SPLP East
Prep Batch: 19329

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 18:46	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 18:46	1
Boron	ND		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Barium	ND		0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 18:46	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 18:46	1
Calcium	0.0266	J	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 18:46	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Cobalt	0.000580	J	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 18:46	1
Chromium	0.000890	J	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 18:46	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 18:46	1
Iron	ND		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 18:46	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 18:46	1
Magnesium	ND		5.0	0.021	mg/L		11/01/11 16:58	11/02/11 18:46	1
Manganese	ND		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 18:46	1
Sodium	ND		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 18:46	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 18:46	1
Lead	ND		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 18:46	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 18:46	1
Vanadium	ND		0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 18:46	1
Zinc	0.00357	J	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 18:46	1

Lab Sample ID: 180-5172-4 MS
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: CH-2011-MU1-COMP
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		0.0500	0.0498		mg/L		100	
Arsenic	0.0035	J	2.00	1.95		mg/L		97	
Boron	0.31		1.00	1.30		mg/L		99	
Barium	0.014	J	2.00	2.01		mg/L		100	
Beryllium	ND		0.0500	0.0492		mg/L		98	
Calcium	22	B	50.0	71.9		mg/L		99	

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 180-5172-4 MS
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: CH-2011-MU1-COMP
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		0.0500	0.0470		mg/L		94	
Cobalt	0.0012	J B	0.500	0.475		mg/L		95	
Chromium	0.0032	J B	0.200	0.201		mg/L		99	
Copper	ND		0.250	0.253		mg/L		101	
Iron	0.93		1.00	2.06		mg/L		112	
Potassium	1.1	J	50.0	50.2		mg/L		98	
Magnesium	2.5	J	50.0	51.2		mg/L		97	
Manganese	0.0090	J	0.500	0.500		mg/L		98	
Sodium	18		50.0	67.0		mg/L		97	
Nickel	ND		0.500	0.474		mg/L		95	
Lead	0.0026	J	0.500	0.478		mg/L		95	
Antimony	ND		0.500	0.495		mg/L		99	
Selenium	ND		2.00	1.88		mg/L		94	
Thallium	ND		2.00	1.94		mg/L		97	
Vanadium	0.0031	J	0.500	0.500		mg/L		99	
Zinc	0.0081	J B	0.500	0.505		mg/L		99	

Lab Sample ID: 180-5172-4 MSD
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: CH-2011-MU1-COMP
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		0.0500	0.0518		mg/L		104		3.97	
Arsenic	0.0035	J	2.00	2.03		mg/L		101		3.92	
Boron	0.31		1.00	1.36		mg/L		105		4.24	
Barium	0.014	J	2.00	2.09		mg/L		104		3.65	
Beryllium	ND		0.0500	0.0514		mg/L		103		4.42	
Calcium	22	B	50.0	75.5		mg/L		106		4.82	
Cadmium	ND		0.0500	0.0491		mg/L		98		4.45	
Cobalt	0.0012	J B	0.500	0.494		mg/L		98		3.87	
Chromium	0.0032	J B	0.200	0.209		mg/L		103		4.11	
Copper	ND		0.250	0.262		mg/L		105		3.86	
Iron	0.93		1.00	2.16		mg/L		123		5.08	
Potassium	1.1	J	50.0	51.8		mg/L		101		3.09	
Magnesium	2.5	J	50.0	53.6		mg/L		102		4.51	
Manganese	0.0090	J	0.500	0.521		mg/L		102		4.05	
Sodium	18		50.0	69.6		mg/L		102		3.74	
Nickel	ND		0.500	0.493		mg/L		99		4.03	
Lead	0.0026	J	0.500	0.498		mg/L		99		3.97	
Antimony	ND		0.500	0.516		mg/L		103		4.14	
Selenium	ND		2.00	1.96		mg/L		98		4.21	
Thallium	ND		2.00	2.02		mg/L		101		3.86	
Vanadium	0.0031	J	0.500	0.522		mg/L		104		4.37	
Zinc	0.0081	J B	0.500	0.526		mg/L		104		4.07	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-18624/1-A
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18624

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050	0.0091	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Boron	0.108	J	0.25	0.019	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Barium	ND		0.50	0.0054	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Beryllium	ND		0.050	0.0038	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Cadmium	ND		0.050	0.0035	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Calcium	ND		5.0	0.66	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Chromium	0.00850	J	0.10	0.0031	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Cobalt	ND		0.025	0.00075	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Copper	ND		0.10	0.017	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Iron	0.298	J	2.5	0.18	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Manganese	ND		0.25	0.0052	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Nickel	ND		0.050	0.0057	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Potassium	ND		5.0	0.68	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Lead	0.00750	J	0.050	0.0019	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Silver	ND		0.050	0.0020	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Antimony	0.0223	J	0.10	0.0013	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Magnesium	0.516	J	5.0	0.094	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Selenium	ND		0.25	0.025	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Thallium	ND		0.050	0.0010	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Sodium	ND		5.0	0.68	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Vanadium	0.00490	J	0.050	0.0040	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Zinc	ND		0.25	0.032	mg/Kg		10/26/11 09:54	11/08/11 21:31	1

Lab Sample ID: LCS 180-18624/2-A
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18624

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	1.66		mg/Kg		83	80 - 120
Boron	50.0	50.4		mg/Kg		101	80 - 120
Barium	100	88.2		mg/Kg		88	80 - 120
Beryllium	2.50	2.33		mg/Kg		93	80 - 120
Cadmium	2.50	2.35		mg/Kg		94	80 - 120
Calcium	2500	2460		mg/Kg		98	80 - 120
Chromium	10.0	9.60		mg/Kg		96	80 - 120
Cobalt	25.0	23.4		mg/Kg		94	80 - 120
Copper	12.5	11.8		mg/Kg		95	80 - 120
Iron	50.0	51.3		mg/Kg		103	80 - 120
Manganese	25.0	25.6		mg/Kg		102	80 - 120
Nickel	25.0	23.0		mg/Kg		92	80 - 120
Potassium	2500	2460		mg/Kg		99	80 - 120
Lead	1.00	0.914		mg/Kg		91	80 - 120
Silver	2.50	2.34		mg/Kg		94	80 - 120
Antimony	25.0	23.0		mg/Kg		92	80 - 120
Magnesium	2500	2530		mg/Kg		101	80 - 120
Selenium	0.500	0.550		mg/Kg		110	80 - 120
Thallium	2.50	2.25		mg/Kg		90	80 - 120
Sodium	2500	2470		mg/Kg		99	80 - 120
Vanadium	25.0	23.9		mg/Kg		96	80 - 120
Zinc	25.0	23.7		mg/Kg		95	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-5048-C-1-E MS
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18624

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.8		3.58	8.82		mg/Kg	☼	85	75 - 125
Boron	13	B	89.6	109		mg/Kg	☼	108	75 - 125
Barium	27		179	192		mg/Kg	☼	92	75 - 125
Beryllium	0.41		4.48	4.56		mg/Kg	☼	93	75 - 125
Cadmium	0.54		4.48	4.72		mg/Kg	☼	93	75 - 125
Calcium	79000		4480	82800	4	mg/Kg	☼	90	75 - 125
Chromium	21	B	17.9	39.8		mg/Kg	☼	106	75 - 125
Cobalt	7.2		44.8	43.8		mg/Kg	☼	82	75 - 125
Copper	26		22.4	42.5	F	mg/Kg	☼	73	75 - 125
Iron	18000	B	89.6	19400	4	mg/Kg	☼	1618	75 - 125
Manganese	540		44.8	594	4	mg/Kg	☼	118	75 - 125
Nickel	16		44.8	51.7		mg/Kg	☼	79	75 - 125
Potassium	1500		4480	7050		mg/Kg	☼	124	75 - 125
Lead	37	B	1.79	42.5	4	mg/Kg	☼	321	75 - 125
Silver	0.14		4.48	4.20		mg/Kg	☼	91	75 - 125
Antimony	0.33	B	44.8	27.3	F	mg/Kg	☼	60	75 - 125
Magnesium	40000	B	4480	45300	4	mg/Kg	☼	107	75 - 125
Selenium	0.51		0.896	1.29		mg/Kg	☼	87	75 - 125
Thallium	0.31		4.48	4.56		mg/Kg	☼	95	75 - 125
Sodium	170		4480	4460		mg/Kg	☼	96	75 - 125
Vanadium	21	B	44.8	66.2		mg/Kg	☼	102	75 - 125
Zinc	96		44.8	135		mg/Kg	☼	87	75 - 125

Lab Sample ID: 180-5048-C-1-F MSD
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18624

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.8		3.43	8.54		mg/Kg	☼	80	75 - 125	3	20
Boron	13	B	85.8	104		mg/Kg	☼	107	75 - 125	5	20
Barium	27		172	179		mg/Kg	☼	88	75 - 125	7	20
Beryllium	0.41		4.29	4.18		mg/Kg	☼	88	75 - 125	9	20
Cadmium	0.54		4.29	4.37		mg/Kg	☼	89	75 - 125	8	20
Calcium	79000		4290	85100	4	mg/Kg	☼	148	75 - 125	3	20
Chromium	21	B	17.2	36.5		mg/Kg	☼	92	75 - 125	9	20
Cobalt	7.2		42.9	41.4		mg/Kg	☼	80	75 - 125	6	20
Copper	26		21.5	39.9	F	mg/Kg	☼	64	75 - 125	6	20
Iron	18000	B	85.8	18400	4	mg/Kg	☼	466	75 - 125	6	20
Manganese	540		42.9	587	4	mg/Kg	☼	107	75 - 125	1	20
Nickel	16		42.9	50.6		mg/Kg	☼	80	75 - 125	2	20
Potassium	1500		4290	6550		mg/Kg	☼	118	75 - 125	7	20
Lead	37	B	1.72	38.9	4	mg/Kg	☼	128	75 - 125	9	20
Silver	0.14		4.29	3.90		mg/Kg	☼	88	75 - 125	7	20
Antimony	0.33	B	42.9	25.2	F	mg/Kg	☼	58	75 - 125	8	20
Magnesium	40000	B	4290	45500	4	mg/Kg	☼	117	75 - 125	0	20
Selenium	0.51		0.858	1.16		mg/Kg	☼	75	75 - 125	11	20
Thallium	0.31		4.29	4.37		mg/Kg	☼	95	75 - 125	4	20
Sodium	170		4290	4090		mg/Kg	☼	91	75 - 125	9	20
Vanadium	21	B	42.9	61.7		mg/Kg	☼	96	75 - 125	7	20
Zinc	96		42.9	123	F	mg/Kg	☼	64	75 - 125	9	20

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-18771/1-A
Matrix: Water
Analysis Batch: 19204

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 18771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.29	ug/L		10/27/11 11:48	10/31/11 14:44	1
Boron	ND		5.0	0.28	ug/L		10/27/11 11:48	10/31/11 14:44	1
Barium	ND		10	0.098	ug/L		10/27/11 11:48	10/31/11 14:44	1
Beryllium	ND		1.0	0.037	ug/L		10/27/11 11:48	10/31/11 14:44	1
Cadmium	ND		1.0	0.11	ug/L		10/27/11 11:48	10/31/11 14:44	1
Calcium	27.2	J	100	2.8	ug/L		10/27/11 11:48	10/31/11 14:44	1
Chromium	0.582	J	2.0	0.54	ug/L		10/27/11 11:48	10/31/11 14:44	1
Cobalt	ND		0.50	0.026	ug/L		10/27/11 11:48	10/31/11 14:44	1
Copper	0.342	J	2.0	0.24	ug/L		10/27/11 11:48	10/31/11 14:44	1
Iron	8.24	J	50	6.1	ug/L		10/27/11 11:48	10/31/11 14:44	1
Manganese	0.187	J	5.0	0.039	ug/L		10/27/11 11:48	10/31/11 14:44	1
Nickel	ND		1.0	0.17	ug/L		10/27/11 11:48	10/31/11 14:44	1
Potassium	ND		100	5.8	ug/L		10/27/11 11:48	10/31/11 14:44	1
Lead	0.0910	J	1.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:44	1
Silver	ND		1.0	0.036	ug/L		10/27/11 11:48	10/31/11 14:44	1
Antimony	0.0640	J	2.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:44	1
Magnesium	1.74	J	100	1.2	ug/L		10/27/11 11:48	10/31/11 14:44	1
Selenium	ND		5.0	0.42	ug/L		10/27/11 11:48	10/31/11 14:44	1
Thallium	ND		1.0	0.015	ug/L		10/27/11 11:48	10/31/11 14:44	1
Sodium	ND		100	3.8	ug/L		10/27/11 11:48	10/31/11 14:44	1
Vanadium	0.589	J	1.0	0.082	ug/L		10/27/11 11:48	10/31/11 14:44	1
Zinc	ND		5.0	0.96	ug/L		10/27/11 11:48	10/31/11 14:44	1

Lab Sample ID: LCS 180-18771/2-A
Matrix: Water
Analysis Batch: 19204

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 18771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	39.5		ug/L		99	80 - 120
Boron	1000	871		ug/L		87	80 - 120
Barium	2000	1880		ug/L		94	80 - 120
Beryllium	50.0	46.6		ug/L		93	80 - 120
Cadmium	50.0	50.5		ug/L		101	80 - 120
Calcium	50000	46400		ug/L		93	80 - 120
Chromium	200	197		ug/L		99	80 - 120
Cobalt	500	491		ug/L		98	80 - 120
Copper	250	245		ug/L		98	80 - 120
Iron	1000	1010		ug/L		101	80 - 120
Manganese	500	489		ug/L		98	80 - 120
Nickel	500	491		ug/L		98	80 - 120
Potassium	50000	46700		ug/L		93	80 - 120
Lead	20.0	21.1		ug/L		106	80 - 120
Silver	50.0	49.0		ug/L		98	80 - 120
Antimony	500	511		ug/L		102	80 - 120
Magnesium	50000	45200		ug/L		90	80 - 120
Selenium	10.0	8.72		ug/L		87	80 - 120
Thallium	50.0	50.9		ug/L		102	80 - 120
Sodium	50000	43800		ug/L		88	80 - 120
Vanadium	500	476		ug/L		95	80 - 120
Zinc	500	510		ug/L		102	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-5257-C-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 19204 — **Prep Batch: 18771**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	41		40.0	79.2		ug/L		97	75 - 125
Boron	240		1000	1100		ug/L		86	75 - 125
Barium	440		2000	2350		ug/L		95	75 - 125
Beryllium	0.038	J	50.0	45.6		ug/L		91	75 - 125
Cadmium	0.11	J	50.0	50.3		ug/L		101	75 - 125
Calcium	180000	B	50000	230000		ug/L		97	75 - 125
Chromium	2.0	B	200	194		ug/L		96	75 - 125
Cobalt	18		500	512		ug/L		99	75 - 125
Copper	2.5	B	250	244		ug/L		97	75 - 125
Iron	52000	B	1000	52000	4	ug/L		39	75 - 125
Nickel	7.2		500	495		ug/L		97	75 - 125
Potassium	16000		50000	62500		ug/L		94	75 - 125
Lead	1.2	B	20.0	22.4		ug/L		106	75 - 125
Silver	ND		50.0	49.4		ug/L		99	75 - 125
Antimony	0.78	J B	500	514		ug/L		103	75 - 125
Magnesium	43000	B	50000	87000		ug/L		89	75 - 125
Selenium	1.3	J	10.0	11.7		ug/L		104	75 - 125
Thallium	ND		50.0	51.9		ug/L		104	75 - 125
Sodium	77000		50000	121000		ug/L		88	75 - 125
Vanadium	2.2	B	500	479		ug/L		95	75 - 125
Zinc	10		500	505		ug/L		99	75 - 125

Lab Sample ID: 180-5257-C-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 19204 — **Prep Batch: 18771**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	41		40.0	82.9		ug/L		106	75 - 125	5	20
Boron	240		1000	1130		ug/L		89	75 - 125	3	20
Barium	440		2000	2400		ug/L		98	75 - 125	2	20
Beryllium	0.038	J	50.0	45.9		ug/L		92	75 - 125	1	20
Cadmium	0.11	J	50.0	50.6		ug/L		101	75 - 125	1	20
Calcium	180000	B	50000	239000		ug/L		115	75 - 125	4	20
Chromium	2.0	B	200	198		ug/L		98	75 - 125	2	20
Cobalt	18		500	518		ug/L		100	75 - 125	1	20
Copper	2.5	B	250	250		ug/L		99	75 - 125	2	20
Iron	52000	B	1000	54300	4	ug/L		262	75 - 125	4	20
Nickel	7.2		500	504		ug/L		99	75 - 125	2	20
Potassium	16000		50000	64200		ug/L		97	75 - 125	3	20
Lead	1.2	B	20.0	22.8		ug/L		108	75 - 125	2	20
Silver	ND		50.0	49.8		ug/L		100	75 - 125	1	20
Antimony	0.78	J B	500	512		ug/L		102	75 - 125	0	20
Magnesium	43000	B	50000	90200		ug/L		95	75 - 125	4	20
Selenium	1.3	J	10.0	11.7		ug/L		105	75 - 125	1	20
Thallium	ND		50.0	52.9		ug/L		106	75 - 125	2	20
Sodium	77000		50000	125000		ug/L		96	75 - 125	4	20
Vanadium	2.2	B	500	490		ug/L		98	75 - 125	2	20
Zinc	10		500	508		ug/L		100	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-19610/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:43	1

Lab Sample ID: LCS 180-19610/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00239		mg/L		96	80 - 120

Lab Sample ID: MB 180-20386/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20422 — **Prep Batch: 20386**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/10/11 15:34	11/10/11 21:59	1

Lab Sample ID: LCS 180-20386/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20422 — **Prep Batch: 20386**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.79		ug/L		112	80 - 120

Lab Sample ID: 500-41155-G-10-D MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20422 — **Prep Batch: 20386**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		1.00	1.11		ug/L		111	75 - 125

Lab Sample ID: 500-41155-G-10-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20422 — **Prep Batch: 20386**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	1.11		ug/L		111	75 - 125	0	20

Lab Sample ID: LB 180-18692/14-C LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:47	1

Lab Sample ID: 180-5219-A-8-G MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.000948		mg/L		95	75 - 125

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-5219-A-8-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00103		mg/L		103	75 - 125	8	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 180-19737/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0055	mg/Kg		11/04/11 13:24	11/04/11 18:00	1

Lab Sample ID: LCS 180-19737/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.208	0.203		mg/Kg		98	80 - 120

Lab Sample ID: 180-5172-1 MS — **Client Sample ID: CH-2011-MU1-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.095		0.172	0.272		mg/Kg	☼	103	75 - 125

Lab Sample ID: 180-5172-1 MSD — **Client Sample ID: CH-2011-MU1-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19765 — **Prep Batch: 19737**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.095		0.172	0.267		mg/Kg	☼	100	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-18783/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.043	mg/L			10/26/11 11:34	1
Fluoride	0.0238	J	0.050	0.014	mg/L			10/26/11 11:34	1
Chloride	ND		1.0	0.20	mg/L			10/26/11 11:34	1
Sulfate	ND		1.0	0.21	mg/L			10/26/11 11:34	1

Lab Sample ID: LCS 180-18783/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.47		mg/L		99	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 180-18783/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.50	2.56		mg/L		102	90 - 110
Chloride	50.0	48.7		mg/L		97	90 - 110
Sulfate	50.0	48.3		mg/L		97	90 - 110

Lab Sample ID: LCSD 180-18783/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.45		mg/L		98	90 - 110	0	20
Fluoride	2.50	2.55		mg/L		102	90 - 110	1	20
Chloride	50.0	48.6		mg/L		97	90 - 110	0	20
Sulfate	50.0	48.1		mg/L		96	90 - 110	0	20

Lab Sample ID: MB 180-20017/6 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.0063	mg/Kg			11/07/11 11:29	1
Fluoride	ND		0.050	0.015	mg/Kg			11/07/11 11:29	1
Chloride	0.675	J	1.0	0.22	mg/Kg			11/07/11 11:29	1
Sulfate	ND		1.0	0.12	mg/Kg			11/07/11 11:29	1

Lab Sample ID: LCS 180-20017/5 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.50		mg/Kg		100	90 - 110
Fluoride	2.50	2.34		mg/Kg		94	90 - 110
Chloride	50.0	49.8		mg/Kg		100	90 - 110
Sulfate	50.0	49.2		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 180-20017/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20017

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.52		mg/Kg		101	90 - 110	1	20
Fluoride	2.50	2.36		mg/Kg		95	90 - 110	1	20
Chloride	50.0	50.0		mg/Kg		100	90 - 110	0	20
Sulfate	50.0	49.4		mg/Kg		99	90 - 110	0	20

Lab Sample ID: LB3 180-19893/7-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 20017

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.063	mg/Kg			11/07/11 15:51	1
Fluoride	ND		0.50	0.15	mg/Kg			11/07/11 15:51	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LB3 180-19893/7-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 20017

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.74	J	10	2.2	mg/Kg			11/07/11 15:51	1
Sulfate	8.22	J	10	1.2	mg/Kg			11/07/11 15:51	1

Method: 335.1 - Cyanide, Amenable

Lab Sample ID: MB 240-21099/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		10/28/11 15:42	10/28/11 16:40	1

Lab Sample ID: MB 240-21099/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		10/28/11 15:42	10/28/11 16:40	1

Lab Sample ID: LCS 240-21099/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0449	0.0418		mg/L		93	62 - 118

Lab Sample ID: MB 240-21848/2-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:27	1

Lab Sample ID: MB 240-21848/3-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:27	1

Lab Sample ID: LCS 240-21848/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0449	0.0353		mg/L		79	62 - 118

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: MRL 240-21886/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0100	0.00992	J	mg/L		99	70 - 130

Lab Sample ID: MB 240-22002/13-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22037 — **Prep Batch: 22002**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.50	0.10	mg/Kg		11/04/11 14:21	11/04/11 16:35	1

Lab Sample ID: MB 240-22002/2-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22037 — **Prep Batch: 22002**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.50	0.10	mg/Kg		11/04/11 13:08	11/04/11 16:35	1

Lab Sample ID: LCS 240-22002/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22037 — **Prep Batch: 22002**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	2.25	1.88		mg/Kg		84	68 - 123

Lab Sample ID: 180-5172-1 MS — **Client Sample ID: CH-2011-MU1-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22037 — **Prep Batch: 22002**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	1.4		4.22	7.38		mg/Kg	☼	141	42 - 140

Lab Sample ID: 180-5172-1 MSD — **Client Sample ID: CH-2011-MU1-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22037 — **Prep Batch: 22002**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	1.4		4.22	6.14		mg/Kg	☼	112	42 - 140	18	20

Lab Sample ID: MRL 240-22037/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22037

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0100	0.00778	J	mg/L		78	70 - 130

Lab Sample ID: MB 240-23169/2-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23214 — **Prep Batch: 23169**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.52	0.10	mg/Kg		11/14/11 13:04	11/14/11 18:30	1

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: MB 240-23169/3-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23214 — **Prep Batch: 23169**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.51	0.10	mg/Kg		11/14/11 13:04	11/14/11 18:30	1

Lab Sample ID: LCS 240-23169/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23214 — **Prep Batch: 23169**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	2.27	2.32		mg/Kg		102	68 - 123

Lab Sample ID: 180-5172-5 MS — **Client Sample ID: CH-2011-MU2-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23214 — **Prep Batch: 23169**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.69	J H	3.69	3.83		mg/Kg	☼	85	42 - 140

Lab Sample ID: 180-5172-5 MSD — **Client Sample ID: CH-2011-MU2-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 23214 — **Prep Batch: 23169**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.69	J H	3.84	3.28		mg/Kg	☼	67	42 - 140	16	20

Lab Sample ID: 180-5172-9 MS — **Client Sample ID: CH-2011-MU1-COMP**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.22		0.0400	0.222	4	mg/L		15	42 - 140

Lab Sample ID: 180-5172-9 MSD — **Client Sample ID: CH-2011-MU1-COMP**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.22		0.0400	0.223	4	mg/L		16	42 - 140	0	20

Lab Sample ID: LB 240-21620/14-C LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:38	1

Lab Sample ID: 180-5219-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.075		0.0400	0.0710	F	mg/L		-11	42 - 140

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: 180-5219-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.075		0.0400	0.0739	F	mg/L		-4	42 - 140	4	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-20039/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20203 — **Prep Batch: 20039**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.0580	J	0.10	0.033	mg/L		11/08/11 13:45	11/09/11 13:20	1

Lab Sample ID: LCS 180-20039/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20203 — **Prep Batch: 20039**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	2.00	2.03		mg/L		101	90 - 110

Lab Sample ID: 180-5644-B-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20203 — **Prep Batch: 20039**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	0.66		2.00	2.28	F	mg/L		81	90 - 110

Lab Sample ID: 180-5644-B-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20203 — **Prep Batch: 20039**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia, distilled	0.66		2.00	2.76		mg/L		105	90 - 110	19	20

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 240-22720/10-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphate	ND		9.6	0.095	mg/Kg		11/10/11 08:45	11/10/11 14:22	1

Lab Sample ID: LCS 240-22720/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphate	519	585		mg/Kg		113	75 - 125

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: 180-5172-1 MS — **Client Sample ID: CH-2011-MU1-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphate	380		110	493		mg/Kg	☼	104	75 - 125

Lab Sample ID: 180-5172-1 MSD — **Client Sample ID: CH-2011-MU1-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphate	380		106	484		mg/Kg	☼	99	75 - 125	2	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 180-18905/4 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18905

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:32	1

Lab Sample ID: LCS 180-18905/3 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18905

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.249		mg/L		100	85 - 115

Lab Sample ID: MB 180-19042/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19042

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/29/11 13:53	1

Lab Sample ID: LCS 180-19042/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19042

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.250		mg/L		100	85 - 115

Lab Sample ID: MB 180-19786/15-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20323 — **Prep Batch: 19786**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.40	0.10	mg/Kg		11/07/11 08:30	11/09/11 14:02	1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: MB 180-19786/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20176 — **Prep Batch: 19786**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.40	0.10	mg/Kg		11/07/11 08:30	11/09/11 13:32	1

Lab Sample ID: LCSI 180-19786/17-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20323 — **Prep Batch: 19786**

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	708	733		mg/Kg		104	80 - 120

Lab Sample ID: LCSI 180-19786/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20176 — **Prep Batch: 19786**

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	708	674		mg/Kg		95	80 - 120

Lab Sample ID: LCSS 180-19786/16-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20323 — **Prep Batch: 19786**

Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.0	19.6		mg/Kg		98	80 - 120

Lab Sample ID: LCSS 180-19786/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20176 — **Prep Batch: 19786**

Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.0	18.6		mg/Kg		93	80 - 120

Lab Sample ID: 180-5172-7 MSI — **Client Sample ID: CH-2011-MU2-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20176 — **Prep Batch: 19786**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		1060	857		mg/Kg	☼	81	75 - 125

Lab Sample ID: 180-5172-7 MSI — **Client Sample ID: CH-2011-MU2-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20323 — **Prep Batch: 19786**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		1060	801		mg/Kg	☼	75	75 - 125

Lab Sample ID: 180-5172-7 MSS — **Client Sample ID: CH-2011-MU2-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20176 — **Prep Batch: 19786**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		30.4	3.71	F	mg/Kg	☼	12	75 - 125

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 180-5172-7 MSS — **Client Sample ID: CH-2011-MU2-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20323 — **Prep Batch: 19786**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		30.1	4.87	F	mg/Kg	☼	16	75 - 125

Lab Sample ID: 180-5172-7 DU — **Client Sample ID: CH-2011-MU2-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20176 — **Prep Batch: 19786**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	ND		ND		mg/Kg	☼	NC	20

Lab Sample ID: 180-5172-7 DU — **Client Sample ID: CH-2011-MU2-G3**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20323 — **Prep Batch: 19786**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	ND		ND		mg/Kg	☼	NC	20

Lab Sample ID: 180-5219-J-16 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 19042

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		0.250	0.246		mg/L		99	85 - 115

Lab Sample ID: 180-5219-J-16 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 19042

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.252		mg/L		101	85 - 115	2	20

Lab Sample ID: LB 180-18695/14-A LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:33	1

Lab Sample ID: 180-5219-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND		0.250	0.257		mg/L		103	85 - 115

Lab Sample ID: 180-5219-A-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.245		mg/L		98	85 - 115	5	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-21087/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		10/28/11 13:17	10/28/11 15:38	1

Lab Sample ID: LCS 240-21087/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0470		mg/L		105	69 - 120

Lab Sample ID: MB 240-21648/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

Lab Sample ID: LCS 240-21648/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0433		mg/L		96	69 - 118

Lab Sample ID: MRL 240-21689/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.00877	J	mg/L		88	70 - 130

Lab Sample ID: MB 240-21974/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22036 — **Prep Batch: 21974**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.50	0.10	mg/Kg		11/04/11 10:57	11/04/11 13:38	1

Lab Sample ID: MRL 240-22036/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22036

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.00742	J	mg/L		74	70 - 130

Lab Sample ID: MB 240-22389/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22592 — **Prep Batch: 22389**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.50	0.10	mg/Kg		11/08/11 14:34	11/09/11 14:57	1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 240-22389/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22592 — **Prep Batch: 22389**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	2.25	2.14		mg/Kg		95	68 - 123

Lab Sample ID: 240-5513-E-5-F MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22592 — **Prep Batch: 22389**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		2.33	2.23		mg/Kg	☼	96	50 - 134

Lab Sample ID: 240-5513-E-5-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22592 — **Prep Batch: 22389**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		2.35	1.92		mg/Kg	☼	81	50 - 134	15	20

Lab Sample ID: MRL 240-22592/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22592

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.0102		mg/L		102	70 - 130

Lab Sample ID: 180-5048-C-6-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.0400	0.0405		mg/L		101	42 - 140

Lab Sample ID: 180-5048-C-6-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.0400	0.0396		mg/L		99	42 - 140	2	20

Lab Sample ID: LB 240-21620/14-B LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

Lab Sample ID: 240-5399-D-40-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.0400	0.0382		mg/L		96	42 - 140

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 240-5399-D-40-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.0400	0.0377		mg/L		94	42 - 140	1	20

Method: 9040B - pH

Lab Sample ID: LCS 180-18790/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18790

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	6.990		SU		100	99 - 101		

Lab Sample ID: 180-5273-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18790

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.46			8.480		SU				0.2	2

Method: Moisture - Percent Moisture

Lab Sample ID: 180-5107-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18487

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	13			13		%				2	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-18748/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			10/27/11 09:13	1

Lab Sample ID: LCS 180-18748/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			413	386		mg/L		93	80 - 120		

Lab Sample ID: 180-5266-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	680			691		mg/L				1	20

QC Association Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5172-1

GC/MS VOA

Prep Batch: 18340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5068-E-3-B MS	Matrix Spike	Total/NA	Sediment	5035	
180-5068-F-3-A MSD	Matrix Spike Duplicate	Total/NA	Sediment	5035	
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	5035	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	5035	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	5035	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	5035	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	5035	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	5035	
LCS 180-18340/2-A	Lab Control Sample	Total/NA	Sediment	5035	
MB 180-18340/1-A	Method Blank	Total/NA	Sediment	5035	

Analysis Batch: 18348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5068-E-3-B MS	Matrix Spike	Total/NA	Sediment	8260B	18340
180-5068-F-3-A MSD	Matrix Spike Duplicate	Total/NA	Sediment	8260B	18340
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8260B	18340
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8260B	18340
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8260B	18340
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8260B	18340
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8260B	18340
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8260B	18340
LCS 180-18340/2-A	Lab Control Sample	Total/NA	Sediment	8260B	18340
MB 180-18340/1-A	Method Blank	Total/NA	Sediment	8260B	18340

Analysis Batch: 19457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	8260B	
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	8260B	
180-5224-M-1 MS	Matrix Spike	Total/NA	Water	8260B	
180-5224-N-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 180-19457/8	Lab Control Sample	Total/NA	Water	8260B	
MB 180-19457/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 18717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	3541	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	3541	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	3541	
180-5172-3 MS	CH-2011-MU1-G3	Total/NA	Sediment	3541	
180-5172-3 MSD	CH-2011-MU1-G3	Total/NA	Sediment	3541	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	3541	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	3541	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	3541	
LCS 180-18717/2-A	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-18717/1-A	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 18887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8270C LL	18717
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8270C LL	18717

GC/MS Semi VOA (Continued)

Analysis Batch: 18887 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8270C LL	18717
180-5172-3 MS	CH-2011-MU1-G3	Total/NA	Sediment	8270C LL	18717
180-5172-3 MSD	CH-2011-MU1-G3	Total/NA	Sediment	8270C LL	18717
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8270C LL	18717
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8270C LL	18717
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8270C LL	18717
LCS 180-18717/2-A	Lab Control Sample	Total/NA	Sediment	8270C LL	18717
MB 180-18717/1-A	Method Blank	Total/NA	Sediment	8270C LL	18717

Prep Batch: 19224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	3520C	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	3520C	
LCS 180-19224/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 180-19224/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 180-19224/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 19538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	8270C LL	19224
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	8270C LL	19224
LCS 180-19224/2-A	Lab Control Sample	Total/NA	Water	8270C LL	19224
LCSD 180-19224/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	19224
MB 180-19224/1-A	Method Blank	Total/NA	Water	8270C LL	19224

GC VOA

Prep Batch: 19073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	DILeach_Prep	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	DILeach_Prep	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	DILeach_Prep	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	DILeach_Prep	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	DILeach_Prep	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	DILeach_Prep	
LB 180-19073/1-A LB	Method Blank	Total/NA	Sediment	DILeach_Prep	
LCS 180-19073/2-A	Lab Control Sample	Total/NA	Sediment	DILeach_Prep	
LCSD 180-19073/3-A	Lab Control Sample Dup	Total/NA	Sediment	DILeach_Prep	

Analysis Batch: 19633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8015C	19073
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8015C	19073
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8015C	19073
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8015C	19073
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8015C	19073
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8015C	19073
LB 180-19073/1-A LB	Method Blank	Total/NA	Sediment	8015C	19073
LCS 180-19073/2-A	Lab Control Sample	Total/NA	Sediment	8015C	19073
LCSD 180-19073/3-A	Lab Control Sample Dup	Total/NA	Sediment	8015C	19073

GC Semi VOA

Prep Batch: 18467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5109-A-10-A MS	Matrix Spike	Total/NA	Sediment	8151A	
180-5109-A-10-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8151A	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8151A	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8151A	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8151A	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8151A	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8151A	
LCS 180-18467/2-A	Lab Control Sample	Total/NA	Sediment	8151A	
MB 180-18467/1-A	Method Blank	Total/NA	Sediment	8151A	

Prep Batch: 18835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	3510C	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	3510C	
LCS 180-18835/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 180-18835/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-18835/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 180-18835/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 180-18835/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 18845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	8151A	
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	8151A	
LCS 180-18845/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 180-18845/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 180-18845/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 19080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-B-2-P MS	Matrix Spike	Total/NA	Sediment	3541	
180-5048-B-2-Q MSD	Matrix Spike Duplicate	Total/NA	Sediment	3541	
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	3541	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	3541	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	3541	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	3541	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	3541	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	3541	
LCS 180-19080/2-B	Lab Control Sample	Total/NA	Sediment	3541	
LCS 180-19080/5-B	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 19089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	8151A	18845
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	8151A	18845
LCS 180-18845/2-A	Lab Control Sample	Total/NA	Water	8151A	18845
LCSD 180-18845/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	18845
MB 180-18845/1-A	Method Blank	Total/NA	Water	8151A	18845

GC Semi VOA (Continued)

Analysis Batch: 19205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	8081A	18835
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	8081A	18835
LCS 180-18835/2-A	Lab Control Sample	Total/NA	Water	8081A	18835
LCSD 180-18835/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	18835
MB 180-18835/1-A	Method Blank	Total/NA	Water	8081A	18835

Analysis Batch: 19311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	8082A	18835
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	8082A	18835
LCS 180-18835/4-A	Lab Control Sample	Total/NA	Water	8082A	18835
LCSD 180-18835/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	18835
MB 180-18835/1-A	Method Blank	Total/NA	Water	8082A	18835

Analysis Batch: 19915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8081A	19080
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8081A	19080
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8081A	19080
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8081A	19080
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8081A	19080
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8081A	19080
LCS 180-19080/2-B	Lab Control Sample	Total/NA	Sediment	8081A	19080
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	8081A	19080

Analysis Batch: 19973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5109-A-10-A MS	Matrix Spike	Total/NA	Sediment	8151A	18467
180-5109-A-10-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	18467
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8151A	18467
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8151A	18467
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8151A	18467
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8151A	18467
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8151A	18467
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8151A	18467
LCS 180-18467/2-A	Lab Control Sample	Total/NA	Sediment	8151A	18467
MB 180-18467/1-A	Method Blank	Total/NA	Sediment	8151A	18467

Analysis Batch: 19978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5109-A-10-A MS	Matrix Spike	Total/NA	Sediment	8151A	18467
180-5109-A-10-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	18467
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8151A	18467
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8151A	18467
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8151A	18467
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8151A	18467
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8151A	18467
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8151A	18467
LCS 180-18467/2-A	Lab Control Sample	Total/NA	Sediment	8151A	18467
MB 180-18467/1-A	Method Blank	Total/NA	Sediment	8151A	18467

GC Semi VOA (Continued)

Analysis Batch: 20521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-B-2-P MS	Matrix Spike	Total/NA	Sediment	8082	19080
180-5048-B-2-Q MSD	Matrix Spike Duplicate	Total/NA	Sediment	8082	19080
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	8082	19080
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	8082	19080
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	8082	19080
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	8082	19080
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	8082	19080
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	8082	19080
LCS 180-19080/5-B	Lab Control Sample	Total/NA	Sediment	8082	19080
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	8082	19080

Metals

Prep Batch: 18624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-C-1-E MS	Matrix Spike	Total/NA	Sediment	3050B	
180-5048-C-1-F MSD	Matrix Spike Duplicate	Total/NA	Sediment	3050B	
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	3050B	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	3050B	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	3050B	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	3050B	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	3050B	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	3050B	
LCS 180-18624/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
MB 180-18624/1-A	Method Blank	Total/NA	Sediment	3050B	

Leach Batch: 18692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	1312	
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	1312	
180-5172-4 MS	CH-2011-MU1-COMP	SPLP East	Sediment	1312	
180-5172-4 MSD	CH-2011-MU1-COMP	SPLP East	Sediment	1312	
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	1312	
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	1312	
180-5219-A-8-G MS	Matrix Spike	SPLP East	Sediment	1312	
180-5219-A-8-H MSD	Matrix Spike Duplicate	SPLP East	Sediment	1312	
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	1312	
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	1312	

Prep Batch: 18771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	3005A	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	3005A	
180-5257-C-1-B MS	Matrix Spike	Dissolved	Water	3005A	
180-5257-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	
LCS 180-18771/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-18771/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 19204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	6020	18771
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	6020	18771

Metals (Continued)

Analysis Batch: 19204 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5257-C-1-B MS	Matrix Spike	Dissolved	Water	6020	18771
180-5257-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	6020	18771
LCS 180-18771/2-A	Lab Control Sample	Total Recoverable	Water	6020	18771
MB 180-18771/1-A	Method Blank	Total Recoverable	Water	6020	18771

Prep Batch: 19329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	3010A	18692
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	3010A	18692
180-5172-4 MS	CH-2011-MU1-COMP	SPLP East	Sediment	3010A	18692
180-5172-4 MSD	CH-2011-MU1-COMP	SPLP East	Sediment	3010A	18692
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	3010A	18692
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	3010A	18692
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	3010A	18692
LCS 180-19329/16-A	Lab Control Sample	Total/NA	Sediment	3010A	
MB 180-19329/15-A	Method Blank	Total/NA	Sediment	3010A	

Analysis Batch: 19544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	6010B	19329
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	6010B	19329
180-5172-4 MS	CH-2011-MU1-COMP	SPLP East	Sediment	6010B	19329
180-5172-4 MSD	CH-2011-MU1-COMP	SPLP East	Sediment	6010B	19329
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	6010B	19329
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	6010B	19329
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	6010B	19329
LCS 180-19329/16-A	Lab Control Sample	Total/NA	Sediment	6010B	19329
MB 180-19329/15-A	Method Blank	Total/NA	Sediment	6010B	19329

Prep Batch: 19610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	7470A	18692
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	7470A	18692
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	7470A	18692
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	7470A	18692
180-5219-A-8-G MS	Matrix Spike	SPLP East	Sediment	7470A	18692
180-5219-A-8-H MSD	Matrix Spike Duplicate	SPLP East	Sediment	7470A	18692
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	7470A	18692
LCS 180-19610/2-A	Lab Control Sample	Total/NA	Sediment	7470A	
MB 180-19610/1-A	Method Blank	Total/NA	Sediment	7470A	

Analysis Batch: 19656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	7470A	19610
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	7470A	19610
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	7470A	19610
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	7470A	19610
180-5219-A-8-G MS	Matrix Spike	SPLP East	Sediment	7470A	19610
180-5219-A-8-H MSD	Matrix Spike Duplicate	SPLP East	Sediment	7470A	19610
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	7470A	19610
LCS 180-19610/2-A	Lab Control Sample	Total/NA	Sediment	7470A	19610
MB 180-19610/1-A	Method Blank	Total/NA	Sediment	7470A	19610

Metals (Continued)

Prep Batch: 19737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	7471A	
180-5172-1 MS	CH-2011-MU1-G1	Total/NA	Sediment	7471A	
180-5172-1 MSD	CH-2011-MU1-G1	Total/NA	Sediment	7471A	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	7471A	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	7471A	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	7471A	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	7471A	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	7471A	
LCS 180-19737/2-A	Lab Control Sample	Total/NA	Sediment	7471A	
MB 180-19737/1-A	Method Blank	Total/NA	Sediment	7471A	

Analysis Batch: 19765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	7471A	19737
180-5172-1 MS	CH-2011-MU1-G1	Total/NA	Sediment	7471A	19737
180-5172-1 MSD	CH-2011-MU1-G1	Total/NA	Sediment	7471A	19737
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	7471A	19737
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	7471A	19737
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	7471A	19737
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	7471A	19737
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	7471A	19737
LCS 180-19737/2-A	Lab Control Sample	Total/NA	Sediment	7471A	19737
MB 180-19737/1-A	Method Blank	Total/NA	Sediment	7471A	19737

Analysis Batch: 20157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-C-1-E MS	Matrix Spike	Total/NA	Sediment	6020	18624
180-5048-C-1-F MSD	Matrix Spike Duplicate	Total/NA	Sediment	6020	18624
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	6020	18624
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	6020	18624
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	6020	18624
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	6020	18624
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	6020	18624
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	6020	18624
LCS 180-18624/2-A	Lab Control Sample	Total/NA	Sediment	6020	18624
MB 180-18624/1-A	Method Blank	Total/NA	Sediment	6020	18624

Prep Batch: 20386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	7470A	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	7470A	
500-41155-G-10-D MS	Matrix Spike	Total/NA	Water	7470A	
500-41155-G-10-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
LCS 180-20386/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 180-20386/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 20422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	7470A	20386
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	7470A	20386
500-41155-G-10-D MS	Matrix Spike	Total/NA	Water	7470A	20386
500-41155-G-10-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	20386

Metals (Continued)

Analysis Batch: 20422 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-20386/2-A	Lab Control Sample	Total/NA	Water	7470A	20386
MB 180-20386/1-A	Method Blank	Total/NA	Water	7470A	20386

General Chemistry

Analysis Batch: 18487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5107-A-1 DU	Duplicate	Total/NA	Sediment	Moisture	
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	Moisture	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	Moisture	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	Moisture	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	Moisture	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	Moisture	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	Moisture	

Leach Batch: 18695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	1312	
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	1312	
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	1312	
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	1312	
180-5219-A-2-B MS	Matrix Spike	SPLP East	Sediment	1312	
180-5219-A-2-B MSD	Matrix Spike Duplicate	SPLP East	Sediment	1312	
LB 180-18695/14-A LB	Method Blank	SPLP East	Sediment	1312	

Analysis Batch: 18748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	SM 2540C	
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	SM 2540C	
180-5266-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 180-18748/1	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 180-18748/2	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 18783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	300.0	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	300.0	
LCS 180-18783/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 180-18783/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 180-18783/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 18790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	9040B	
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	9040B	
180-5273-A-1 DU	Duplicate	Total/NA	Water	9040B	
LCS 180-18790/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 18905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP East	Sediment	7196A	
180-5172-4	CH-2011-MU1-COMP	SPLP East	Sediment	7196A	

General Chemistry (Continued)

Analysis Batch: 18905 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-5	CH-2011-MU2-G1	SPLP East	Sediment	7196A	
180-5172-8	CH-2011-MU2-COMP	SPLP East	Sediment	7196A	
180-5219-A-2-B MS	Matrix Spike	SPLP East	Sediment	7196A	
180-5219-A-2-B MSD	Matrix Spike Duplicate	SPLP East	Sediment	7196A	
LB 180-18695/14-A LB	Method Blank	SPLP East	Sediment	7196A	
LCS 180-18905/3	Lab Control Sample	Total/NA	Sediment	7196A	
MB 180-18905/4	Method Blank	Total/NA	Sediment	7196A	

Analysis Batch: 19042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-14	CH-2011-MU1-COMP	Dissolved	Water	7196A	
180-5172-15	CH-2011-MU2-COMP	Dissolved	Water	7196A	
180-5219-J-16 MS	Matrix Spike	Dissolved	Water	7196A	
180-5219-J-16 MSD	Matrix Spike Duplicate	Dissolved	Water	7196A	
LCS 180-19042/3	Lab Control Sample	Total/NA	Water	7196A	
MB 180-19042/4	Method Blank	Total/NA	Water	7196A	

Prep Batch: 19786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	3060A	
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	3060A	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	3060A	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	3060A	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	3060A	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	3060A	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	3060A	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	3060A	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	3060A	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	3060A	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7 DU	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7 DU	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7 MSI	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7 MSI	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7 MSS	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
180-5172-7 MSS	CH-2011-MU2-G3	Total/NA	Sediment	3060A	
LCSI 180-19786/17-A	Lab Control Sample	Total/NA	Sediment	3060A	
LCSI 180-19786/3-A	Lab Control Sample	Total/NA	Sediment	3060A	
LCSS 180-19786/16-A	Lab Control Sample	Total/NA	Sediment	3060A	
LCSS 180-19786/2-A	Lab Control Sample	Total/NA	Sediment	3060A	
MB 180-19786/15-A	Method Blank	Total/NA	Sediment	3060A	
MB 180-19786/1-A	Method Blank	Total/NA	Sediment	3060A	

Leach Batch: 19893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Soluble	Sediment	DI Leach	
180-5172-2	CH-2011-MU1-G2	Soluble	Sediment	DI Leach	
180-5172-3	CH-2011-MU1-G3	Soluble	Sediment	DI Leach	
180-5172-5	CH-2011-MU2-G1	Soluble	Sediment	DI Leach	
180-5172-6	CH-2011-MU2-G2	Soluble	Sediment	DI Leach	
180-5172-7	CH-2011-MU2-G3	Soluble	Sediment	DI Leach	

General Chemistry (Continued)

Leach Batch: 19893 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB3 180-19893/7-A LB3	Method Blank	Soluble	Sediment	DI Leach	

Analysis Batch: 20017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Soluble	Sediment	300.0	
180-5172-2	CH-2011-MU1-G2	Soluble	Sediment	300.0	
180-5172-3	CH-2011-MU1-G3	Soluble	Sediment	300.0	
180-5172-5	CH-2011-MU2-G1	Soluble	Sediment	300.0	
180-5172-6	CH-2011-MU2-G2	Soluble	Sediment	300.0	
180-5172-7	CH-2011-MU2-G3	Soluble	Sediment	300.0	
LB3 180-19893/7-A LB3	Method Blank	Soluble	Sediment	300.0	
LCS 180-20017/5	Lab Control Sample	Total/NA	Sediment	300.0	
LCSD 180-20017/7	Lab Control Sample Dup	Total/NA	Sediment	300.0	
MB 180-20017/6	Method Blank	Total/NA	Sediment	300.0	

Prep Batch: 20039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5644-B-2-B MS	Matrix Spike	Total/NA	Water	Distill/Ammonia	
180-5644-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Ammonia	
LCS 180-20039/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 180-20039/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 20176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	7196A	19786
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	7196A	19786
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	7196A	19786
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	7196A	19786
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	7196A	19786
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
180-5172-7 DU	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
180-5172-7 MSI	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
180-5172-7 MSS	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
LCSI 180-19786/3-A	Lab Control Sample	Total/NA	Sediment	7196A	19786
LCSS 180-19786/2-A	Lab Control Sample	Total/NA	Sediment	7196A	19786
MB 180-19786/1-A	Method Blank	Total/NA	Sediment	7196A	19786

Analysis Batch: 20203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Total/NA	SET, Dissolved	350.1	20039
180-5172-10	CH-2011-MU2-COMP	Total/NA	SET, Dissolved	350.1	20039
180-5644-B-2-B MS	Matrix Spike	Total/NA	Water	350.1	20039
180-5644-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	20039
LCS 180-20039/2-A	Lab Control Sample	Total/NA	Water	350.1	20039
MB 180-20039/1-A	Method Blank	Total/NA	Water	350.1	20039

Analysis Batch: 20323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	7196A	19786
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	7196A	19786

General Chemistry (Continued)

Analysis Batch: 20323 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	7196A	19786
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	7196A	19786
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	7196A	19786
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
180-5172-7 DU	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
180-5172-7 MSI	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
180-5172-7 MSS	CH-2011-MU2-G3	Total/NA	Sediment	7196A	19786
LCSI 180-19786/17-A	Lab Control Sample	Total/NA	Sediment	7196A	19786
LCSS 180-19786/16-A	Lab Control Sample	Total/NA	Sediment	7196A	19786
MB 180-19786/15-A	Method Blank	Total/NA	Sediment	7196A	19786

Prep Batch: 21087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-C-6-B MS	Matrix Spike	Dissolved	Water	9012A	
180-5048-C-6-C MSD	Matrix Spike Duplicate	Dissolved	Water	9012A	
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	9012A	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	9012A	
LCS 240-21087/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-21087/1-A	Method Blank	Total/NA	Water	9012A	

Prep Batch: 21099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	Distill/CN	
180-5172-9 MS	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	Distill/CN	
180-5172-9 MSD	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	Distill/CN	
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	Distill/CN	
LCS 240-21099/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 240-21099/1-A	Method Blank	Total/NA	Water	Distill/CN	
MB 240-21099/2-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 21110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-C-6-B MS	Matrix Spike	Dissolved	Water	9012A	21087
180-5048-C-6-C MSD	Matrix Spike Duplicate	Dissolved	Water	9012A	21087
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	9012A	21087
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	9012A	21087
LCS 240-21087/2-A	Lab Control Sample	Total/NA	Water	9012A	21087
MB 240-21087/1-A	Method Blank	Total/NA	Water	9012A	21087

Analysis Batch: 21114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	335.1	21099
180-5172-9 MS	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	335.1	21099
180-5172-9 MSD	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	335.1	21099
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	335.1	21099
LCS 240-21099/3-A	Lab Control Sample	Total/NA	Water	335.1	21099
MB 240-21099/1-A	Method Blank	Total/NA	Water	335.1	21099
MB 240-21099/2-A	Method Blank	Total/NA	Water	335.1	21099

Analysis Batch: 21417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-9	CH-2011-MU1-COMP	Dissolved	SET, Dissolved	9012A	

General Chemistry (Continued)

Analysis Batch: 21417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-10	CH-2011-MU2-COMP	Dissolved	SET, Dissolved	9012A	

Leach Batch: 21620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP	Sediment	1312	
180-5172-4	CH-2011-MU1-COMP	SPLP	Sediment	1312	
180-5172-5	CH-2011-MU2-G1	SPLP	Sediment	1312	
180-5172-8	CH-2011-MU2-COMP	SPLP	Sediment	1312	
180-5219-A-1-H MS	Matrix Spike	SPLP	Sediment	1312	
180-5219-A-1-I MSD	Matrix Spike Duplicate	SPLP	Sediment	1312	
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	1312	
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	1312	

Prep Batch: 21648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP	Sediment	9012A	21620
180-5172-4	CH-2011-MU1-COMP	SPLP	Sediment	9012A	21620
180-5172-5	CH-2011-MU2-G1	SPLP	Sediment	9012A	21620
180-5172-8	CH-2011-MU2-COMP	SPLP	Sediment	9012A	21620
240-5399-D-40-B MS	Matrix Spike	SPLP	Sediment	9012A	
240-5399-D-40-C MSD	Matrix Spike Duplicate	SPLP	Sediment	9012A	
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	9012A	21620
LCS 240-21648/2-A	Lab Control Sample	Total/NA	Sediment	9012A	
MB 240-21648/1-A	Method Blank	Total/NA	Sediment	9012A	

Analysis Batch: 21689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP	Sediment	9012A	21648
180-5172-4	CH-2011-MU1-COMP	SPLP	Sediment	9012A	21648
180-5172-5	CH-2011-MU2-G1	SPLP	Sediment	9012A	21648
180-5172-8	CH-2011-MU2-COMP	SPLP	Sediment	9012A	21648
240-5399-D-40-B MS	Matrix Spike	SPLP	Sediment	9012A	21648
240-5399-D-40-C MSD	Matrix Spike Duplicate	SPLP	Sediment	9012A	21648
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	9012A	21648
LCS 240-21648/2-A	Lab Control Sample	Total/NA	Sediment	9012A	21648
MB 240-21648/1-A	Method Blank	Total/NA	Sediment	9012A	21648
MRL 240-21689/6 MRL	Lab Control Sample	Total/NA	Sediment	9012A	

Prep Batch: 21848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP	Sediment	Distill/CN	21620
180-5172-4	CH-2011-MU1-COMP	SPLP	Sediment	Distill/CN	21620
180-5172-5	CH-2011-MU2-G1	SPLP	Sediment	Distill/CN	21620
180-5172-8	CH-2011-MU2-COMP	SPLP	Sediment	Distill/CN	21620
180-5219-A-1-H MS	Matrix Spike	SPLP	Sediment	Distill/CN	21620
180-5219-A-1-I MSD	Matrix Spike Duplicate	SPLP	Sediment	Distill/CN	21620
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	Distill/CN	21620
LCS 240-21848/1-A	Lab Control Sample	Total/NA	Sediment	Distill/CN	
MB 240-21848/2-A	Method Blank	Total/NA	Sediment	Distill/CN	
MB 240-21848/3-A	Method Blank	Total/NA	Sediment	Distill/CN	

General Chemistry (Continued)

Analysis Batch: 21886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP	Sediment	335.1	21848
180-5172-4	CH-2011-MU1-COMP	SPLP	Sediment	335.1	21848
180-5172-5	CH-2011-MU2-G1	SPLP	Sediment	335.1	21848
180-5172-8	CH-2011-MU2-COMP	SPLP	Sediment	335.1	21848
180-5219-A-1-H MS	Matrix Spike	SPLP	Sediment	335.1	21848
180-5219-A-1-I MSD	Matrix Spike Duplicate	SPLP	Sediment	335.1	21848
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	335.1	21848
LCS 240-21848/1-A	Lab Control Sample	Total/NA	Sediment	335.1	21848
MB 240-21848/2-A	Method Blank	Total/NA	Sediment	335.1	21848
MB 240-21848/3-A	Method Blank	Total/NA	Sediment	335.1	21848
MRL 240-21886/6 MRL	Lab Control Sample	Total/NA	Sediment	335.1	

Prep Batch: 21974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	9012A	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	9012A	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	9012A	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	9012A	
240-5342-N-8-C MS	Matrix Spike	Total/NA	Sediment	Distill/CN	
240-5342-N-8-D MSD	Matrix Spike Duplicate	Total/NA	Sediment	Distill/CN	
LCS 240-21974/2-A	Lab Control Sample	Total/NA	Sediment	Distill/CN	
MB 240-21974/1-A	Method Blank	Total/NA	Sediment	9012A	

Prep Batch: 22002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	Distill/CN	
180-5172-1 MS	CH-2011-MU1-G1	Total/NA	Sediment	Distill/CN	
180-5172-1 MSD	CH-2011-MU1-G1	Total/NA	Sediment	Distill/CN	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	Distill/CN	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	Distill/CN	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	Distill/CN	
LCS 240-22002/3-A	Lab Control Sample	Total/NA	Sediment	Distill/CN	
MB 240-22002/13-A	Method Blank	Total/NA	Sediment	Distill/CN	
MB 240-22002/2-A	Method Blank	Total/NA	Sediment	Distill/CN	

Analysis Batch: 22036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	9012A	21974
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	9012A	21974
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	9012A	21974
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	9012A	21974
240-5342-N-8-C MS	Matrix Spike	Total/NA	Sediment	335.1	21974
240-5342-N-8-D MSD	Matrix Spike Duplicate	Total/NA	Sediment	335.1	21974
LCS 240-21974/2-A	Lab Control Sample	Total/NA	Sediment	335.1	21974
MB 240-21974/1-A	Method Blank	Total/NA	Sediment	9012A	21974
MRL 240-22036/6 MRL	Lab Control Sample	Total/NA	Sediment	9012A	

Analysis Batch: 22037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	335.1	22002
180-5172-1 MS	CH-2011-MU1-G1	Total/NA	Sediment	335.1	22002
180-5172-1 MSD	CH-2011-MU1-G1	Total/NA	Sediment	335.1	22002

General Chemistry (Continued)

Analysis Batch: 22037 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	335.1	22002
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	335.1	22002
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	335.1	22002
LCS 240-22002/3-A	Lab Control Sample	Total/NA	Sediment	335.1	22002
MB 240-22002/13-A	Method Blank	Total/NA	Sediment	335.1	22002
MB 240-22002/2-A	Method Blank	Total/NA	Sediment	335.1	22002
MRL 240-22037/6 MRL	Lab Control Sample	Total/NA	Sediment	335.1	

Prep Batch: 22389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	9012A	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	9012A	
240-5513-E-5-F MS	Matrix Spike	Total/NA	Sediment	9012A	
240-5513-E-5-G MSD	Matrix Spike Duplicate	Total/NA	Sediment	9012A	
LCS 240-22389/2-A	Lab Control Sample	Total/NA	Sediment	9012A	
MB 240-22389/1-A	Method Blank	Total/NA	Sediment	9012A	

Analysis Batch: 22592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	9012A	22389
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	9012A	22389
240-5513-E-5-F MS	Matrix Spike	Total/NA	Sediment	9012A	22389
240-5513-E-5-G MSD	Matrix Spike Duplicate	Total/NA	Sediment	9012A	22389
LCS 240-22389/2-A	Lab Control Sample	Total/NA	Sediment	9012A	22389
MB 240-22389/1-A	Method Blank	Total/NA	Sediment	9012A	22389
MRL 240-22592/6 MRL	Lab Control Sample	Total/NA	Sediment	9012A	

Prep Batch: 22720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	365.2/365.3/365	
180-5172-1 MS	CH-2011-MU1-G1	Total/NA	Sediment	365.2/365.3/365	
180-5172-1 MSD	CH-2011-MU1-G1	Total/NA	Sediment	365.2/365.3/365	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	365.2/365.3/365	
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	365.2/365.3/365	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	365.2/365.3/365	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	365.2/365.3/365	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	365.2/365.3/365	
LCS 240-22720/11-A	Lab Control Sample	Total/NA	Sediment	365.2/365.3/365	
MB 240-22720/10-A	Method Blank	Total/NA	Sediment	365.2/365.3/365	

Analysis Batch: 22782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	365.1	22720
180-5172-1 MS	CH-2011-MU1-G1	Total/NA	Sediment	365.1	22720
180-5172-1 MSD	CH-2011-MU1-G1	Total/NA	Sediment	365.1	22720
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	365.1	22720
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	365.1	22720
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	365.1	22720
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	365.1	22720
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	365.1	22720
LCS 240-22720/11-A	Lab Control Sample	Total/NA	Sediment	365.1	22720
MB 240-22720/10-A	Method Blank	Total/NA	Sediment	365.1	22720

General Chemistry (Continued)

Prep Batch: 23169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	Distill/CN	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	Distill/CN	
180-5172-5 MS	CH-2011-MU2-G1	Total/NA	Sediment	Distill/CN	
180-5172-5 MSD	CH-2011-MU2-G1	Total/NA	Sediment	Distill/CN	
LCS 240-23169/1-A	Lab Control Sample	Total/NA	Sediment	Distill/CN	
MB 240-23169/2-A	Method Blank	Total/NA	Sediment	Distill/CN	
MB 240-23169/3-A	Method Blank	Total/NA	Sediment	Distill/CN	

Analysis Batch: 23214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	335.1	23169
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	335.1	23169
180-5172-5 MS	CH-2011-MU2-G1	Total/NA	Sediment	335.1	23169
180-5172-5 MSD	CH-2011-MU2-G1	Total/NA	Sediment	335.1	23169
LCS 240-23169/1-A	Lab Control Sample	Total/NA	Sediment	335.1	23169
MB 240-23169/2-A	Method Blank	Total/NA	Sediment	335.1	23169
MB 240-23169/3-A	Method Blank	Total/NA	Sediment	335.1	23169

Analysis Batch: 23216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	Total/NA	Sediment	9012A	
180-5172-5	CH-2011-MU2-G1	Total/NA	Sediment	9012A	

Analysis Batch: 23970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-1	CH-2011-MU1-G1	Total/NA	Sediment	9012A	
180-5172-2	CH-2011-MU1-G2	Total/NA	Sediment	9012A	
180-5172-6	CH-2011-MU2-G2	Total/NA	Sediment	9012A	
180-5172-7	CH-2011-MU2-G3	Total/NA	Sediment	9012A	

Analysis Batch: 23974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-3	CH-2011-MU1-G3	SPLP	Sediment	9012A	
180-5172-4	CH-2011-MU1-COMP	SPLP	Sediment	9012A	
180-5172-5	CH-2011-MU2-G1	SPLP	Sediment	9012A	
180-5172-8	CH-2011-MU2-COMP	SPLP	Sediment	9012A	

Organic Prep

Analysis Batch: 18631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-4	CH-2011-MU1-COMP	Total/NA	Sediment	35 ILL C-395	
180-5172-8	CH-2011-MU2-COMP	Total/NA	Sediment	35 ILL C-395	

Analysis Batch: 18930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-12	CH-2011-MU1-COMP	Total/NA	Sediment	35 ILL C-395	
180-5172-13	CH-2011-MU2-COMP	Total/NA	Sediment	35 ILL C-395	

0,5 #2 180- 5172

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

5/15/2012

Client Contact			
Company Name: Future Net Group, Inc	Client Project Manager: Dr. Ethi Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn Street	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email:		
Phone: (313) 544-7117			
Project Name: H6 Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-001	Shipping/Tracking No:		
PO#			

COC No: 1 of 1 COCs

Analysis Turnaround Time (in BUS days)
TAT if different from below _____
☒ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

For lab use only
Walk-in client ☐
Lab pickup ☐
Lab sampling ☐
Job/SDG No:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/Grab=G	Bulk Chemistry	VOC	SPLP	Grain Size	E Leachate	Sample Specific Notes / Special Instructions:
CH-2011-MU1-G1	10/21	10:00			X										N		X	X	X	X		
CH-2011-MU1-G2	"	11:00			X															X		
CH-2011-MU1-G3	"	11:30			X														X	X		
CH-2011-MU1-Comp	"	11:30		X	X														X		X	
CH-2011-MU2-G1	"	1:15			X														X	X		
CH-2011-MU2-G2	"	3:30			X															X		
CH-2011-MU2-G3	"	5:10			X															X		
CH-2011-MU2-Comp	"	5:10		X	"														X		X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
See the SOW for complete analysis required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ethi Al-Saffar	FNG	10/21 7:00pm	Delilue Watson	TA-Pitt	10-22-11 9:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

0.5 #2

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

5/15/2012

Client Contact			
Company Name: Future Note Group, Inc	Client Project Manager: Dr. Adli Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn Street	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email:		
Phone: (313) 544-7117			
Project Name: HG Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-004	Shipping/Tracking No:		
PO#			

COC No: 9
1 of 1 COCs

Analysis Turnaround Time (In BUS days)
TAT if different from below _____
☒ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

For lab use only
Walk-in client ☐
Lab pickup ☐
Lab sampling ☐
Job/SDG No. ☐

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/Grab=G	Analyses: Bulk Chemistry	VOC	SPLP	Grain Size	Elutriate	Sample Specific Notes / Special Instructions:
CH-2011-MU1-G1	10/21	10:00			X										N		X	X	X	X		
CH-2011-MU1-G2	"	11:00			X															X		
CH-2011-MU1-G3	"	11:30			X														X	X		
CH-2011-MU1-comp	"	11:30		X	X													X	X		X	
CH-2011-MU2-G1	"	1:15			X														X	X		
CH-2011-MU2-G2	"	3:30			X															X		
CH-2011-MU2-G3	"	5:10			X															X		
CH-2011-MU2-comp	"	5:10		X	"													X	X		X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
See the SOW for complete analysis required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Adli Al-Saffar	FNG	10/21 7:00PM	Deliluc Watson	TA Dirt	10-22-11 9:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-0018 (1008)

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.05 #1 .06 #2
.10 #1 .12 #1
.07 #1 .05 #2
.03 #2

Reed Broken
2 Jars — 11.80
Gallon Seal Jars

ORIGIN ID: JOTA (313) 544-7117
FUTURENET GROUP, INC.
12801 AUBURN ST
DETROIT, MI 482233413
UNITED STATES US

SHIP DATE: 21OCT11
ACTWGT: 90.4 LB
CAD: /OFFC1242
DIMS: 15x16 IN
BILL

Part # 156397-4

TO SAMPLE RECIEVING
TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 860-1408
REF:
INV:
PO:
DEPT:

RT 639 ST F1

FedEx Express
E

J112011080G0126

3 of 7
MPS# 0681 7955 4131 4453
Mstr# 8741 9090 2366
0200

SATURDAY ### A2
PRIORITY OVERNIGHT

XO AGCA

15238
PA-US PIT

ENVIRONMENTAL TESTING
10175

FedEx. US Airbill Express

FedEx Tracking Number 8741 9090 2366

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 10/21/2011 Sender's FedEx Account Number 427870103

Sender's Name Ali Al Saffar Phone 313 544-7117

Company FutureNet Group, Inc.

Address 12801 Auburn Dept./Floor/Suite/Room

City Detroit State MI ZIP 48223

2 Your Internal Billing Reference 11655-004

3 To

Recipient's Name Sample Recieving Phone 412 963-7058

Company Test America

Address 301 Alpha Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address RIDC Park

Use this line for the HOLD location address or for continuation of your shipping address.

City Pittsburg State PA ZIP 15238

01 ☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4a Express Package Service * To most locations. *Packages up to 150 lbs.*

01 ☒ FedEx Priority Overnight Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight Next business afternoon.* Saturday Delivery NOT available.

06 ☐ FedEx First Overnight Earliest next business morning delivery to select locations.*

03 ☐ FedEx 2Day Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. *Packages over 150 lbs.*

70 ☐ FedEx 1Day Freight Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.

80 ☐ FedEx 2Day Freight Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

83 ☐ FedEx 3Day Freight Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 07 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☒ **SATURDAY DELIVERY**

☐ No Signature Required Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. 06 ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

01 ☒ Sender Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

Total Packages 1 Total Weight 00113 lbs. Credit Card Auth.

*Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

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Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5172-1

Login Number: 5172
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	RECEIVED BROKEN 2-1GALLON JUGS FOR CH-2011-MU1-COMP 05:30
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5172-1

Login Number: 5172
List Number: 1
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 10/28/11 01:01 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5172-1

Login Number: 5172
List Number: 2
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 11/02/11 12:31 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5172-1

Login Number: 5172
List Number: 3
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 11/02/11 01:31 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-5048-1
Client Project/Site: Calument Harbor
Revision: 3

For:
FutureNet Group, Inc
12801 Auburn Street
Detroit, Michigan 48223

Attn: Jim Finetti

Authorized for release by:
5/15/2012 5:04:45 PM

Carrie Gamber
Customer Service Manager
carrie.gamber@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 180-5048-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-5048-1 Revised

NOTE: This revised report reflects the correct reporting units for the non-amenable cyanide for the sediments.

NOTE: This revision reports all fractions of amenable cyanide.

NOTE: This revised report contains the TIC compound DMF.

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
The laboratory control sample duplicate (LCSD) for batch 18133 exceeded control limits for the several analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Several samples were analyzed at a dilution due to the sample matrix.

Several compounds recovered outside QC limits in the matrix spike and matrix spike duplicate.

No other analytical or quality issues were noted.

GC Semi VOA
Several compounds recovered outside QC limits in the matrix spike and matrix spike duplicate.

No other analytical or quality issues were noted.

Metals
The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 18624 were outside control limits for copper, antimony, and zinc: CH-2011-MU3-G1 (180-5048-1). The associated laboratory control sample (LCS) recovery met acceptance criteria.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

No other analytical or quality issues were noted.

General Chemistry
Several samples were analyzed at a dilution for total phosphorus.

The matrix spikes recovered low outside QC limits for the non-amenable cyanide.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HF	Field parameter with a holding time of 15 minutes
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
TestAmerica Pittsburgh	California	NELAC	9	4224CA
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	L-A-B	DoD ELAP		L2314
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAC	1	203011
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	New York	NELAC	2	11182
TestAmerica Pittsburgh	North Carolina DENR	State Program	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	Federal		P330-10-00139
TestAmerica Pittsburgh	USDA	Federal		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia DEP	State Program	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sample Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-5048-1	CH-2011-MU3-G1	Sediment	10/18/11 12:00	10/19/11 10:00
180-5048-2	CH-2011-MU3-G2	Sediment	10/18/11 15:00	10/19/11 10:00
180-5048-3	CH-2011-MU3-G3	Sediment	10/18/11 16:00	10/19/11 10:00
180-5048-5	CH-2011-MU3-COMP	Sediment	10/18/11 16:00	10/19/11 10:00
180-5048-6	CH-2011-MU3-COMP	SET, Dissolved	10/26/11 15:00	10/26/11 16:15

Method Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL PIT
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	TAL PIT
8081A	Organochlorine Pesticides (GC)	SW846	TAL PIT
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
8151A	Herbicides (GC)	SW846	TAL PIT
6010B	Metals (ICP)	SW846	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
7471A	Mercury (CVAA)	SW846	TAL PIT
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
335.1	Cyanide, Amenable	MCAWW	TAL NC
350.1	Nitrogen, Ammonia	MCAWW	TAL PIT
365.1	Phosphorus, Total	EPA	TAL NC
7196A	Chromium, Hexavalent	SW846	TAL PIT
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9012A	Cyanide, Amenable	SW846	TAL NC
9040B	pH	SW846	TAL PIT
Moisture	Percent Moisture	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
35 ILL C-395	Illinois Elutriate Test	ILL-EPA	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

ILL-EPA = Illinois Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G1

Date Collected: 10/18/11 12:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-1

Matrix: Sediment
Percent Solids: 54.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		8.6	0.80	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Bromomethane	ND		8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Chloroethane	ND		8.6	2.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Trichlorofluoromethane	ND		8.6	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,1-Dichloroethene	ND		8.6	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Acetone	ND		34	8.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Carbon disulfide	ND		8.6	0.88	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Methylene Chloride	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
trans-1,2-Dichloroethene	ND		8.6	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Methyl tert-butyl ether	ND		8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,1-Dichloroethane	ND		8.6	0.98	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
cis-1,2-Dichloroethene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
2-Butanone (MEK)	ND		8.6	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Chloroform	ND		8.6	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,1,1-Trichloroethane	ND		8.6	0.83	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Carbon tetrachloride	ND		8.6	0.76	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Benzene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2-Dichloroethane	ND		8.6	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Trichloroethene	ND		8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2-Dichloropropane	ND		8.6	0.93	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Bromodichloromethane	ND		8.6	0.96	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
4-Methyl-2-pentanone (MIBK)	ND		8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Toluene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,1,2-Trichloroethane	ND		8.6	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Tetrachloroethene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Dibromochloromethane	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2-Dibromoethane	ND		8.6	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Chlorobenzene	ND		8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,1,1,2-Tetrachloroethane	ND		8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Ethylbenzene	ND		8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
m-Xylene & p-Xylene	ND		17	2.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
o-Xylene	ND		8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Xylenes, Total	ND		26	3.8	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Styrene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Bromoform	ND		8.6	0.76	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Isopropylbenzene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
N-Propylbenzene	ND	*	8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,1,2,2-Tetrachloroethane	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,3,5-Trimethylbenzene	ND		8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2,4-Trimethylbenzene	ND		8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,3-Dichlorobenzene	ND	*	8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,4-Dichlorobenzene	ND	*	8.6	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2-Dichlorobenzene	ND		8.6	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2-Dibromo-3-Chloropropane	ND		8.6	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
1,2,4-Trichlorobenzene	ND		8.6	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Hexachlorobutadiene	ND		8.6	1.9	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Cyclohexane	ND		8.6	0.64	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Acrolein	ND		170	12	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Vinyl acetate	ND		8.6	0.61	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
n-Butyl alcohol	ND		340	56	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
Hexane	ND		8.6	1.7	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G1

Date Collected: 10/18/11 12:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-1

Matrix: Sediment
Percent Solids: 54.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		8.6	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1
trans-1,3-Dichloropropene	ND		8.6	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*70*		*52 - 124*	*10/20/11 10:41*	*10/20/11 18:31*	*1*
Toluene-d8 (Surr)	*99*		*72 - 127*	*10/20/11 10:41*	*10/20/11 18:31*	*1*
4-Bromofluorobenzene (Surr)	*82*		*63 - 120*	*10/20/11 10:41*	*10/20/11 18:31*	*1*
Dibromofluoromethane (Surr)	*87*		*68 - 121*	*10/20/11 10:41*	*10/20/11 18:31*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**78**		61	5.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Acenaphthylene	**47**	**J**	61	7.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Anthracene	**190**		61	6.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Atrazine	ND		300	30	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Benzo[a]anthracene	**460**		61	7.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Benzo[b]fluoranthene	**480**		61	9.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Benzo[k]fluoranthene	**250**		61	12	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Benzo[a]pyrene	**500**		61	6.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Bis(2-chloroethyl)ether	ND		61	8.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Bis(2-ethylhexyl) phthalate	**240**	**J**	610	49	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Butyl benzyl phthalate	ND		300	42	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Carbazole	**45**	**J**	61	5.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Chrysene	**490**		61	7.3	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2-Chloronaphthalene	ND		61	6.4	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2-Chlorophenol	ND		300	25	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,4-Dichlorophenol	ND		61	6.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,4-Dimethylphenol	ND		300	48	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,4-Dinitrophenol	ND		1600	360	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,4-Dinitrotoluene	ND		300	25	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,6-Dinitrotoluene	ND		300	31	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2-Methylnaphthalene	**57**	**J**	61	5.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2-Methylphenol	ND		300	21	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2-Nitroaniline	ND		1600	140	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,2'-oxybis[1-chloropropane]	ND		61	6.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,4,5-Trichlorophenol	ND		300	33	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
2,4,6-Trichlorophenol	ND		300	46	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Methylphenol, 3 & 4	**57**	**J**	300	30	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
4-Chloroaniline	ND		300	24	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Dibenz(a,h)anthracene	**81**		61	6.8	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Dibenzofuran	**53**	**J**	300	30	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Di-n-butyl phthalate	ND		300	38	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Diethyl phthalate	ND		300	33	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Dimethyl phthalate	ND		300	33	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Di-n-octyl phthalate	ND		300	32	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
3,3'-Dichlorobenzidine	ND		300	32	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Fluoranthene	**860**		61	6.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Fluorene	**100**		61	8.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Hexachlorobenzene	ND		61	6.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Hexachlorocyclopentadiene	ND		300	33	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Hexachloroethane	ND		300	22	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10

Client Sample ID: CH-2011-MU3-G1

Date Collected: 10/18/11 12:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-1

Matrix: Sediment
Percent Solids: 54.5

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**250**		61	6.3	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Isophorone	ND		300	23	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Naphthalene	**66**		61	5.3	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Nitrobenzene	ND		610	25	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
N-Nitrosodiphenylamine	ND		300	28	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
N-Nitrosodi-n-propylamine	ND		61	7.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Pyrene	**790**		61	6.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Phenol	ND		61	7.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Phenanthrene	**590**		61	9.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Pentachlorophenol	ND		300	27	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Benzyl alcohol	ND		300	37	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10
Benzoic acid	ND		1600	130	ug/Kg	☼	10/25/11 04:15	10/25/11 18:00	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*None*		*ug/Kg*	☼		*68-12-2*	*10/25/11 04:15*	*10/25/11 18:00*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*67*		*21 - 116*	*10/25/11 04:15*	*10/25/11 18:00*	*10*
2-Fluorophenol	*46*		*28 - 107*	*10/25/11 04:15*	*10/25/11 18:00*	*10*
Phenol-d5	*64*		*30 - 112*	*10/25/11 04:15*	*10/25/11 18:00*	*10*
Nitrobenzene-d5	*51*		*27 - 110*	*10/25/11 04:15*	*10/25/11 18:00*	*10*
2-Fluorobiphenyl	*51*		*28 - 108*	*10/25/11 04:15*	*10/25/11 18:00*	*10*
Terphenyl-d14	*69*		*21 - 130*	*10/25/11 04:15*	*10/25/11 18:00*	*10*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		180	180	mg/Kg	☼	10/30/11 13:42	10/30/11 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*58*		*40 - 140*	*10/30/11 13:42*	*10/30/11 16:25*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.5	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
alpha-BHC	ND		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
alpha-Chlordane	ND		1.5	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
beta-BHC	ND		1.5	0.39	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
2,4'-DDD	**3.5**		1.5	0.091	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
2,4'-DDE	ND		1.5	0.14	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
2,4'-DDT	ND		1.5	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
4,4'-DDD	**3.1**	**p**	1.5	0.20	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
4,4'-DDE	**4.4**		1.5	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
4,4'-DDT	ND		1.5	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Chlordane (technical)	ND		15	0.67	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Dieldrin	ND		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Endosulfan I	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Endosulfan II	ND		1.5	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Endosulfan sulfate	ND		1.5	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Endrin	ND		1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Endrin aldehyde	ND		1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Endrin ketone	ND		1.5	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
gamma-BHC (Lindane)	**3.0**		1.5	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G1

Date Collected: 10/18/11 12:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-1

Matrix: Sediment
Percent Solids: 54.5

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		1.5	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Heptachlor	ND		1.5	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Heptachlor epoxide	**0.38**	**J p**	1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Methoxychlor	**2.3**	**J**	3.0	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1
Toxaphene	ND		61	10	ug/Kg	☼	10/31/11 04:38	11/03/11 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*82*		*45 - 130*	*10/31/11 04:38*	*11/03/11 13:13*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*45 - 130*	*10/31/11 04:38*	*11/03/11 13:13*	*1*
Tetrachloro-m-xylene	*58*		*45 - 130*	*10/31/11 04:38*	*11/03/11 13:13*	*1*
Tetrachloro-m-xylene	*63*		*45 - 130*	*10/31/11 04:38*	*11/03/11 13:13*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**19**		15	2.2	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
PCB-1221	ND		15	2.9	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
PCB-1232	ND		15	2.6	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
PCB-1242	ND		15	2.5	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
PCB-1248	ND		15	1.4	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
PCB-1254	**38**		15	2.1	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
PCB-1260	ND		15	2.1	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1
Polychlorinated biphenyls, Total	**57**		15	3.3	ug/Kg	☼	10/31/11 04:38	11/08/11 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*35 - 140*	*10/31/11 04:38*	*11/08/11 21:56*	*1*
DCB Decachlorobiphenyl (Surr)	*91*		*35 - 140*	*10/31/11 04:38*	*11/08/11 21:56*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		37	4.6	ug/Kg	☼	10/21/11 04:22	10/26/11 23:58	20
2,4-D	ND		150	10	ug/Kg	☼	10/21/11 04:22	10/26/11 23:58	20
Dalapon	ND		160	13	ug/Kg	☼	10/21/11 04:22	10/26/11 23:58	20
Dinoseb	ND		22	8.3	ug/Kg	☼	10/21/11 04:22	10/26/11 23:58	20
Silvex (2,4,5-TP)	ND		37	3.8	ug/Kg	☼	10/21/11 04:22	10/26/11 23:58	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*58*		*42 - 140*	*10/21/11 04:22*	*10/26/11 23:58*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.14**		0.089	0.0035	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Arsenic	**5.8**		0.089	0.016	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Boron	**13**	**B**	0.45	0.033	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Barium	**27**		0.89	0.0095	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Beryllium	**0.41**		0.089	0.0067	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Calcium	**79000**		8.9	1.2	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Cadmium	**0.54**		0.089	0.0062	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Cobalt	**7.2**		0.045	0.0013	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Chromium	**21**	**B**	0.18	0.0054	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Copper	**26**		0.18	0.029	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Iron	**18000**	**B**	4.5	0.32	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Potassium	**1500**		8.9	1.2	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1

Client Sample ID: CH-2011-MU3-G1

Lab Sample ID: 180-5048-1
Date Collected: 10/18/11 12:00
Matrix: Sediment
Date Received: 10/19/11 10:00
Percent Solids: 54.5

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	40000	B	8.9	0.17	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Manganese	540		0.45	0.0092	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Sodium	170		8.9	1.2	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Nickel	16		0.089	0.010	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Lead	37	B	0.089	0.0034	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Antimony	0.33	B	0.18	0.0023	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Selenium	0.51		0.45	0.045	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Thallium	0.31		0.089	0.0018	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Vanadium	21	B	0.089	0.0070	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1
Zinc	96		0.45	0.058	mg/Kg	☼	10/26/11 09:54	11/08/11 21:43	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.077		0.030	0.010	mg/Kg	☼	10/28/11 03:39	10/28/11 08:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	1.6	B	0.87	0.17	mg/Kg	☼	10/27/11 11:39	10/27/11 14:21	1
Total Phosphate	180		94	0.93	mg/Kg	☼	11/10/11 08:45	11/10/11 14:34	5
Cr (VI)	ND		0.74	0.19	mg/Kg	☼	10/22/11 10:00	10/23/11 13:57	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/27/11 14:21	1
Cyanide, Total	0.46	J	0.95	0.19	mg/Kg	☼	10/27/11 11:39	10/27/11 14:13	1
Percent Moisture	46		0.10	0.10	%			10/19/11 16:53	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.55	J B	0.92	0.12	mg/Kg	☼		10/20/11 18:54	1
Fluoride	7.3	B	0.92	0.28	mg/Kg	☼		10/20/11 18:54	1
Chloride	18		18	4.0	mg/Kg	☼		10/20/11 18:54	1
Sulfate	56		18	2.2	mg/Kg	☼		10/20/11 18:54	1

Client Sample ID: CH-2011-MU3-G2

Lab Sample ID: 180-5048-2
Date Collected: 10/18/11 15:00
Matrix: Sediment
Date Received: 10/19/11 10:00
Percent Solids: 56.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		8.8	0.83	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Bromomethane	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Chloroethane	ND		8.8	2.7	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Trichlorofluoromethane	ND		8.8	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,1-Dichloroethene	ND		8.8	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Acetone	18	J	35	8.8	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Carbon disulfide	ND		8.8	0.90	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Methylene Chloride	4.5	J B	8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
trans-1,2-Dichloroethene	ND		8.8	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Methyl tert-butyl ether	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,1-Dichloroethane	ND		8.8	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
cis-1,2-Dichloroethene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
2-Butanone (MEK)	ND		8.8	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Chloroform	ND		8.8	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,1,1-Trichloroethane	ND		8.8	0.86	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G2
Date Collected: 10/18/11 15:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-2
Matrix: Sediment
Percent Solids: 56.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		8.8	0.79	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Benzene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2-Dichloroethane	ND		8.8	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Trichloroethene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2-Dichloropropane	ND		8.8	0.96	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Bromodichloromethane	ND		8.8	0.99	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
4-Methyl-2-pentanone (MIBK)	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Toluene	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,1,2-Trichloroethane	ND		8.8	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Tetrachloroethene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Dibromochloromethane	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2-Dibromoethane	ND		8.8	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Chlorobenzene	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,1,1,2-Tetrachloroethane	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Ethylbenzene	ND		8.8	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
m-Xylene & p-Xylene	ND		18	2.6	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
o-Xylene	ND		8.8	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Xylenes, Total	ND		27	4.0	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Styrene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Bromoform	ND		8.8	0.78	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Isopropylbenzene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
N-Propylbenzene	ND	*	8.8	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,1,2,2-Tetrachloroethane	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,3,5-Trimethylbenzene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2,4-Trimethylbenzene	ND		8.8	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,3-Dichlorobenzene	ND	*	8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,4-Dichlorobenzene	ND	*	8.8	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2-Dichlorobenzene	ND		8.8	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2-Dibromo-3-Chloropropane	ND		8.8	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
1,2,4-Trichlorobenzene	ND		8.8	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Hexachlorobutadiene	ND		8.8	2.0	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Cyclohexane	ND		8.8	0.66	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Acrolein	ND		180	12	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Vinyl acetate	ND		8.8	0.62	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
n-Butyl alcohol	ND		350	58	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
Hexane	ND		8.8	1.8	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
cis-1,3-Dichloropropene	ND		8.8	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1
trans-1,3-Dichloropropene	ND		8.8	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*69*		*52 - 124*	*10/20/11 10:41*	*10/20/11 17:45*	*1*
Toluene-d8 (Surr)	*106*		*72 - 127*	*10/20/11 10:41*	*10/20/11 17:45*	*1*
4-Bromofluorobenzene (Surr)	*83*		*63 - 120*	*10/20/11 10:41*	*10/20/11 17:45*	*1*
Dibromofluoromethane (Surr)	*92*		*68 - 121*	*10/20/11 10:41*	*10/20/11 17:45*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**72**		29	2.8	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Acenaphthylene	**42**		29	3.3	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Anthracene	**140**		29	2.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Atrazine	ND		140	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G2

Date Collected: 10/18/11 15:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-2

Matrix: Sediment
Percent Solids: 56.7

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**420**		29	3.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Benzo[b]fluoranthene	**420**		29	4.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Benzo[k]fluoranthene	**250**		29	5.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Benzo[a]pyrene	**460**		29	2.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Bis(2-chloroethyl)ether	ND		29	3.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Bis(2-ethylhexyl) phthalate	**99**	**J**	290	24	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Butyl benzyl phthalate	ND		140	20	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Carbazole	**38**		29	2.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Chrysene	**440**		29	3.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2-Chloronaphthalene	ND		29	3.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2-Chlorophenol	ND		140	12	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,4-Dichlorophenol	ND		29	2.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,4-Dimethylphenol	ND		140	23	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,4-Dinitrophenol	ND		750	170	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,4-Dinitrotoluene	ND		140	12	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,6-Dinitrotoluene	ND		140	15	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2-Methylnaphthalene	**34**		29	2.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2-Methylphenol	ND		140	10	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2-Nitroaniline	ND		750	65	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,2'-oxybis[1-chloropropane]	ND		29	3.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,4,5-Trichlorophenol	ND		140	16	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
2,4,6-Trichlorophenol	ND		140	22	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Methylphenol, 3 & 4	ND		140	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
4-Chloroaniline	ND		140	12	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Dibenz(a,h)anthracene	**84**		29	3.3	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Dibenzofuran	**40**	**J**	140	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Di-n-butyl phthalate	ND		140	18	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Diethyl phthalate	ND		140	16	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Dimethyl phthalate	ND		140	16	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Di-n-octyl phthalate	ND		140	15	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
3,3'-Dichlorobenzidine	ND		140	15	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Fluoranthene	**750**		29	3.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Fluorene	**76**		29	3.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Hexachlorobenzene	ND		29	3.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Hexachlorocyclopentadiene	ND		140	16	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Hexachloroethane	ND		140	11	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Indeno[1,2,3-cd]pyrene	**230**		29	3.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Isophorone	ND		140	11	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Naphthalene	**45**		29	2.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Nitrobenzene	ND		290	12	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
N-Nitrosodiphenylamine	ND		140	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
N-Nitrosodi-n-propylamine	ND		29	3.4	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Pyrene	**730**		29	3.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Phenol	ND		29	3.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Phenanthrene	**530**		29	4.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Pentachlorophenol	ND		140	13	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Benzyl alcohol	ND		140	18	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5
Benzoic acid	ND		750	61	ug/Kg	☼	10/25/11 04:15	10/25/11 18:40	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*None*		*ug/Kg*	☼		*68-12-2*	*10/25/11 04:15*	*10/25/11 18:40*	*5*

Client Sample ID: CH-2011-MU3-G2

Date Collected: 10/18/11 15:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-2

Matrix: Sediment
Percent Solids: 56.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	84		21 - 116	10/25/11 04:15	10/25/11 18:40	5
2-Fluorophenol	72		28 - 107	10/25/11 04:15	10/25/11 18:40	5
Phenol-d5	83		30 - 112	10/25/11 04:15	10/25/11 18:40	5
Nitrobenzene-d5	67		27 - 110	10/25/11 04:15	10/25/11 18:40	5
2-Fluorobiphenyl	70		28 - 108	10/25/11 04:15	10/25/11 18:40	5
Terphenyl-d14	70		21 - 130	10/25/11 04:15	10/25/11 18:40	5

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		180	180	mg/Kg	☼	10/30/11 13:42	10/30/11 16:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	68		40 - 140	10/30/11 13:42	10/30/11 16:37	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.5	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
alpha-BHC	ND		1.5	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
alpha-Chlordane	ND		1.5	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
beta-BHC	ND		1.5	0.37	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
2,4'-DDD	ND		1.5	0.087	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
2,4'-DDE	ND		1.5	0.13	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
2,4'-DDT	ND		1.5	0.12	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
4,4'-DDD	**2.3**	**p**	1.5	0.19	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
4,4'-DDE	**3.9**		1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
4,4'-DDT	**1.0**	**J p**	1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Chlordane (technical)	ND		15	0.64	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Dieldrin	**0.35**	**J p**	1.5	0.24	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Endosulfan I	ND		1.5	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Endosulfan II	ND		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Endosulfan sulfate	ND		1.5	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Endrin	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Endrin aldehyde	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Endrin ketone	ND		1.5	0.22	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
gamma-BHC (Lindane)	**2.8**		1.5	0.25	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
gamma-Chlordane	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Heptachlor	ND		1.5	0.32	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Heptachlor epoxide	ND		1.5	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Methoxychlor	**1.6**	**J**	2.9	0.30	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1
Toxaphene	ND		58	9.6	ug/Kg	☼	10/31/11 04:38	11/03/11 13:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	76		45 - 130	10/31/11 04:38	11/03/11 13:32	1
DCB Decachlorobiphenyl (Surr)	76		45 - 130	10/31/11 04:38	11/03/11 13:32	1
Tetrachloro-m-xylene	57		45 - 130	10/31/11 04:38	11/03/11 13:32	1
Tetrachloro-m-xylene	60		45 - 130	10/31/11 04:38	11/03/11 13:32	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**22**		14	2.1	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1
PCB-1221	ND		14	2.8	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1
PCB-1232	ND		14	2.5	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1
PCB-1242	ND		14	2.3	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1

Client Sample ID: CH-2011-MU3-G2

Date Collected: 10/18/11 15:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-2

Matrix: Sediment
Percent Solids: 56.7

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		14	1.4	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1
PCB-1254	**31**		14	2.1	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1
PCB-1260	ND		14	2.0	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1
Polychlorinated biphenyls, Total	**53**		14	3.2	ug/Kg	☼	10/31/11 04:38	11/08/11 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*35 - 140*	*10/31/11 04:38*	*11/08/11 22:24*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*35 - 140*	*10/31/11 04:38*	*11/08/11 22:24*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		35	4.4	ug/Kg	☼	10/21/11 04:22	10/27/11 00:22	20
2,4-D	ND		140	9.6	ug/Kg	☼	10/21/11 04:22	10/27/11 00:22	20
Dalapon	ND		160	12	ug/Kg	☼	10/21/11 04:22	10/27/11 00:22	20
Dinoseb	ND		21	8.0	ug/Kg	☼	10/21/11 04:22	10/27/11 00:22	20
Silvex (2,4,5-TP)	ND		35	3.7	ug/Kg	☼	10/21/11 04:22	10/27/11 00:22	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*69*		*42 - 140*	*10/21/11 04:22*	*10/27/11 00:22*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.11**		0.081	0.0032	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Arsenic	**5.7**		0.081	0.015	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Boron	**14**	**B**	0.40	0.030	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Barium	**26**		0.81	0.0087	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Beryllium	**0.40**		0.081	0.0061	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Calcium	**87000**		8.1	1.1	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Cadmium	**0.49**		0.081	0.0057	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Cobalt	**6.5**		0.040	0.0012	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Chromium	**19**	**B**	0.16	0.0049	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Copper	**24**		0.16	0.027	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Iron	**17000**	**B**	4.0	0.29	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Potassium	**1500**		8.1	1.1	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Magnesium	**44000**	**B**	8.1	0.15	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Manganese	**600**		0.40	0.0083	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Sodium	**170**		8.1	1.1	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Nickel	**14**		0.081	0.0091	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Lead	**33**	**B**	0.081	0.0031	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Antimony	**0.27**	**B**	0.16	0.0021	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Selenium	**0.48**		0.40	0.041	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Thallium	**0.30**		0.081	0.0016	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Vanadium	**20**	**B**	0.081	0.0064	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1
Zinc	**85**		0.40	0.052	mg/Kg	☼	10/26/11 09:54	11/08/11 22:04	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.085**		0.029	0.0096	mg/Kg	☼	10/28/11 03:39	10/28/11 08:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**1.5**	**B**	0.85	0.17	mg/Kg	☼	10/27/11 11:39	10/27/11 14:21	1

Client Sample ID: CH-2011-MU3-G2

Lab Sample ID: 180-5048-2

Date Collected: 10/18/11 15:00
Date Received: 10/19/11 10:00

Matrix: Sediment
Percent Solids: 56.7

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphate	**290**		85	0.84	mg/Kg	☼	11/10/11 08:45	11/10/11 14:34	5
Cr (VI)	ND		0.71	0.18	mg/Kg	☼	10/22/11 10:00	10/23/11 13:58	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/27/11 14:21	1
Cyanide, Total	**0.56**	**J**	0.87	0.17	mg/Kg	☼	10/27/11 11:39	10/27/11 14:13	1
Percent Moisture	**43**		0.10	0.10	%			10/19/11 16:53	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.49**	**J B**	0.88	0.11	mg/Kg	☼		10/20/11 19:07	1
Fluoride	**6.2**	**B**	0.88	0.26	mg/Kg	☼		10/20/11 19:07	1
Chloride	**14**	**J**	18	3.9	mg/Kg	☼		10/20/11 19:07	1
Sulfate	**35**		18	2.1	mg/Kg	☼		10/20/11 19:07	1

Client Sample ID: CH-2011-MU3-G3

Lab Sample ID: 180-5048-3

Date Collected: 10/18/11 16:00
Date Received: 10/19/11 10:00

Matrix: Sediment
Percent Solids: 47.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		10	0.98	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Bromomethane	ND		10	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Chloroethane	ND		10	3.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Trichlorofluoromethane	ND		10	1.9	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,1-Dichloroethene	ND		10	1.8	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Acetone	**20**	**J**	42	10	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Carbon disulfide	ND		10	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Methylene Chloride	**1.6**	**J B**	10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
trans-1,2-Dichloroethene	ND		10	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Methyl tert-butyl ether	ND		10	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,1-Dichloroethane	ND		10	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
cis-1,2-Dichloroethene	ND		10	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
2-Butanone (MEK)	ND		10	1.8	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Chloroform	ND		10	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,1,1-Trichloroethane	ND		10	1.0	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Carbon tetrachloride	ND		10	0.93	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Benzene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2-Dichloroethane	ND		10	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Trichloroethene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2-Dichloropropane	ND		10	1.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Bromodichloromethane	ND		10	1.2	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
4-Methyl-2-pentanone (MIBK)	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Toluene	ND		10	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,1,2-Trichloroethane	ND		10	1.7	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Tetrachloroethene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Dibromochloromethane	ND		10	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2-Dibromoethane	ND		10	1.8	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Chlorobenzene	ND		10	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,1,1,2-Tetrachloroethane	ND		10	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Ethylbenzene	ND		10	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
m-Xylene & p-Xylene	ND		21	3.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
o-Xylene	ND		10	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G3

Date Collected: 10/18/11 16:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-3

Matrix: Sediment
Percent Solids: 47.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		31	4.7	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Styrene	ND		10	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Bromoform	ND		10	0.93	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Isopropylbenzene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
N-Propylbenzene	ND	*	10	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,1,2,2-Tetrachloroethane	ND		10	1.5	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,3,5-Trimethylbenzene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2,4-Trimethylbenzene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,3-Dichlorobenzene	ND	*	10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,4-Dichlorobenzene	ND	*	10	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2-Dichlorobenzene	ND		10	1.7	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
1,2,4-Trichlorobenzene	ND		10	1.8	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Hexachlorobutadiene	ND		10	2.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Cyclohexane	ND		10	0.78	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Acrolein	ND		210	15	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Vinyl acetate	ND		10	0.74	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
n-Butyl alcohol	ND		420	69	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
Hexane	ND		10	2.1	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
cis-1,3-Dichloropropene	ND		10	1.4	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1
trans-1,3-Dichloropropene	ND		10	1.3	ug/Kg	☼	10/20/11 10:41	10/20/11 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*52 - 124*	*10/20/11 10:41*	*10/20/11 18:08*	*1*
Toluene-d8 (Surr)	*115*		*72 - 127*	*10/20/11 10:41*	*10/20/11 18:08*	*1*
4-Bromofluorobenzene (Surr)	*73*		*63 - 120*	*10/20/11 10:41*	*10/20/11 18:08*	*1*
Dibromofluoromethane (Surr)	*92*		*68 - 121*	*10/20/11 10:41*	*10/20/11 18:08*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**59**		35	3.4	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Acenaphthylene	**38**		35	4.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Anthracene	**100**		35	3.4	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Atrazine	ND		170	17	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Benzo[a]anthracene	**300**		35	4.4	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Benzo[b]fluoranthene	**380**		35	5.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Benzo[k]fluoranthene	**150**		35	7.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Benzo[a]pyrene	**350**		35	3.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Bis(2-chloroethyl)ether	ND		35	4.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Bis(2-ethylhexyl) phthalate	**97**	**J**	350	28	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Butyl benzyl phthalate	ND		170	24	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Carbazole	**28**	**J**	35	3.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Chrysene	**340**		35	4.2	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2-Chloronaphthalene	ND		35	3.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2-Chlorophenol	ND		170	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,4-Dichlorophenol	ND		35	3.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,4-Dimethylphenol	ND		170	27	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,4-Dinitrophenol	ND		890	210	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,4-Dinitrotoluene	ND		170	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,6-Dinitrotoluene	ND		170	18	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2-Methylnaphthalene	**39**		35	3.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G3

Date Collected: 10/18/11 16:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-3

Matrix: Sediment
Percent Solids: 47.4

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		170	12	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2-Nitroaniline	ND		890	78	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,2'-oxybis[1-chloropropane]	ND		35	3.8	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,4,5-Trichlorophenol	ND		170	19	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
2,4,6-Trichlorophenol	ND		170	26	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Methylphenol, 3 & 4	**25**	**J**	170	17	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
4-Chloroaniline	ND		170	14	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Dibenz(a,h)anthracene	**63**		35	3.9	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Dibenzofuran	**36**	**J**	170	17	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Di-n-butyl phthalate	ND		170	22	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Diethyl phthalate	ND		170	19	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Dimethyl phthalate	ND		170	19	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Di-n-octyl phthalate	ND		170	18	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
3,3'-Dichlorobenzidine	ND		170	18	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Fluoranthene	**560**		35	3.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Fluorene	**59**		35	4.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Hexachlorobenzene	ND		35	3.7	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Hexachlorocyclopentadiene	ND		170	19	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Hexachloroethane	ND		170	13	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Indeno[1,2,3-cd]pyrene	**190**		35	3.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Isophorone	ND		170	13	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Naphthalene	**48**		35	3.0	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Nitrobenzene	ND		350	15	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
N-Nitrosodiphenylamine	ND		170	16	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
N-Nitrosodi-n-propylamine	ND		35	4.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Pyrene	**540**		35	3.5	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Phenol	ND		35	4.1	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Phenanthrene	**390**		35	5.6	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Pentachlorophenol	ND		170	16	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Benzyl alcohol	ND		170	21	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5
Benzoic acid	ND		890	73	ug/Kg	☼	10/25/11 04:15	10/25/11 18:20	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*None*		*ug/Kg*	☼		*68-12-2*	*10/25/11 04:15*	*10/25/11 18:20*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*69*		*21 - 116*	*10/25/11 04:15*	*10/25/11 18:20*	*5*
2-Fluorophenol	*71*		*28 - 107*	*10/25/11 04:15*	*10/25/11 18:20*	*5*
Phenol-d5	*80*		*30 - 112*	*10/25/11 04:15*	*10/25/11 18:20*	*5*
Nitrobenzene-d5	*70*		*27 - 110*	*10/25/11 04:15*	*10/25/11 18:20*	*5*
2-Fluorobiphenyl	*66*		*28 - 108*	*10/25/11 04:15*	*10/25/11 18:20*	*5*
Terphenyl-d14	*63*		*21 - 130*	*10/25/11 04:15*	*10/25/11 18:20*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		210	210	mg/Kg	☼	10/30/11 13:42	10/30/11 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bis (2-ethoxyethyl) ether (Surr)	*65*		*40 - 140*	*10/30/11 13:42*	*10/30/11 16:50*	*1*

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G3

Date Collected: 10/18/11 16:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-3

Matrix: Sediment
Percent Solids: 47.4

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		1.8	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
alpha-BHC	ND		1.8	0.28	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
alpha-Chlordane	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
beta-BHC	ND		1.8	0.45	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
2,4'-DDD	**2.6**		1.8	0.10	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
2,4'-DDE	ND		1.8	0.16	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
2,4'-DDT	ND		1.8	0.15	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
4,4'-DDD	**1.6**	**J p**	1.8	0.23	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
4,4'-DDE	**3.3**		1.8	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
4,4'-DDT	**1.8**		1.8	0.26	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Chlordane (technical)	ND		18	0.77	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Dieldrin	ND		1.8	0.29	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Endosulfan I	ND		1.8	0.33	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Endosulfan II	ND		1.8	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Endosulfan sulfate	ND		1.8	0.18	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Endrin	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Endrin aldehyde	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Endrin ketone	ND		1.8	0.27	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
gamma-BHC (Lindane)	**1.2**	**J p**	1.8	0.31	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
gamma-Chlordane	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Heptachlor	ND		1.8	0.39	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Heptachlor epoxide	ND		1.8	0.34	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Methoxychlor	ND		3.4	0.36	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1
Toxaphene	ND		70	12	ug/Kg	☼	10/31/11 04:38	11/03/11 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*79*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:29*	*1*
DCB Decachlorobiphenyl (Surr)	*79*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:29*	*1*
Tetrachloro-m-xylene	*61*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:29*	*1*
Tetrachloro-m-xylene	*65*		*45 - 130*	*10/31/11 04:38*	*11/03/11 14:29*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**29**		17	2.6	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
PCB-1221	ND		17	3.3	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
PCB-1232	ND		17	3.0	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
PCB-1242	ND		17	2.8	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
PCB-1248	ND		17	1.6	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
PCB-1254	**28**		17	2.5	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
PCB-1260	ND		17	2.5	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1
Polychlorinated biphenyls, Total	**57**		17	3.8	ug/Kg	☼	10/31/11 04:38	11/08/11 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*35 - 140*	*10/31/11 04:38*	*11/08/11 22:52*	*1*
DCB Decachlorobiphenyl (Surr)	*89*		*35 - 140*	*10/31/11 04:38*	*11/08/11 22:52*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		42	5.3	ug/Kg	☼	10/21/11 04:22	10/27/11 00:47	20
2,4-D	ND		170	12	ug/Kg	☼	10/21/11 04:22	10/27/11 00:47	20
Dalapon	ND		190	15	ug/Kg	☼	10/21/11 04:22	10/27/11 00:47	20
Dinoseb	ND		25	9.6	ug/Kg	☼	10/21/11 04:22	10/27/11 00:47	20

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-G3

Date Collected: 10/18/11 16:00
Date Received: 10/19/11 10:00

Lab Sample ID: 180-5048-3

Matrix: Sediment
Percent Solids: 47.4

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	ND		42	4.4	ug/Kg	☼	10/21/11 04:22	10/27/11 00:47	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*63*		*42 - 140*	*10/21/11 04:22*	*10/27/11 00:47*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.12**		0.10	0.0041	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Arsenic	**5.8**		0.10	0.019	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Boron	**16**	**B**	0.52	0.038	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Barium	**29**		1.0	0.011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Beryllium	**0.40**		0.10	0.0078	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Calcium	**84000**		10	1.4	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Cadmium	**0.46**		0.10	0.0073	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Cobalt	**7.1**		0.052	0.0016	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Chromium	**21**	**B**	0.21	0.0063	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Copper	**28**		0.21	0.034	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Iron	**19000**	**B**	5.2	0.37	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Potassium	**1800**		10	1.4	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Magnesium	**42000**	**B**	10	0.19	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Manganese	**600**		0.52	0.011	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Sodium	**180**		10	1.4	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Nickel	**17**		0.10	0.012	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Lead	**31**	**B**	0.10	0.0040	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Antimony	**0.31**	**B**	0.21	0.0027	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Selenium	**0.55**		0.52	0.052	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Thallium	**0.30**		0.10	0.0021	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Vanadium	**21**	**B**	0.10	0.0082	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1
Zinc	**87**		0.52	0.067	mg/Kg	☼	10/26/11 09:54	11/08/11 22:08	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.069**		0.034	0.011	mg/Kg	☼	10/28/11 03:39	10/28/11 08:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**2.2**	**B**	1.0	0.21	mg/Kg	☼	10/27/11 11:39	10/27/11 14:21	1
Total Phosphate	**310**		110	1.1	mg/Kg	☼	11/10/11 08:45	11/10/11 14:34	5
Cr (VI)	ND		0.83	0.21	mg/Kg	☼	10/22/11 10:00	10/23/11 13:59	1
Cyanide, Amenable	ND		0.50	0.50	mg/Kg			10/27/11 14:21	1
Cyanide, Total	**0.87**	**J**	1.0	0.21	mg/Kg	☼	10/27/11 11:39	10/27/11 14:13	1
Percent Moisture	**53**		0.10	0.10	%			10/19/11 16:53	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.87**	**J B**	1.0	0.13	mg/Kg	☼		10/20/11 19:21	1
Fluoride	**4.7**	**B**	1.0	0.31	mg/Kg	☼		10/20/11 19:21	1
Chloride	**15**	**J**	21	4.6	mg/Kg	☼		10/20/11 19:21	1
Sulfate	**41**		21	2.5	mg/Kg	☼		10/20/11 19:21	1

Client Sample ID: CH-2011-MU3-COMP

Lab Sample ID: 180-5048-5

Date Collected: 10/18/11 16:00

Matrix: Sediment

Date Received: 10/19/11 10:00

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:59	11/02/11 19:52	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:59	11/02/11 19:52	1
Boron	**0.25**		0.20	0.0013	mg/L		11/01/11 16:59	11/02/11 19:52	1
Barium	**0.015**	**J**	0.20	0.00062	mg/L		11/01/11 16:59	11/02/11 19:52	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:59	11/02/11 19:52	1
Calcium	**17**	**B**	5.0	0.0097	mg/L		11/01/11 16:59	11/02/11 19:52	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:59	11/02/11 19:52	1
Cobalt	**0.0013**	**J B**	0.050	0.00040	mg/L		11/01/11 16:59	11/02/11 19:52	1
Chromium	**0.0050**	**B**	0.0050	0.00057	mg/L		11/01/11 16:59	11/02/11 19:52	1
Copper	**0.0045**	**J**	0.025	0.0027	mg/L		11/01/11 16:59	11/02/11 19:52	1
Iron	**1.9**		0.10	0.012	mg/L		11/01/11 16:59	11/02/11 19:52	1
Potassium	**1.3**	**J**	5.0	0.75	mg/L		11/01/11 16:59	11/02/11 19:52	1
Magnesium	**2.5**	**J**	5.0	0.021	mg/L		11/01/11 16:59	11/02/11 19:52	1
Manganese	**0.021**		0.015	0.00068	mg/L		11/01/11 16:59	11/02/11 19:52	1
Sodium	**18**		5.0	0.22	mg/L		11/01/11 16:59	11/02/11 19:52	1
Nickel	**0.0018**	**J**	0.040	0.0016	mg/L		11/01/11 16:59	11/02/11 19:52	1
Lead	**0.0049**		0.0030	0.0013	mg/L		11/01/11 16:59	11/02/11 19:52	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:59	11/02/11 19:52	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:59	11/02/11 19:52	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:59	11/02/11 19:52	1
Vanadium	**0.0065**	**J**	0.050	0.0019	mg/L		11/01/11 16:59	11/02/11 19:52	1
Zinc	**0.012**	**J B**	0.020	0.0025	mg/L		11/01/11 16:59	11/02/11 19:52	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:49	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	**0.070**		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 17:23	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			11/16/11 09:21	1
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

General Chemistry - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:33	1

Method: 35 ILL C-395 - Illinois Elutriate Test

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Elutriate Generated	**y**				ug/L			10/26/11 10:52	1

Client Sample ID: CH-2011-MU3-COMP

Lab Sample ID: 180-5048-6

Date Collected: 10/26/11 15:00

Matrix: SET, Dissolved

Date Received: 10/26/11 16:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/02/11 14:59	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/02/11 14:59	1
Methylene Chloride	**3.2**		1.0	0.15	ug/L			11/02/11 14:59	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/02/11 14:59	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/02/11 14:59	1

Client Sample ID: CH-2011-MU3-COMP

Lab Sample ID: 180-5048-6

Date Collected: 10/26/11 15:00

Matrix: SET, Dissolved

Date Received: 10/26/11 16:15

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/02/11 14:59	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/02/11 14:59	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/02/11 14:59	1
Benzene	ND		1.0	0.11	ug/L			11/02/11 14:59	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/02/11 14:59	1
Trichloroethene	ND		1.0	0.14	ug/L			11/02/11 14:59	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/02/11 14:59	1
Toluene	**0.21**	**J**	1.0	0.15	ug/L			11/02/11 14:59	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/02/11 14:59	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/02/11 14:59	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/02/11 14:59	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/02/11 14:59	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/02/11 14:59	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/02/11 14:59	1
Styrene	ND		1.0	0.097	ug/L			11/02/11 14:59	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/02/11 14:59	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/02/11 14:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/02/11 14:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/02/11 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 135*		*11/02/11 14:59*	*1*
Toluene-d8 (Surr)	*100*		*71 - 118*		*11/02/11 14:59*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 118*		*11/02/11 14:59*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 128*		*11/02/11 14:59*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.96	0.086	ug/L		11/01/11 09:10	11/02/11 16:46	1
Benzo[a]pyrene	ND		0.19	0.013	ug/L		11/01/11 09:10	11/02/11 16:46	1
Bis(2-ethylhexyl) phthalate	ND		1.9	1.2	ug/L		11/01/11 09:10	11/02/11 16:46	1
Hexachlorocyclopentadiene	ND		0.96	0.050	ug/L		11/01/11 09:10	11/02/11 16:46	1
Pentachlorophenol	ND		0.96	0.064	ug/L		11/01/11 09:10	11/02/11 16:46	1
Phenol	ND		0.19	0.056	ug/L		11/01/11 09:10	11/02/11 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*59*		*23 - 112*	*11/01/11 09:10*	*11/02/11 16:46*	*1*
2-Fluorobiphenyl	*50*		*19 - 107*	*11/01/11 09:10*	*11/02/11 16:46*	*1*
Terphenyl-d14	*34*		*10 - 132*	*11/01/11 09:10*	*11/02/11 16:46*	*1*
2,4,6-Tribromophenol	*61*		*16 - 122*	*11/01/11 09:10*	*11/02/11 16:46*	*1*
2-Fluorophenol	*56*		*10 - 111*	*11/01/11 09:10*	*11/02/11 16:46*	*1*
Phenol-d5	*56*		*15 - 112*	*11/01/11 09:10*	*11/02/11 16:46*	*1*

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:00	1
Chlordane (technical)	ND		0.012	0.0016	ug/L		10/27/11 13:35	10/31/11 12:00	1
Endrin	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:00	1
gamma-BHC (Lindane)	**0.0019**		0.0012	0.00075	ug/L		10/27/11 13:35	10/31/11 12:00	1
gamma-Chlordane	ND		0.0012	0.00091	ug/L		10/27/11 13:35	10/31/11 12:00	1
Heptachlor	ND		0.0012	0.00093	ug/L		10/27/11 13:35	10/31/11 12:00	1
Heptachlor epoxide	ND		0.0012	0.00092	ug/L		10/27/11 13:35	10/31/11 12:00	1

Client Sample ID: CH-2011-MU3-COMP

Lab Sample ID: 180-5048-6

Date Collected: 10/26/11 15:00

Matrix: SET, Dissolved

Date Received: 10/26/11 16:15

Method: 8081A - Organochlorine Pesticides (GC) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		0.0024	0.00086	ug/L		10/27/11 13:35	10/31/11 12:00	1
Toxaphene	ND		0.094	0.018	ug/L		10/27/11 13:35	10/31/11 12:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*102*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:00*	*1*
Tetrachloro-m-xylene	*82*		*60 - 111*	*10/27/11 13:35*	*10/31/11 12:00*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:00*	*1*
DCB Decachlorobiphenyl (Surr)	*86*		*56 - 122*	*10/27/11 13:35*	*10/31/11 12:00*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0094	0.0024	ug/L		10/27/11 13:35	10/28/11 20:10	1
PCB-1221	ND		0.0094	0.0023	ug/L		10/27/11 13:35	10/28/11 20:10	1
PCB-1232	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 20:10	1
PCB-1242	ND		0.0094	0.0018	ug/L		10/27/11 13:35	10/28/11 20:10	1
PCB-1248	ND		0.0094	0.0021	ug/L		10/27/11 13:35	10/28/11 20:10	1
PCB-1254	ND		0.0094	0.0022	ug/L		10/27/11 13:35	10/28/11 20:10	1
PCB-1260	ND		0.0094	0.0013	ug/L		10/27/11 13:35	10/28/11 20:10	1
Polychlorinated biphenyls, Total	ND		0.0094	0.0028	ug/L		10/27/11 13:35	10/28/11 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*47 - 150*	*10/27/11 13:35*	*10/28/11 20:10*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*50 - 140*	*10/27/11 13:35*	*10/28/11 20:10*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		3.8	0.43	ug/L		10/27/11 16:00	10/30/11 12:37	20
Silvex (2,4,5-TP)	ND		0.94	0.10	ug/L		10/27/11 16:00	10/30/11 12:37	20
Dalapon	ND		4.7	0.65	ug/L		10/27/11 16:00	10/30/11 12:37	20
Dinoseb	ND		0.85	0.12	ug/L		10/27/11 16:00	10/30/11 12:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*73*		*32 - 140*	*10/27/11 16:00*	*10/30/11 12:37*	*20*

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.11	ug/L		10/27/11 11:48	10/31/11 14:52	1
Antimony	**0.41**	**J B**	2.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:52	1
Beryllium	ND		1.0	0.037	ug/L		10/27/11 11:48	10/31/11 14:52	1
Thallium	**0.20**	**J**	1.0	0.015	ug/L		10/27/11 11:48	10/31/11 14:52	1
Iron	**170**	**B**	50	6.1	ug/L		10/27/11 11:48	10/31/11 14:52	1
Nickel	**0.53**	**J**	1.0	0.17	ug/L		10/27/11 11:48	10/31/11 14:52	1
Silver	ND		1.0	0.036	ug/L		10/27/11 11:48	10/31/11 14:52	1
Arsenic	**4.1**		1.0	0.29	ug/L		10/27/11 11:48	10/31/11 14:52	1
Copper	**3.7**	**B**	2.0	0.24	ug/L		10/27/11 11:48	10/31/11 14:52	1
Lead	**0.15**	**J B**	1.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:52	1
Zinc	**5.1**		5.0	0.96	ug/L		10/27/11 11:48	10/31/11 14:52	1
Selenium	ND		5.0	0.42	ug/L		10/27/11 11:48	10/31/11 14:52	1
Manganese	**200**	**B**	5.0	0.039	ug/L		10/27/11 11:48	10/31/11 14:52	1
Chromium	**5.0**	**B**	2.0	0.54	ug/L		10/27/11 11:48	10/31/11 14:52	1
Cobalt	**0.20**	**J**	0.50	0.026	ug/L		10/27/11 11:48	10/31/11 14:52	1
Sodium	**6500**		100	3.8	ug/L		10/27/11 11:48	10/31/11 14:52	1

Client Sample Results

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

Client Sample ID: CH-2011-MU3-COMP

Lab Sample ID: 180-5048-6

Date Collected: 10/26/11 15:00
Matrix: SET, Dissolved
Date Received: 10/26/11 16:15

Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	1500		100	5.8	ug/L		10/27/11 11:48	10/31/11 14:52	1
Barium	36		10	0.098	ug/L		10/27/11 11:48	10/31/11 14:52	1
Calcium	30000	B	100	2.8	ug/L		10/27/11 11:48	10/31/11 14:52	1
Vanadium	4.2	B	1.0	0.082	ug/L		10/27/11 11:48	10/31/11 14:52	1
Magnesium	8200	B	100	1.2	ug/L		10/27/11 11:48	10/31/11 14:52	1
Boron	30		5.0	0.28	ug/L		10/27/11 11:48	10/31/11 14:52	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/09/11 13:24	11/09/11 18:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	2.7	B	0.10	0.033	mg/L		11/03/11 16:15	11/04/11 12:12	1
pH	7.51	HF	0.100	0.100	SU			10/27/11 12:38	1
Total Dissolved Solids	130		10	10	mg/L			10/27/11 09:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.29		0.050	0.043	mg/L			10/26/11 16:40	1
Fluoride	0.093	B	0.050	0.014	mg/L			10/26/11 16:40	1
Chloride	14		1.0	0.20	mg/L			10/26/11 16:40	1
Sulfate	22		1.0	0.21	mg/L			10/26/11 16:40	1
Cyanide, Non-amenable	0.25		0.050	0.025	mg/L		10/28/11 15:42	10/28/11 16:54	5
Cr (VI)	ND		0.010	0.0017	mg/L			10/27/11 14:47	1
Cyanide, Amenable	ND		0.010	0.010	mg/L			10/28/11 16:54	1
Cyanide, Total	ND		0.010	0.0050	mg/L		10/28/11 13:17	10/28/11 15:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-18064/1-A
Matrix: Sediment
Analysis Batch: 18133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18064

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.0	0.47	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Bromomethane	ND		5.0	0.74	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Chloroethane	ND		5.0	1.5	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Trichlorofluoromethane	ND		5.0	0.92	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,1-Dichloroethene	ND		5.0	0.85	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Acetone	ND		20	5.0	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Carbon disulfide	ND		5.0	0.51	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Methylene Chloride	1.55	J	5.0	0.67	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
trans-1,2-Dichloroethene	ND		5.0	0.60	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Methyl tert-butyl ether	ND		5.0	0.75	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,1-Dichloroethane	ND		5.0	0.58	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
cis-1,2-Dichloroethene	ND		5.0	0.70	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
2-Butanone (MEK)	ND		5.0	0.88	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Chloroform	ND		5.0	0.58	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,1,1-Trichloroethane	ND		5.0	0.49	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Carbon tetrachloride	ND		5.0	0.45	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Benzene	ND		5.0	0.68	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2-Dichloroethane	ND		5.0	0.61	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Trichloroethene	ND		5.0	0.66	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2-Dichloropropane	ND		5.0	0.54	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Bromodichloromethane	ND		5.0	0.56	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.65	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Toluene	ND		5.0	0.73	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,1,2-Trichloroethane	ND		5.0	0.83	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Tetrachloroethene	ND		5.0	0.68	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Dibromochloromethane	ND		5.0	0.71	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2-Dibromoethane	ND		5.0	0.86	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Chlorobenzene	ND		5.0	0.76	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.74	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Ethylbenzene	ND		5.0	0.64	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
m-Xylene & p-Xylene	ND		10	1.5	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
o-Xylene	ND		5.0	0.78	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Xylenes, Total	ND		15	2.2	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Styrene	ND		5.0	0.71	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Bromoform	ND		5.0	0.44	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
N-Propylbenzene	ND		5.0	0.76	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.72	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,3,5-Trimethylbenzene	ND		5.0	0.67	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2,4-Trimethylbenzene	ND		5.0	0.65	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,3-Dichlorobenzene	ND		5.0	0.66	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,4-Dichlorobenzene	ND		5.0	0.64	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2-Dichlorobenzene	ND		5.0	0.80	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.75	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
1,2,4-Trichlorobenzene	ND		5.0	0.88	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Hexachlorobutadiene	ND		5.0	1.1	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Cyclohexane	ND		5.0	0.37	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Acrolein	ND		100	7.0	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Vinyl acetate	ND		5.0	0.35	ug/Kg		10/20/11 07:41	10/20/11 09:56	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-18064/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18133 — **Prep Batch: 18064**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butyl alcohol	ND		200	33	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
Hexane	ND		5.0	1.0	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
cis-1,3-Dichloropropene	ND		5.0	0.68	ug/Kg		10/20/11 07:41	10/20/11 09:56	1
trans-1,3-Dichloropropene	ND		5.0	0.60	ug/Kg		10/20/11 07:41	10/20/11 09:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*64*		*52 - 124*	*10/20/11 07:41*	*10/20/11 09:56*	*1*
Toluene-d8 (Surr)	*94*		*72 - 127*	*10/20/11 07:41*	*10/20/11 09:56*	*1*
4-Bromofluorobenzene (Surr)	*77*		*63 - 120*	*10/20/11 07:41*	*10/20/11 09:56*	*1*
Dibromofluoromethane (Surr)	*82*		*68 - 121*	*10/20/11 07:41*	*10/20/11 09:56*	*1*

Lab Sample ID: LCS 180-18064/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18133 — **Prep Batch: 18064**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	40.0	32.2		ug/Kg		81	63 - 124
Bromomethane	40.0	30.2		ug/Kg		75	25 - 150
Chloroethane	40.0	45.7		ug/Kg		114	22 - 150
Trichlorofluoromethane	40.0	34.7		ug/Kg		87	20 - 150
1,1-Dichloroethene	40.0	41.0		ug/Kg		102	59 - 129
Acetone	40.0	27.6		ug/Kg		69	20 - 150
Carbon disulfide	40.0	37.8		ug/Kg		94	50 - 127
Methylene Chloride	40.0	43.9		ug/Kg		110	58 - 127
trans-1,2-Dichloroethene	40.0	45.5		ug/Kg		114	77 - 121
Methyl tert-butyl ether	40.0	32.6		ug/Kg		81	48 - 132
1,1-Dichloroethane	40.0	40.6		ug/Kg		102	66 - 124
cis-1,2-Dichloroethene	40.0	45.4		ug/Kg		113	80 - 118
2-Butanone (MEK)	40.0	25.6		ug/Kg		64	35 - 149
Chloroform	40.0	37.5		ug/Kg		94	72 - 120
1,1,1-Trichloroethane	40.0	33.7		ug/Kg		84	67 - 126
Carbon tetrachloride	40.0	31.6		ug/Kg		79	69 - 122
Benzene	40.0	41.8		ug/Kg		105	77 - 120
1,2-Dichloroethane	40.0	33.3		ug/Kg		83	61 - 127
Trichloroethene	40.0	45.4		ug/Kg		113	76 - 119
1,2-Dichloropropane	40.0	41.1		ug/Kg		103	72 - 122
Bromodichloromethane	40.0	33.1		ug/Kg		83	70 - 125
4-Methyl-2-pentanone (MIBK)	40.0	27.9		ug/Kg		70	44 - 148
Toluene	40.0	44.4		ug/Kg		111	78 - 124
1,1,2-Trichloroethane	40.0	41.1		ug/Kg		103	70 - 128
Tetrachloroethene	40.0	47.1		ug/Kg		118	78 - 129
Dibromochloromethane	40.0	33.8		ug/Kg		85	70 - 132
1,2-Dibromoethane	40.0	35.7		ug/Kg		89	70 - 131
Chlorobenzene	40.0	45.7		ug/Kg		114	79 - 120
1,1,1,2-Tetrachloroethane	40.0	40.5		ug/Kg		101	76 - 124
Ethylbenzene	40.0	42.2		ug/Kg		106	78 - 125
m-Xylene & p-Xylene	80.0	85.0		ug/Kg		106	75 - 126
o-Xylene	40.0	41.8		ug/Kg		104	83 - 127
Styrene	40.0	41.2		ug/Kg		103	83 - 129

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-18064/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18133 — **Prep Batch: 18064**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	40.0	30.2		ug/Kg		75	53 - 140
Isopropylbenzene	40.0	39.8		ug/Kg		100	70 - 133
N-Propylbenzene	40.0	45.6		ug/Kg		114	80 - 120
1,1,2,2-Tetrachloroethane	40.0	35.3		ug/Kg		88	60 - 139
1,3,5-Trimethylbenzene	40.0	39.3		ug/Kg		98	68 - 133
1,2,4-Trimethylbenzene	40.0	39.4		ug/Kg		98	80 - 121
1,3-Dichlorobenzene	40.0	45.6		ug/Kg		114	75 - 118
1,4-Dichlorobenzene	40.0	45.1		ug/Kg		113	77 - 116
1,2-Dichlorobenzene	40.0	45.0		ug/Kg		112	71 - 124
1,2-Dibromo-3-Chloropropane	40.0	26.7		ug/Kg		67	35 - 136
1,2,4-Trichlorobenzene	40.0	42.8		ug/Kg		107	51 - 136
Hexachlorobutadiene	40.0	43.2		ug/Kg		108	42 - 150
Cyclohexane	40.0	36.1		ug/Kg		90	64 - 130
cis-1,3-Dichloropropene	40.0	34.5		ug/Kg		86	73 - 120
trans-1,3-Dichloropropene	40.0	31.5		ug/Kg		79	74 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*74*		*52 - 124*
Toluene-d8 (Surr)	*93*		*72 - 127*
4-Bromofluorobenzene (Surr)	*84*		*63 - 120*
Dibromofluoromethane (Surr)	*87*		*68 - 121*

Lab Sample ID: LCSD 180-18064/5-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18133 — **Prep Batch: 18064**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	40.0	32.8		ug/Kg		82	63 - 124	2	27
Bromomethane	40.0	30.8		ug/Kg		77	25 - 150	2	40
Chloroethane	40.0	48.1		ug/Kg		120	22 - 150	5	40
Trichlorofluoromethane	40.0	36.9		ug/Kg		92	20 - 150	6	40
1,1-Dichloroethene	40.0	44.0		ug/Kg		110	59 - 129	7	25
Acetone	40.0	26.6		ug/Kg		67	20 - 150	4	40
Carbon disulfide	40.0	38.6		ug/Kg		96	50 - 127	2	23
Methylene Chloride	40.0	43.4		ug/Kg		109	58 - 127	1	28
trans-1,2-Dichloroethene	40.0	46.8		ug/Kg		117	77 - 121	3	20
Methyl tert-butyl ether	40.0	31.5		ug/Kg		79	48 - 132	3	36
1,1-Dichloroethane	40.0	40.7		ug/Kg		102	66 - 124	0	23
cis-1,2-Dichloroethene	40.0	45.5		ug/Kg		114	80 - 118	0	20
2-Butanone (MEK)	40.0	23.9		ug/Kg		60	35 - 149	7	36
Chloroform	40.0	38.2		ug/Kg		95	72 - 120	2	25
1,1,1-Trichloroethane	40.0	35.4		ug/Kg		88	67 - 126	5	31
Carbon tetrachloride	40.0	33.0		ug/Kg		82	69 - 122	4	22
Benzene	40.0	42.8		ug/Kg		107	77 - 120	2	20
1,2-Dichloroethane	40.0	31.6		ug/Kg		79	61 - 127	5	23
Trichloroethene	40.0	47.0		ug/Kg		117	76 - 119	3	21
1,2-Dichloropropane	40.0	41.7		ug/Kg		104	72 - 122	1	20
Bromodichloromethane	40.0	32.8		ug/Kg		82	70 - 125	1	21
4-Methyl-2-pentanone (MIBK)	40.0	27.3		ug/Kg		68	44 - 148	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-18064/5-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18133 — **Prep Batch: 18064**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	40.0	46.2		ug/Kg		115	78 - 124	4	21
1,1,2-Trichloroethane	40.0	40.0		ug/Kg		100	70 - 128	3	22
Tetrachloroethene	40.0	50.0		ug/Kg		125	78 - 129	6	20
Dibromochloromethane	40.0	35.1		ug/Kg		88	70 - 132	4	20
1,2-Dibromoethane	40.0	35.0		ug/Kg		88	70 - 131	2	20
Chlorobenzene	40.0	47.6		ug/Kg		119	79 - 120	4	20
1,1,1,2-Tetrachloroethane	40.0	40.6		ug/Kg		102	76 - 124	0	22
Ethylbenzene	40.0	43.3		ug/Kg		108	78 - 125	2	21
m-Xylene & p-Xylene	80.0	87.7		ug/Kg		110	75 - 126	3	21
o-Xylene	40.0	42.4		ug/Kg		106	83 - 127	1	20
Styrene	40.0	42.7		ug/Kg		107	83 - 129	4	20
Bromoform	40.0	27.8		ug/Kg		70	53 - 140	8	23
Isopropylbenzene	40.0	41.5		ug/Kg		104	70 - 133	4	22
N-Propylbenzene	40.0	48.3	*	ug/Kg		121	80 - 120	6	20
1,1,2,2-Tetrachloroethane	40.0	33.6		ug/Kg		84	60 - 139	5	24
1,3,5-Trimethylbenzene	40.0	41.0		ug/Kg		102	68 - 133	4	21
1,2,4-Trimethylbenzene	40.0	40.4		ug/Kg		101	80 - 121	2	20
1,3-Dichlorobenzene	40.0	47.7	*	ug/Kg		119	75 - 118	5	20
1,4-Dichlorobenzene	40.0	47.1	*	ug/Kg		118	77 - 116	4	20
1,2-Dichlorobenzene	40.0	46.1		ug/Kg		115	71 - 124	3	22
1,2-Dibromo-3-Chloropropane	40.0	28.0		ug/Kg		70	35 - 136	4	40
1,2,4-Trichlorobenzene	40.0	43.9		ug/Kg		110	51 - 136	3	40
Hexachlorobutadiene	40.0	44.9		ug/Kg		112	42 - 150	4	40
Cyclohexane	40.0	39.0		ug/Kg		97	64 - 130	8	21
cis-1,3-Dichloropropene	40.0	34.9		ug/Kg		87	73 - 120	1	20
trans-1,3-Dichloropropene	40.0	32.9		ug/Kg		82	74 - 129	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*52 - 124*
Toluene-d8 (Surr)	*105*		*72 - 127*
4-Bromofluorobenzene (Surr)	*93*		*63 - 120*
Dibromofluoromethane (Surr)	*96*		*68 - 121*

Lab Sample ID: MB 180-19457/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19457

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			11/02/11 09:38	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			11/02/11 09:38	1
Methylene Chloride	ND		1.0	0.15	ug/L			11/02/11 09:38	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/02/11 09:38	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			11/02/11 09:38	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			11/02/11 09:38	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			11/02/11 09:38	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			11/02/11 09:38	1
Benzene	ND		1.0	0.11	ug/L			11/02/11 09:38	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/02/11 09:38	1
Trichloroethene	ND		1.0	0.14	ug/L			11/02/11 09:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-19457/5
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	0.095	ug/L			11/02/11 09:38	1
Toluene	ND		1.0	0.15	ug/L			11/02/11 09:38	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			11/02/11 09:38	1
Tetrachloroethene	ND		1.0	0.15	ug/L			11/02/11 09:38	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			11/02/11 09:38	1
Chlorobenzene	ND		1.0	0.14	ug/L			11/02/11 09:38	1
Ethylbenzene	ND		1.0	0.23	ug/L			11/02/11 09:38	1
Xylenes, Total	ND		3.0	0.49	ug/L			11/02/11 09:38	1
Styrene	ND		1.0	0.097	ug/L			11/02/11 09:38	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			11/02/11 09:38	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			11/02/11 09:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			11/02/11 09:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			11/02/11 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 135*		*11/02/11 09:38*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*11/02/11 09:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 118*		*11/02/11 09:38*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 128*		*11/02/11 09:38*	*1*

Lab Sample ID: LCS 180-19457/8
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	10.1		ug/L		101	53 - 138
1,1-Dichloroethene	10.0	9.99		ug/L		100	65 - 136
Methylene Chloride	10.0	8.95		ug/L		90	63 - 129
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	73 - 126
Methyl tert-butyl ether	10.0	8.95		ug/L		89	64 - 123
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	70 - 120
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	63 - 133
Carbon tetrachloride	10.0	11.2		ug/L		112	55 - 150
Benzene	10.0	9.95		ug/L		99	80 - 120
1,2-Dichloroethane	10.0	9.21		ug/L		92	68 - 132
Trichloroethene	10.0	10.1		ug/L		101	73 - 120
1,2-Dichloropropane	10.0	9.56		ug/L		96	76 - 124
Toluene	10.0	10.7		ug/L		107	80 - 123
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	77 - 127
Tetrachloroethene	10.0	10.2		ug/L		102	70 - 135
1,2-Dibromoethane	10.0	9.85		ug/L		99	74 - 123
Chlorobenzene	10.0	10.3		ug/L		103	80 - 120
Ethylbenzene	10.0	10.4		ug/L		104	72 - 126
Styrene	10.0	10.2		ug/L		102	71 - 127
1,4-Dichlorobenzene	10.0	9.78		ug/L		98	77 - 120
1,2-Dichlorobenzene	10.0	9.74		ug/L		97	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.12		ug/L		91	37 - 133
1,2,4-Trichlorobenzene	10.0	9.53		ug/L		95	60 - 127

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-19457/8
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		64 - 135
Toluene-d8 (Surr)	98		71 - 118
4-Bromofluorobenzene (Surr)	95		70 - 118
Dibromofluoromethane (Surr)	95		70 - 128

Lab Sample ID: 180-5224-M-1 MS
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	ND		10.0	9.66		ug/L		97	53 - 138
1,1-Dichloroethene	ND		10.0	9.73		ug/L		97	65 - 136
Methylene Chloride	ND		10.0	8.39		ug/L		84	63 - 129
trans-1,2-Dichloroethene	ND		10.0	9.31		ug/L		93	73 - 126
Methyl tert-butyl ether	ND		10.0	8.88		ug/L		89	64 - 123
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L		102	70 - 120
1,1,1-Trichloroethane	ND		10.0	9.92		ug/L		99	63 - 133
Carbon tetrachloride	ND		10.0	11.1		ug/L		111	55 - 150
Benzene	ND		10.0	9.86		ug/L		99	80 - 120
1,2-Dichloroethane	ND		10.0	10.2		ug/L		102	68 - 132
Trichloroethene	ND		10.0	10.5		ug/L		105	73 - 120
1,2-Dichloropropane	ND		10.0	10.4		ug/L		104	76 - 124
Toluene	ND		10.0	10.1		ug/L		101	80 - 123
1,1,2-Trichloroethane	ND		10.0	9.56		ug/L		96	77 - 127
Tetrachloroethene	ND		10.0	9.50		ug/L		95	70 - 135
1,2-Dibromoethane	ND		10.0	9.41		ug/L		94	74 - 123
Chlorobenzene	ND		10.0	9.68		ug/L		97	80 - 120
Ethylbenzene	ND		10.0	10.0		ug/L		100	72 - 126
Styrene	ND		10.0	9.75		ug/L		97	71 - 127
1,4-Dichlorobenzene	ND		10.0	10.0		ug/L		100	77 - 120
1,2-Dichlorobenzene	ND		10.0	9.71		ug/L		97	77 - 120
1,2-Dibromo-3-Chloropropane	ND		10.0	8.85		ug/L		88	37 - 133
1,2,4-Trichlorobenzene	ND		10.0	10.1		ug/L		101	60 - 127

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		64 - 135
Toluene-d8 (Surr)	92		71 - 118
4-Bromofluorobenzene (Surr)	92		70 - 118
Dibromofluoromethane (Surr)	90		70 - 128

Lab Sample ID: 180-5224-N-1 MSD
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	ND		10.0	10.6		ug/L		106	53 - 138	9	35
1,1-Dichloroethene	ND		10.0	10.5		ug/L		105	65 - 136	7	35
Methylene Chloride	ND		10.0	8.79		ug/L		88	63 - 129	5	35
trans-1,2-Dichloroethene	ND		10.0	9.95		ug/L		100	73 - 126	7	35

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-5224-N-1 MSD
Matrix: Water
Analysis Batch: 19457

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		10.0	9.46		ug/L		95	64 - 123	6	35
cis-1,2-Dichloroethene	ND		10.0	9.62		ug/L		96	70 - 120	5	35
1,1,1-Trichloroethane	ND		10.0	10.2		ug/L		102	63 - 133	3	35
Carbon tetrachloride	ND		10.0	10.4		ug/L		104	55 - 150	6	35
Benzene	ND		10.0	9.89		ug/L		99	80 - 120	0	32
1,2-Dichloroethane	ND		10.0	10.2		ug/L		102	68 - 132	1	32
Trichloroethene	ND		10.0	10.1		ug/L		101	73 - 120	3	35
1,2-Dichloropropane	ND		10.0	9.19		ug/L		92	76 - 124	13	34
Toluene	ND		10.0	10.1		ug/L		101	80 - 123	1	35
1,1,2-Trichloroethane	ND		10.0	10.2		ug/L		102	77 - 127	7	35
Tetrachloroethene	ND		10.0	9.77		ug/L		98	70 - 135	3	35
1,2-Dibromoethane	ND		10.0	9.66		ug/L		97	74 - 123	3	35
Chlorobenzene	ND		10.0	10.3		ug/L		103	80 - 120	7	29
Ethylbenzene	ND		10.0	10.5		ug/L		105	72 - 126	5	33
Styrene	ND		10.0	10.9		ug/L		109	71 - 127	12	34
1,4-Dichlorobenzene	ND		10.0	9.48		ug/L		95	77 - 120	6	24
1,2-Dichlorobenzene	ND		10.0	9.65		ug/L		97	77 - 120	1	24
1,2-Dibromo-3-Chloropropane	ND		10.0	7.81		ug/L		78	37 - 133	12	35
1,2,4-Trichlorobenzene	ND		10.0	9.32		ug/L		93	60 - 127	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*64 - 135*
Toluene-d8 (Surr)	*94*		*71 - 118*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*
Dibromofluoromethane (Surr)	*96*		*70 - 128*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 180-18459/1-A
Matrix: Sediment
Analysis Batch: 18786

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18459

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		3.4	0.32	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Acenaphthylene	ND		3.4	0.38	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Anthracene	ND		3.4	0.33	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Atrazine	ND		17	1.6	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Benzo[a]anthracene	ND		3.4	0.42	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Benzo[b]fluoranthene	ND		3.4	0.52	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Benzo[k]fluoranthene	ND		3.4	0.67	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Benzo[a]pyrene	ND		3.4	0.33	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Bis(2-chloroethyl)ether	ND		3.4	0.45	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Bis(2-ethylhexyl) phthalate	ND		33	2.7	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Butyl benzyl phthalate	ND		17	2.3	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Carbazole	ND		3.4	0.31	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Chrysene	ND		3.4	0.40	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2-Chloronaphthalene	ND		3.4	0.35	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2-Chlorophenol	ND		17	1.4	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,4-Dichlorophenol	ND		3.4	0.33	ug/Kg		10/25/11 04:15	10/25/11 15:58	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 180-18459/1-A
Matrix: Sediment
Analysis Batch: 18786

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18459

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dimethylphenol	ND		17	2.6	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,4-Dinitrophenol	ND		85	20	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,4-Dinitrotoluene	ND		17	1.3	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,6-Dinitrotoluene	ND		17	1.7	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2-Methylnaphthalene	ND		3.4	0.30	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2-Methylphenol	ND		17	1.2	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2-Nitroaniline	ND		85	7.5	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,2'-oxybis[1-chloropropane]	ND		3.4	0.36	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,4,5-Trichlorophenol	ND		17	1.8	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
2,4,6-Trichlorophenol	ND		17	2.5	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Methylphenol, 3 & 4	ND		17	1.6	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
4-Chloroaniline	ND		17	1.3	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Dibenz(a,h)anthracene	ND		3.4	0.37	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Dibenzofuran	ND		17	1.6	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Di-n-butyl phthalate	ND		17	2.1	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Diethyl phthalate	ND		17	1.8	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Dimethyl phthalate	ND		17	1.8	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Di-n-octyl phthalate	ND		17	1.8	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
3,3'-Dichlorobenzidine	ND		17	1.8	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Fluoranthene	ND		3.4	0.36	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Fluorene	ND		3.4	0.44	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Hexachlorobenzene	ND		3.4	0.36	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Hexachlorocyclopentadiene	ND		17	1.8	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Hexachloroethane	ND		17	1.2	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Indeno[1,2,3-cd]pyrene	ND		3.4	0.34	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Isophorone	ND		17	1.3	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Naphthalene	ND		3.4	0.29	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Nitrobenzene	ND		33	1.4	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
N-Nitrosodiphenylamine	ND		17	1.5	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
N-Nitrosodi-n-propylamine	ND		3.4	0.39	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Pyrene	ND		3.4	0.34	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Phenol	ND		3.4	0.39	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Phenanthrene	ND		3.4	0.53	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Pentachlorophenol	ND		17	1.5	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Benzyl alcohol	ND		17	2.0	ug/Kg		10/25/11 04:15	10/25/11 15:58	1
Benzoic acid	ND		85	6.9	ug/Kg		10/25/11 04:15	10/25/11 15:58	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
DMF	*None*		*ug/Kg*			*68-12-2*	*10/25/11 04:15*	*10/25/11 15:58*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*21 - 116*	*10/25/11 04:15*	*10/25/11 15:58*	*1*
2-Fluorophenol	*87*		*28 - 107*	*10/25/11 04:15*	*10/25/11 15:58*	*1*
Phenol-d5	*92*		*30 - 112*	*10/25/11 04:15*	*10/25/11 15:58*	*1*
Nitrobenzene-d5	*78*		*27 - 110*	*10/25/11 04:15*	*10/25/11 15:58*	*1*
2-Fluorobiphenyl	*69*		*28 - 108*	*10/25/11 04:15*	*10/25/11 15:58*	*1*
Terphenyl-d14	*73*		*21 - 130*	*10/25/11 04:15*	*10/25/11 15:58*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 180-18459/2-A
Matrix: Sediment
Analysis Batch: 18786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	251		ug/Kg		75	42 - 104
Acenaphthylene	333	261		ug/Kg		78	43 - 117
Anthracene	333	264		ug/Kg		79	43 - 111
Atrazine	333	459		ug/Kg		138	30 - 150
Benzo[a]anthracene	333	290		ug/Kg		87	45 - 110
Benzo[b]fluoranthene	333	267		ug/Kg		80	37 - 108
Benzo[k]fluoranthene	333	296		ug/Kg		89	39 - 115
Benzo[a]pyrene	333	299		ug/Kg		90	42 - 114
Bis(2-chloroethyl)ether	333	227		ug/Kg		68	40 - 100
Bis(2-ethylhexyl) phthalate	333	273		ug/Kg		82	41 - 121
Butyl benzyl phthalate	333	292		ug/Kg		87	40 - 117
Carbazole	333	287		ug/Kg		86	42 - 114
Chrysene	333	256		ug/Kg		77	44 - 108
2-Chloronaphthalene	333	246		ug/Kg		74	40 - 104
2-Chlorophenol	333	244		ug/Kg		73	40 - 105
2,4-Dichlorophenol	333	273		ug/Kg		82	44 - 110
2,4-Dimethylphenol	333	271		ug/Kg		81	39 - 106
2,4-Dinitrophenol	333	260		ug/Kg		78	19 - 140
2,4-Dinitrotoluene	333	262		ug/Kg		79	48 - 118
2,6-Dinitrotoluene	333	287		ug/Kg		86	47 - 119
2-Methylnaphthalene	333	249		ug/Kg		75	43 - 105
2-Methylphenol	333	243		ug/Kg		73	41 - 104
2-Nitroaniline	333	294		ug/Kg		88	41 - 118
2,2'-oxybis[1-chloropropane]	333	249		ug/Kg		75	37 - 105
2,4,5-Trichlorophenol	333	251		ug/Kg		75	42 - 110
2,4,6-Trichlorophenol	333	275		ug/Kg		82	43 - 111
Methylphenol, 3 & 4	667	522		ug/Kg		78	43 - 107
4-Chloroaniline	333	285		ug/Kg		85	33 - 102
Dibenz(a,h)anthracene	333	263		ug/Kg		79	34 - 131
Dibenzofuran	333	247		ug/Kg		74	42 - 106
Di-n-butyl phthalate	333	281		ug/Kg		84	44 - 120
Diethyl phthalate	333	268		ug/Kg		80	44 - 113
Dimethyl phthalate	333	252		ug/Kg		76	44 - 111
Di-n-octyl phthalate	333	326		ug/Kg		98	35 - 129
3,3'-Dichlorobenzidine	333	264		ug/Kg		79	24 - 113
Fluoranthene	333	285		ug/Kg		86	40 - 118
Fluorene	333	256		ug/Kg		77	43 - 110
Hexachlorobenzene	333	263		ug/Kg		79	42 - 110
Hexachlorocyclopentadiene	333	247		ug/Kg		74	10 - 150
Hexachloroethane	333	222		ug/Kg		67	40 - 102
Indeno[1,2,3-cd]pyrene	333	255		ug/Kg		77	34 - 130
Isophorone	333	253		ug/Kg		76	39 - 114
Naphthalene	333	249		ug/Kg		75	42 - 104
Nitrobenzene	333	245		ug/Kg		74	40 - 109
N-Nitrosodiphenylamine	333	267		ug/Kg		80	41 - 110
N-Nitrosodi-n-propylamine	333	246		ug/Kg		74	42 - 108
Pyrene	333	275		ug/Kg		82	39 - 113
Phenol	333	251		ug/Kg		75	39 - 105
Phenanthrene	333	262		ug/Kg		79	41 - 107

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 180-18459/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18786 — **Prep Batch: 18459**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	333	270		ug/Kg		81	18 - 125
Benzyl alcohol	333	420		ug/Kg		126	18 - 129
Benzoic acid	333	235		ug/Kg		71	10 - 93

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*90*		*21 - 116*
2-Fluorophenol	*82*		*28 - 107*
Phenol-d5	*84*		*30 - 112*
Nitrobenzene-d5	*72*		*27 - 110*
2-Fluorobiphenyl	*70*		*28 - 108*
Terphenyl-d14	*83*		*21 - 130*

Lab Sample ID: 180-5048-2 MS — **Client Sample ID: CH-2011-MU3-G2**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18786 — **Prep Batch: 18459**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	72		588	547		ug/Kg	☼	81	42 - 104
Acenaphthylene	42		588	533		ug/Kg	☼	84	43 - 117
Anthracene	140		588	656		ug/Kg	☼	87	43 - 111
Atrazine	ND		588	877		ug/Kg	☼	149	30 - 150
Benzo[a]anthracene	420		588	945		ug/Kg	☼	90	45 - 110
Benzo[b]fluoranthene	420		588	1000		ug/Kg	☼	99	37 - 108
Benzo[k]fluoranthene	250		588	642		ug/Kg	☼	67	39 - 115
Benzo[a]pyrene	460		588	1000		ug/Kg	☼	93	42 - 114
Bis(2-chloroethyl)ether	ND		588	360		ug/Kg	☼	61	40 - 100
Bis(2-ethylhexyl) phthalate	99	J	588	558		ug/Kg	☼	78	41 - 121
Butyl benzyl phthalate	ND		588	501		ug/Kg	☼	85	40 - 117
Carbazole	38		588	557		ug/Kg	☼	88	42 - 114
Chrysene	440		588	965		ug/Kg	☼	90	44 - 108
2-Chloronaphthalene	ND		588	470		ug/Kg	☼	80	40 - 104
2-Chlorophenol	ND		588	416		ug/Kg	☼	71	40 - 105
2,4-Dichlorophenol	ND		588	503		ug/Kg	☼	85	44 - 110
2,4-Dimethylphenol	ND		588	500		ug/Kg	☼	85	39 - 106
2,4-Dinitrophenol	ND		588	ND	F	ug/Kg	☼	0	19 - 140
2,4-Dinitrotoluene	ND		588	542		ug/Kg	☼	92	48 - 118
2,6-Dinitrotoluene	ND		588	580		ug/Kg	☼	99	47 - 119
2-Methylnaphthalene	34		588	503		ug/Kg	☼	80	43 - 105
2-Methylphenol	ND		588	433		ug/Kg	☼	74	41 - 104
2-Nitroaniline	ND		588	572	J	ug/Kg	☼	97	41 - 118
2,2'-oxybis[1-chloropropane]	ND		588	394		ug/Kg	☼	67	37 - 105
2,4,5-Trichlorophenol	ND		588	460		ug/Kg	☼	78	42 - 110
2,4,6-Trichlorophenol	ND		588	540		ug/Kg	☼	92	43 - 111
Methylphenol, 3 & 4	ND		1180	1030		ug/Kg	☼	87	43 - 107
4-Chloroaniline	ND		588	477		ug/Kg	☼	81	33 - 102
Dibenz(a,h)anthracene	84		588	566		ug/Kg	☼	82	34 - 131
Dibenzofuran	40	J	588	522		ug/Kg	☼	82	42 - 106
Di-n-butyl phthalate	ND		588	491		ug/Kg	☼	83	44 - 120
Diethyl phthalate	ND		588	528		ug/Kg	☼	90	44 - 113

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5048-2 MS — **Client Sample ID: CH-2011-MU3-G2**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18786 — **Prep Batch: 18459**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dimethyl phthalate	ND		588	510		ug/Kg	☼	87	44 - 111
Di-n-octyl phthalate	ND		588	502		ug/Kg	☼	85	35 - 129
3,3'-Dichlorobenzidine	ND		588	219		ug/Kg	☼	37	24 - 113
Fluoranthene	750		588	1320		ug/Kg	☼	97	40 - 118
Fluorene	76		588	611		ug/Kg	☼	91	43 - 110
Hexachlorobenzene	ND		588	515		ug/Kg	☼	88	42 - 110
Hexachlorocyclopentadiene	ND		588	46.4	J F	ug/Kg	☼	8	10 - 150
Hexachloroethane	ND		588	279		ug/Kg	☼	47	40 - 102
Indeno[1,2,3-cd]pyrene	230		588	757		ug/Kg	☼	89	34 - 130
Isophorone	ND		588	429		ug/Kg	☼	73	39 - 114
Naphthalene	45		588	447		ug/Kg	☼	68	42 - 104
Nitrobenzene	ND		588	398		ug/Kg	☼	68	40 - 109
N-Nitrosodiphenylamine	ND		588	550		ug/Kg	☼	94	41 - 110
N-Nitrosodi-n-propylamine	ND		588	423		ug/Kg	☼	72	42 - 108
Pyrene	730		588	1240		ug/Kg	☼	87	39 - 113
Phenol	ND		588	419		ug/Kg	☼	71	39 - 105
Phenanthrene	530		588	1100		ug/Kg	☼	96	41 - 107
Pentachlorophenol	ND		588	261		ug/Kg	☼	44	18 - 125
Benzyl alcohol	ND		588	706		ug/Kg	☼	120	18 - 129
Benzoic acid	ND		588	ND	F	ug/Kg	☼	0	10 - 93

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*94*		*21 - 116*
2-Fluorophenol	*71*		*28 - 107*
Phenol-d5	*78*		*30 - 112*
Nitrobenzene-d5	*66*		*27 - 110*
2-Fluorobiphenyl	*74*		*28 - 108*
Terphenyl-d14	*77*		*21 - 130*

Lab Sample ID: 180-5048-2 MSD — **Client Sample ID: CH-2011-MU3-G2**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18786 — **Prep Batch: 18459**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	72		584	507		ug/Kg	☼	75	42 - 104	8	34
Acenaphthylene	42		584	505		ug/Kg	☼	79	43 - 117	5	36
Anthracene	140		584	604		ug/Kg	☼	79	43 - 111	8	35
Atrazine	ND		584	782		ug/Kg	☼	134	30 - 150	11	40
Benzo[a]anthracene	420		584	931		ug/Kg	☼	88	45 - 110	1	31
Benzo[b]fluoranthene	420		584	836		ug/Kg	☼	72	37 - 108	18	28
Benzo[k]fluoranthene	250		584	673		ug/Kg	☼	73	39 - 115	5	42
Benzo[a]pyrene	460		584	926		ug/Kg	☼	80	42 - 114	8	31
Bis(2-chloroethyl)ether	ND		584	323		ug/Kg	☼	55	40 - 100	11	33
Bis(2-ethylhexyl) phthalate	99	J	584	547		ug/Kg	☼	77	41 - 121	2	31
Butyl benzyl phthalate	ND		584	472		ug/Kg	☼	81	40 - 117	6	34
Carbazole	38		584	495		ug/Kg	☼	78	42 - 114	12	35
Chrysene	440		584	888		ug/Kg	☼	77	44 - 108	8	31
2-Chloronaphthalene	ND		584	438		ug/Kg	☼	75	40 - 104	7	34
2-Chlorophenol	ND		584	394		ug/Kg	☼	67	40 - 105	5	37

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 180-5048-2 MSD
Matrix: Sediment
Analysis Batch: 18786

Client Sample ID: CH-2011-MU3-G2
Prep Type: Total/NA
Prep Batch: 18459

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dichlorophenol	ND		584	481		ug/Kg	☼	82	44 - 110	4	27
2,4-Dimethylphenol	ND		584	461		ug/Kg	☼	79	39 - 106	8	42
2,4-Dinitrophenol	ND		584	ND	F	ug/Kg	☼	0	19 - 140	NC	43
2,4-Dinitrotoluene	ND		584	466		ug/Kg	☼	80	48 - 118	15	33
2,6-Dinitrotoluene	ND		584	523		ug/Kg	☼	90	47 - 119	10	30
2-Methylnaphthalene	34		584	429		ug/Kg	☼	68	43 - 105	16	34
2-Methylphenol	ND		584	403		ug/Kg	☼	69	41 - 104	7	37
2-Nitroaniline	ND		584	546	J	ug/Kg	☼	93	41 - 118	5	33
2,2'-oxybis[1-chloropropane]	ND		584	385		ug/Kg	☼	66	37 - 105	2	31
2,4,5-Trichlorophenol	ND		584	446		ug/Kg	☼	76	42 - 110	3	35
2,4,6-Trichlorophenol	ND		584	498		ug/Kg	☼	85	43 - 111	8	36
Methylphenol, 3 & 4	ND		1170	907		ug/Kg	☼	78	43 - 107	12	36
4-Chloroaniline	ND		584	420		ug/Kg	☼	72	33 - 102	13	28
Dibenz(a,h)anthracene	84		584	526		ug/Kg	☼	76	34 - 131	7	32
Dibenzofuran	40	J	584	489		ug/Kg	☼	77	42 - 106	7	33
Di-n-butyl phthalate	ND		584	476		ug/Kg	☼	82	44 - 120	3	34
Diethyl phthalate	ND		584	492		ug/Kg	☼	84	44 - 113	7	32
Dimethyl phthalate	ND		584	464		ug/Kg	☼	79	44 - 111	9	34
Di-n-octyl phthalate	ND		584	457		ug/Kg	☼	78	35 - 129	9	33
3,3'-Dichlorobenzidine	ND		584	212		ug/Kg	☼	36	24 - 113	3	30
Fluoranthene	750		584	1210		ug/Kg	☼	80	40 - 118	8	23
Fluorene	76		584	560		ug/Kg	☼	83	43 - 110	9	37
Hexachlorobenzene	ND		584	453		ug/Kg	☼	77	42 - 110	13	29
Hexachlorocyclopentadiene	ND		584	33.4	J F	ug/Kg	☼	6	10 - 150	32	33
Hexachloroethane	ND		584	257		ug/Kg	☼	44	40 - 102	8	34
Indeno[1,2,3-cd]pyrene	230		584	719		ug/Kg	☼	83	34 - 130	5	30
Isophorone	ND		584	391		ug/Kg	☼	67	39 - 114	9	33
Naphthalene	45		584	427		ug/Kg	☼	65	42 - 104	4	25
Nitrobenzene	ND		584	361		ug/Kg	☼	62	40 - 109	10	31
N-Nitrosodiphenylamine	ND		584	506		ug/Kg	☼	87	41 - 110	8	32
N-Nitrosodi-n-propylamine	ND		584	365		ug/Kg	☼	62	42 - 108	15	32
Pyrene	730		584	1170		ug/Kg	☼	75	39 - 113	6	28
Phenol	ND		584	411		ug/Kg	☼	70	39 - 105	2	40
Phenanthrene	530		584	961		ug/Kg	☼	74	41 - 107	13	20
Pentachlorophenol	ND		584	213		ug/Kg	☼	36	18 - 125	20	34
Benzyl alcohol	ND		584	678		ug/Kg	☼	116	18 - 129	4	41
Benzoic acid	ND		584	ND	F	ug/Kg	☼	0	10 - 93	NC	36

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*82*		*21 - 116*
2-Fluorophenol	*67*		*28 - 107*
Phenol-d5	*75*		*30 - 112*
Nitrobenzene-d5	*66*		*27 - 110*
2-Fluorobiphenyl	*70*		*28 - 108*
Terphenyl-d14	*76*		*21 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 180-19224/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		1.0	0.089	ug/L		11/01/11 09:10	11/02/11 13:05	1
Benzo[a]pyrene	ND		0.20	0.013	ug/L		11/01/11 09:10	11/02/11 13:05	1
Bis(2-ethylhexyl) phthalate	ND		2.0	1.3	ug/L		11/01/11 09:10	11/02/11 13:05	1
Hexachlorocyclopentadiene	ND		1.0	0.052	ug/L		11/01/11 09:10	11/02/11 13:05	1
Phenol	ND		0.20	0.058	ug/L		11/01/11 09:10	11/02/11 13:05	1
Pentachlorophenol	ND		1.0	0.066	ug/L		11/01/11 09:10	11/02/11 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*79*		*16 - 122*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
2-Fluorophenol	*77*		*10 - 111*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Phenol-d5	*77*		*15 - 112*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Nitrobenzene-d5	*68*		*23 - 112*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
2-Fluorobiphenyl	*67*		*19 - 107*	*11/01/11 09:10*	*11/02/11 13:05*	*1*
Terphenyl-d14	*66*		*10 - 132*	*11/01/11 09:10*	*11/02/11 13:05*	*1*

Lab Sample ID: LCS 180-19224/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	20.0	24.7		ug/L		124	30 - 150
Benzo[a]pyrene	20.0	14.4		ug/L		72	26 - 108
Bis(2-ethylhexyl) phthalate	20.0	13.3		ug/L		67	20 - 116
Hexachlorocyclopentadiene	20.0	16.5		ug/L		83	36 - 115
Phenol	20.0	14.1		ug/L		71	32 - 95
Pentachlorophenol	20.0	15.2		ug/L		76	15 - 111

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*92*		*16 - 122*
2-Fluorophenol	*81*		*10 - 111*
Phenol-d5	*81*		*15 - 112*
Nitrobenzene-d5	*74*		*23 - 112*
2-Fluorobiphenyl	*71*		*19 - 107*
Terphenyl-d14	*74*		*10 - 132*

Lab Sample ID: LCSD 180-19224/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	20.0	25.8		ug/L		129	30 - 150	4	35
Benzo[a]pyrene	20.0	14.5		ug/L		73	26 - 108	1	40
Bis(2-ethylhexyl) phthalate	20.0	13.7		ug/L		68	20 - 116	3	40
Hexachlorocyclopentadiene	20.0	17.9		ug/L		89	36 - 115	8	47
Phenol	20.0	14.8		ug/L		74	32 - 95	5	39
Pentachlorophenol	20.0	15.2		ug/L		76	15 - 111	0	42

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 180-19224/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19538 — **Prep Batch: 19224**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol	92		16 - 122
2-Fluorophenol	82		10 - 111
Phenol-d5	83		15 - 112
Nitrobenzene-d5	76		23 - 112
2-Fluorobiphenyl	74		19 - 107
Terphenyl-d14	76		10 - 132

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: LB 180-19073/1-A LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	ND		100	100	mg/Kg		10/30/11 13:42	10/30/11 20:05	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bis (2-ethoxyethyl) ether (Surr)	81		40 - 140	10/30/11 13:42	10/30/11 20:05	1

Lab Sample ID: LCS 180-19073/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene glycol	200	136		mg/Kg		68	40 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Bis (2-ethoxyethyl) ether (Surr)	83		40 - 140

Lab Sample ID: LCSD 180-19073/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19633 — **Prep Batch: 19073**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene glycol	200	138		mg/Kg		69	40 - 140	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Bis (2-ethoxyethyl) ether (Surr)	83		40 - 140

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.0013	0.00098	ug/L		10/27/11 13:35	10/31/11 13:55	1
Chlordane (technical)	ND		0.013	0.0017	ug/L		10/27/11 13:35	10/31/11 13:55	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 180-18835/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	ND		0.0013	0.00096	ug/L		10/27/11 13:35	10/31/11 13:55	1
gamma-BHC (Lindane)	ND		0.0013	0.00080	ug/L		10/27/11 13:35	10/31/11 13:55	1
gamma-Chlordane	ND		0.0013	0.00096	ug/L		10/27/11 13:35	10/31/11 13:55	1
Heptachlor	ND		0.0013	0.00099	ug/L		10/27/11 13:35	10/31/11 13:55	1
Heptachlor epoxide	ND		0.0013	0.00097	ug/L		10/27/11 13:35	10/31/11 13:55	1
Methoxychlor	ND		0.0025	0.00091	ug/L		10/27/11 13:35	10/31/11 13:55	1
Toxaphene	ND		0.10	0.019	ug/L		10/27/11 13:35	10/31/11 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
Tetrachloro-m-xylene	*79*		*60 - 111*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
DCB Decachlorobiphenyl (Surr)	*78*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:55*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*56 - 122*	*10/27/11 13:35*	*10/31/11 13:55*	*1*

Lab Sample ID: LCS 180-18835/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	0.0250	0.0188		ug/L		75	59 - 114
Endrin	0.0250	0.0193		ug/L		77	31 - 138
gamma-BHC (Lindane)	0.0250	0.0186		ug/L		75	57 - 110
gamma-Chlordane	0.0250	0.0186		ug/L		75	60 - 114
Heptachlor	0.0250	0.0183		ug/L		73	63 - 120
Heptachlor epoxide	0.0250	0.0188		ug/L		75	60 - 120
Methoxychlor	0.0250	0.0174		ug/L		69	35 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*60 - 111*
Tetrachloro-m-xylene	*82*		*60 - 111*
DCB Decachlorobiphenyl (Surr)	*80*		*56 - 122*
DCB Decachlorobiphenyl (Surr)	*100*		*56 - 122*

Lab Sample ID: LCSD 180-18835/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19205 — **Prep Batch: 18835**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-Chlordane	0.0250	0.0193		ug/L		77	59 - 114	2	21
Endrin	0.0250	0.0193		ug/L		77	31 - 138	0	24
gamma-BHC (Lindane)	0.0250	0.0189		ug/L		76	57 - 110	2	21
gamma-Chlordane	0.0250	0.0186		ug/L		74	60 - 114	0	21
Heptachlor	0.0250	0.0187		ug/L		75	63 - 120	2	25
Heptachlor epoxide	0.0250	0.0189		ug/L		76	60 - 120	1	20
Methoxychlor	0.0250	0.0178		ug/L		71	35 - 137	3	27

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*80*		*60 - 111*
Tetrachloro-m-xylene	*82*		*60 - 111*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 180-18835/3-A
Matrix: Water
Analysis Batch: 19205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18835

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	78		56 - 122
DCB Decachlorobiphenyl (Surr)	83		56 - 122

Lab Sample ID: MB 180-19080/1-B
Matrix: Sediment
Analysis Batch: 19915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
alpha-BHC	ND		0.85	0.14	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
alpha-Chlordane	ND		0.85	0.17	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
beta-BHC	ND		0.85	0.22	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDD	ND		0.85	0.050	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDE	ND		0.85	0.077	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
2,4'-DDT	ND		0.85	0.072	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDD	ND		0.85	0.11	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDE	ND		0.85	0.13	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
4,4'-DDT	ND		0.85	0.12	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Chlordane (technical)	ND		8.5	0.37	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Dieldrin	ND		0.85	0.14	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan I	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan II	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endosulfan sulfate	ND		0.85	0.087	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin aldehyde	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Endrin ketone	ND		0.85	0.13	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
gamma-BHC (Lindane)	ND		0.85	0.15	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
gamma-Chlordane	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Heptachlor	ND		0.85	0.19	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Heptachlor epoxide	ND		0.85	0.16	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Methoxychlor	ND		1.7	0.17	ug/Kg		10/31/11 04:38	11/03/11 19:15	1
Toxaphene	ND		34	5.6	ug/Kg		10/31/11 04:38	11/03/11 19:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82		45 - 130	10/31/11 04:38	11/03/11 19:15	1
DCB Decachlorobiphenyl (Surr)	82		45 - 130	10/31/11 04:38	11/03/11 19:15	1
Tetrachloro-m-xylene	71		45 - 130	10/31/11 04:38	11/03/11 19:15	1
Tetrachloro-m-xylene	75		45 - 130	10/31/11 04:38	11/03/11 19:15	1

Lab Sample ID: LCS 180-19080/2-B
Matrix: Sediment
Analysis Batch: 19915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	16.7	14.7		ug/Kg		88	70 - 123
alpha-BHC	16.7	15.0		ug/Kg		90	59 - 127
alpha-Chlordane	16.7	14.6		ug/Kg		88	71 - 130
beta-BHC	16.7	14.1		ug/Kg		84	70 - 138
4,4'-DDD	16.7	14.2		ug/Kg		85	70 - 135

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 180-19080/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19915 — **Prep Batch: 19080**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDE	16.7	15.0		ug/Kg		90	70 - 133
4,4'-DDT	16.7	14.7		ug/Kg		88	61 - 126
Dieldrin	16.7	15.1		ug/Kg		91	70 - 123
Endosulfan I	16.7	14.4		ug/Kg		87	70 - 126
Endosulfan II	16.7	13.6		ug/Kg		81	70 - 128
Endosulfan sulfate	16.7	12.6		ug/Kg		76	55 - 140
Endrin	16.7	14.6		ug/Kg		88	70 - 127
Endrin aldehyde	16.7	11.5		ug/Kg		69	65 - 122
Endrin ketone	16.7	14.2		ug/Kg		85	70 - 132
gamma-BHC (Lindane)	16.7	14.5		ug/Kg		87	66 - 124
gamma-Chlordane	16.7	14.2		ug/Kg		85	68 - 123
Heptachlor	16.7	14.2		ug/Kg		85	70 - 128
Heptachlor epoxide	16.7	14.4		ug/Kg		87	69 - 131
Methoxychlor	16.7	13.6		ug/Kg		82	70 - 143

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 130*
DCB Decachlorobiphenyl (Surr)	*95*		*45 - 130*
Tetrachloro-m-xylene	*96*		*45 - 130*
Tetrachloro-m-xylene	*94*		*45 - 130*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-19080/1-B — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1221	ND		8.3	1.6	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1232	ND		8.3	1.4	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1242	ND		8.3	1.4	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1248	ND		8.3	0.79	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1254	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
PCB-1260	ND		8.3	1.2	ug/Kg		10/31/11 04:38	11/09/11 03:31	1
Polychlorinated biphenyls, Total	ND		8.3	1.8	ug/Kg		10/31/11 04:38	11/09/11 03:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 03:31*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*35 - 140*	*10/31/11 04:38*	*11/09/11 03:31*	*1*

Lab Sample ID: LCS 180-19080/5-B — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20521 — **Prep Batch: 19080**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	667	586		ug/Kg		88	55 - 130
PCB-1260	667	577		ug/Kg		87	54 - 130

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 180-19080/5-B
Matrix: Sediment
Analysis Batch: 20521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19080

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	96		35 - 140
DCB Decachlorobiphenyl (Surr)	98		35 - 140

Lab Sample ID: 180-5048-2 MS
Matrix: Sediment
Analysis Batch: 20521

Client Sample ID: CH-2011-MU3-G2
Prep Type: Total/NA
Prep Batch: 19080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	22		1170	904		ug/Kg	☼	75	55 - 130
PCB-1260	ND		1170	915		ug/Kg	☼	78	54 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	62		35 - 140
DCB Decachlorobiphenyl (Surr)	87		35 - 140

Lab Sample ID: 180-5048-2 MSD
Matrix: Sediment
Analysis Batch: 20521

Client Sample ID: CH-2011-MU3-G2
Prep Type: Total/NA
Prep Batch: 19080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	22		1160	902		ug/Kg	☼	76	55 - 130	0	35
PCB-1260	ND		1160	914		ug/Kg	☼	79	54 - 130	0	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	61		35 - 140
DCB Decachlorobiphenyl (Surr)	86		35 - 140

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-18835/1-A
Matrix: Water
Analysis Batch: 19311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18835

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.010	0.0025	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1221	ND		0.010	0.0025	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1232	ND		0.010	0.0029	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1242	ND		0.010	0.0019	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1248	ND		0.010	0.0023	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1254	ND		0.010	0.0023	ug/L		10/27/11 13:35	10/28/11 23:05	1
PCB-1260	ND		0.010	0.0014	ug/L		10/27/11 13:35	10/28/11 23:05	1
Polychlorinated biphenyls, Total	ND		0.010	0.0029	ug/L		10/27/11 13:35	10/28/11 23:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		47 - 150	10/27/11 13:35	10/28/11 23:05	1
DCB Decachlorobiphenyl (Surr)	85		50 - 140	10/27/11 13:35	10/28/11 23:05	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 180-18835/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.756		ug/L		76	60 - 110
PCB-1260	1.00	0.741		ug/L		74	60 - 111

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*89*		*47 - 150*
DCB Decachlorobiphenyl (Surr)	*86*		*50 - 140*

Lab Sample ID: LCSD 180-18835/5-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19311 — **Prep Batch: 18835**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.00	0.793		ug/L		79	60 - 110	5	27
PCB-1260	1.00	0.770		ug/L		77	60 - 111	4	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*93*		*47 - 150*
DCB Decachlorobiphenyl (Surr)	*89*		*50 - 140*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 180-18160/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18813 — **Prep Batch: 18160**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.5	ug/Kg		10/21/11 04:22	10/26/11 21:29	20
2,4-D	ND		80	5.5	ug/Kg		10/21/11 04:22	10/26/11 21:29	20
Dalapon	ND		90	7.1	ug/Kg		10/21/11 04:22	10/26/11 21:29	20
Dinoseb	ND		12	4.5	ug/Kg		10/21/11 04:22	10/26/11 21:29	20
Silvex (2,4,5-TP)	ND		20	2.1	ug/Kg		10/21/11 04:22	10/26/11 21:29	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*76*		*42 - 140*	*10/21/11 04:22*	*10/26/11 21:29*	*20*

Lab Sample ID: LCS 180-18160/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18813 — **Prep Batch: 18160**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	80.0	49.1		ug/Kg		61	30 - 140
2,4-D	320	152		ug/Kg		48	30 - 140
Dalapon	160	89.0	J	ug/Kg		56	36 - 120
Dinoseb	48.0	43.8		ug/Kg		91	10 - 140
Silvex (2,4,5-TP)	80.0	58.2		ug/Kg		73	40 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*85*		*42 - 140*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 180-5036-A-7-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18815 — **Prep Batch: 18160**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		133	84.0		ug/Kg	☼	63	30 - 140
2,4-D	ND		533	277		ug/Kg	☼	52	30 - 140
Dinoseb	ND		79.9	22.7		ug/Kg	☼	28	10 - 140

Lab Sample ID: 180-5036-A-7-A MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18813 — **Prep Batch: 18160**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dalapon	ND		266	153		ug/Kg	☼	58	36 - 120
Silvex (2,4,5-TP)	ND		133	91.1		ug/Kg	☼	68	40 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*78*		*42 - 140*

Lab Sample ID: 180-5036-A-7-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18815 — **Prep Batch: 18160**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		133	86.6		ug/Kg	☼	65	30 - 140	3	30
2,4-D	ND		533	280		ug/Kg	☼	52	30 - 140	1	30
Dalapon	ND		266	159		ug/Kg	☼	60	36 - 120	4	30
Dinoseb	ND		79.9	29.7		ug/Kg	☼	37	10 - 140	27	30
Silvex (2,4,5-TP)	ND		133	93.6		ug/Kg	☼	70	40 - 130	7	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*79*		*42 - 140*

Lab Sample ID: MB 180-18845/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		4.0	0.45	ug/L		10/27/11 16:00	10/30/11 14:16	20
Dalapon	ND		5.0	0.69	ug/L		10/27/11 16:00	10/30/11 14:16	20
Dinoseb	ND		0.90	0.13	ug/L		10/27/11 16:00	10/30/11 14:16	20
Silvex (2,4,5-TP)	ND		1.0	0.11	ug/L		10/27/11 16:00	10/30/11 14:16	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*42*		*32 - 140*	*10/27/11 16:00*	*10/30/11 14:16*	*20*

Lab Sample ID: LCS 180-18845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	16.0	7.64		ug/L		48	32 - 140
Dalapon	8.00	4.09	J	ug/L		51	32 - 140

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 180-18845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dinoseb	2.40	1.54		ug/L		64	10 - 140
Silvex (2,4,5-TP)	4.00	2.52		ug/L		63	32 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*53*		*32 - 140*

Lab Sample ID: LCSD 180-18845/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19089 — **Prep Batch: 18845**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	16.0	9.44		ug/L		59	32 - 140	21	30
Dalapon	8.00	5.32		ug/L		66	32 - 140	26	30
Dinoseb	2.40	1.74		ug/L		73	10 - 140	12	30
Silvex (2,4,5-TP)	4.00	3.09		ug/L		77	32 - 140	20	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*66*		*32 - 140*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 180-19329/15-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19544 — **Prep Batch: 19329**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 18:40	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 18:40	1
Boron	ND		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Barium	ND		0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 18:40	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 18:40	1
Calcium	0.0134	J	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 18:40	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Cobalt	0.00106	J	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 18:40	1
Chromium	ND		0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 18:40	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 18:40	1
Iron	ND		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 18:40	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 18:40	1
Magnesium	ND		5.0	0.021	mg/L		11/01/11 16:58	11/02/11 18:40	1
Manganese	ND		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 18:40	1
Sodium	ND		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 18:40	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 18:40	1
Lead	ND		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 18:40	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 18:40	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 18:40	1
Vanadium	ND		0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 18:40	1
Zinc	0.00523	J	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 18:40	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 180-19329/16-A
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.0500	0.0518		mg/L		104	
Arsenic	2.00	2.02		mg/L		101	
Boron	1.00	1.01		mg/L		101	
Barium	2.00	2.07		mg/L		104	
Beryllium	0.0500	0.0515		mg/L		103	
Calcium	50.0	51.0		mg/L		102	
Cadmium	0.0500	0.0492		mg/L		98	
Cobalt	0.500	0.495		mg/L		99	
Chromium	0.200	0.206		mg/L		103	
Copper	0.250	0.261		mg/L		104	
Iron	1.00	0.922		mg/L		92	
Potassium	50.0	49.5		mg/L		99	
Magnesium	50.0	50.3		mg/L		101	
Manganese	0.500	0.510		mg/L		102	
Sodium	50.0	50.5		mg/L		101	
Nickel	0.500	0.495		mg/L		99	
Lead	0.500	0.498		mg/L		100	
Antimony	0.500	0.512		mg/L		102	
Selenium	2.00	1.95		mg/L		98	
Thallium	2.00	2.03		mg/L		101	
Vanadium	0.500	0.517		mg/L		103	
Zinc	0.500	0.517		mg/L		103	

Lab Sample ID: LB 180-18692/14-B LB
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Method Blank
Prep Type: SPLP East
Prep Batch: 19329

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00068	mg/L		11/01/11 16:58	11/02/11 18:46	1
Arsenic	ND		0.010	0.0027	mg/L		11/01/11 16:58	11/02/11 18:46	1
Boron	ND		0.20	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Barium	ND		0.20	0.00062	mg/L		11/01/11 16:58	11/02/11 18:46	1
Beryllium	ND		0.0040	0.00023	mg/L		11/01/11 16:58	11/02/11 18:46	1
Calcium	0.0266	J	5.0	0.0097	mg/L		11/01/11 16:58	11/02/11 18:46	1
Cadmium	ND		0.0050	0.00013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Cobalt	0.000580	J	0.050	0.00040	mg/L		11/01/11 16:58	11/02/11 18:46	1
Chromium	0.000890	J	0.0050	0.00057	mg/L		11/01/11 16:58	11/02/11 18:46	1
Copper	ND		0.025	0.0027	mg/L		11/01/11 16:58	11/02/11 18:46	1
Iron	ND		0.10	0.012	mg/L		11/01/11 16:58	11/02/11 18:46	1
Potassium	ND		5.0	0.75	mg/L		11/01/11 16:58	11/02/11 18:46	1
Magnesium	ND		5.0	0.021	mg/L		11/01/11 16:58	11/02/11 18:46	1
Manganese	ND		0.015	0.00068	mg/L		11/01/11 16:58	11/02/11 18:46	1
Sodium	ND		5.0	0.22	mg/L		11/01/11 16:58	11/02/11 18:46	1
Nickel	ND		0.040	0.0016	mg/L		11/01/11 16:58	11/02/11 18:46	1
Lead	ND		0.0030	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Antimony	ND		0.010	0.0013	mg/L		11/01/11 16:58	11/02/11 18:46	1
Selenium	ND		0.0050	0.0030	mg/L		11/01/11 16:58	11/02/11 18:46	1
Thallium	ND		0.010	0.0024	mg/L		11/01/11 16:58	11/02/11 18:46	1
Vanadium	ND		0.050	0.0019	mg/L		11/01/11 16:58	11/02/11 18:46	1
Zinc	0.00357	J	0.020	0.0025	mg/L		11/01/11 16:58	11/02/11 18:46	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 180-5172-A-4-F MS
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Matrix Spike
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		0.0500	0.0498		mg/L		100	
Arsenic	0.0035	J	2.00	1.95		mg/L		97	
Boron	0.31		1.00	1.30		mg/L		99	
Barium	0.014	J	2.00	2.01		mg/L		100	
Beryllium	ND		0.0500	0.0492		mg/L		98	
Calcium	22	B	50.0	71.9		mg/L		99	
Cadmium	ND		0.0500	0.0470		mg/L		94	
Cobalt	0.0012	J B	0.500	0.475		mg/L		95	
Chromium	0.0032	J B	0.200	0.201		mg/L		99	
Copper	ND		0.250	0.253		mg/L		101	
Iron	0.93		1.00	2.06		mg/L		112	
Potassium	1.1	J	50.0	50.2		mg/L		98	
Magnesium	2.5	J	50.0	51.2		mg/L		97	
Manganese	0.0090	J	0.500	0.500		mg/L		98	
Sodium	18		50.0	67.0		mg/L		97	
Nickel	ND		0.500	0.474		mg/L		95	
Lead	0.0026	J	0.500	0.478		mg/L		95	
Antimony	ND		0.500	0.495		mg/L		99	
Selenium	ND		2.00	1.88		mg/L		94	
Thallium	ND		2.00	1.94		mg/L		97	
Vanadium	0.0031	J	0.500	0.500		mg/L		99	
Zinc	0.0081	J B	0.500	0.505		mg/L		99	

Lab Sample ID: 180-5172-A-4-G MSD
Matrix: Sediment
Analysis Batch: 19544

Client Sample ID: Matrix Spike Duplicate
Prep Type: SPLP East
Prep Batch: 19329

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		0.0500	0.0518		mg/L		104		3.97	
Arsenic	0.0035	J	2.00	2.03		mg/L		101		3.92	
Boron	0.31		1.00	1.36		mg/L		105		4.24	
Barium	0.014	J	2.00	2.09		mg/L		104		3.65	
Beryllium	ND		0.0500	0.0514		mg/L		103		4.42	
Calcium	22	B	50.0	75.5		mg/L		106		4.82	
Cadmium	ND		0.0500	0.0491		mg/L		98		4.45	
Cobalt	0.0012	J B	0.500	0.494		mg/L		98		3.87	
Chromium	0.0032	J B	0.200	0.209		mg/L		103		4.11	
Copper	ND		0.250	0.262		mg/L		105		3.86	
Iron	0.93		1.00	2.16		mg/L		123		5.08	
Potassium	1.1	J	50.0	51.8		mg/L		101		3.09	
Magnesium	2.5	J	50.0	53.6		mg/L		102		4.51	
Manganese	0.0090	J	0.500	0.521		mg/L		102		4.05	
Sodium	18		50.0	69.6		mg/L		102		3.74	
Nickel	ND		0.500	0.493		mg/L		99		4.03	
Lead	0.0026	J	0.500	0.498		mg/L		99		3.97	
Antimony	ND		0.500	0.516		mg/L		103		4.14	
Selenium	ND		2.00	1.96		mg/L		98		4.21	
Thallium	ND		2.00	2.02		mg/L		101		3.86	
Vanadium	0.0031	J	0.500	0.522		mg/L		104		4.37	
Zinc	0.0081	J B	0.500	0.526		mg/L		104		4.07	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-18624/1-A
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18624

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.050	0.0035	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Antimony	0.0223	J	0.10	0.0013	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Beryllium	ND		0.050	0.0038	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Thallium	ND		0.050	0.0010	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Iron	0.298	J	2.5	0.18	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Nickel	ND		0.050	0.0057	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Silver	ND		0.050	0.0020	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Arsenic	ND		0.050	0.0091	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Copper	ND		0.10	0.017	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Lead	0.00750	J	0.050	0.0019	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Zinc	ND		0.25	0.032	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Selenium	ND		0.25	0.025	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Manganese	ND		0.25	0.0052	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Chromium	0.00850	J	0.10	0.0031	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Cobalt	ND		0.025	0.00075	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Sodium	ND		5.0	0.68	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Potassium	ND		5.0	0.68	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Barium	ND		0.50	0.0054	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Calcium	ND		5.0	0.66	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Vanadium	0.00490	J	0.050	0.0040	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Magnesium	0.516	J	5.0	0.094	mg/Kg		10/26/11 09:54	11/08/11 21:31	1
Boron	0.108	J	0.25	0.019	mg/Kg		10/26/11 09:54	11/08/11 21:31	1

Lab Sample ID: LCS 180-18624/2-A
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18624

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	2.50	2.35		mg/Kg		94	80 - 120
Antimony	25.0	23.0		mg/Kg		92	80 - 120
Beryllium	2.50	2.33		mg/Kg		93	80 - 120
Thallium	2.50	2.25		mg/Kg		90	80 - 120
Iron	50.0	51.3		mg/Kg		103	80 - 120
Nickel	25.0	23.0		mg/Kg		92	80 - 120
Silver	2.50	2.34		mg/Kg		94	80 - 120
Arsenic	2.00	1.66		mg/Kg		83	80 - 120
Copper	12.5	11.8		mg/Kg		95	80 - 120
Lead	1.00	0.914		mg/Kg		91	80 - 120
Zinc	25.0	23.7		mg/Kg		95	80 - 120
Selenium	0.500	0.550		mg/Kg		110	80 - 120
Manganese	25.0	25.6		mg/Kg		102	80 - 120
Chromium	10.0	9.60		mg/Kg		96	80 - 120
Cobalt	25.0	23.4		mg/Kg		94	80 - 120
Sodium	2500	2470		mg/Kg		99	80 - 120
Potassium	2500	2460		mg/Kg		99	80 - 120
Barium	100	88.2		mg/Kg		88	80 - 120
Calcium	2500	2460		mg/Kg		98	80 - 120
Vanadium	25.0	23.9		mg/Kg		96	80 - 120
Magnesium	2500	2530		mg/Kg		101	80 - 120
Boron	50.0	50.4		mg/Kg		101	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-5048-1 MS
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: CH-2011-MU3-G1
Prep Type: Total/NA
Prep Batch: 18624

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.54		4.48	4.72		mg/Kg	☼	93	75 - 125
Antimony	0.33	B	44.8	27.3	F	mg/Kg	☼	60	75 - 125
Beryllium	0.41		4.48	4.56		mg/Kg	☼	93	75 - 125
Thallium	0.31		4.48	4.56		mg/Kg	☼	95	75 - 125
Iron	18000	B	89.6	19400	4	mg/Kg	☼	1618	75 - 125
Nickel	16		44.8	51.7		mg/Kg	☼	79	75 - 125
Silver	0.14		4.48	4.20		mg/Kg	☼	91	75 - 125
Arsenic	5.8		3.58	8.82		mg/Kg	☼	85	75 - 125
Copper	26		22.4	42.5	F	mg/Kg	☼	73	75 - 125
Lead	37	B	1.79	42.5	4	mg/Kg	☼	321	75 - 125
Zinc	96		44.8	135		mg/Kg	☼	87	75 - 125
Selenium	0.51		0.896	1.29		mg/Kg	☼	87	75 - 125
Manganese	540		44.8	594	4	mg/Kg	☼	118	75 - 125
Chromium	21	B	17.9	39.8		mg/Kg	☼	106	75 - 125
Cobalt	7.2		44.8	43.8		mg/Kg	☼	82	75 - 125
Sodium	170		4480	4460		mg/Kg	☼	96	75 - 125
Potassium	1500		4480	7050		mg/Kg	☼	124	75 - 125
Barium	27		179	192		mg/Kg	☼	92	75 - 125
Calcium	79000		4480	82800	4	mg/Kg	☼	90	75 - 125
Vanadium	21	B	44.8	66.2		mg/Kg	☼	102	75 - 125
Magnesium	40000	B	4480	45300	4	mg/Kg	☼	107	75 - 125
Boron	13	B	89.6	109		mg/Kg	☼	108	75 - 125

Lab Sample ID: 180-5048-1 MSD
Matrix: Sediment
Analysis Batch: 20157

Client Sample ID: CH-2011-MU3-G1
Prep Type: Total/NA
Prep Batch: 18624

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.54		4.29	4.37		mg/Kg	☼	89	75 - 125	8	20
Antimony	0.33	B	42.9	25.2	F	mg/Kg	☼	58	75 - 125	8	20
Beryllium	0.41		4.29	4.18		mg/Kg	☼	88	75 - 125	9	20
Thallium	0.31		4.29	4.37		mg/Kg	☼	95	75 - 125	4	20
Iron	18000	B	85.8	18400	4	mg/Kg	☼	466	75 - 125	6	20
Nickel	16		42.9	50.6		mg/Kg	☼	80	75 - 125	2	20
Silver	0.14		4.29	3.90		mg/Kg	☼	88	75 - 125	7	20
Arsenic	5.8		3.43	8.54		mg/Kg	☼	80	75 - 125	3	20
Copper	26		21.5	39.9	F	mg/Kg	☼	64	75 - 125	6	20
Lead	37	B	1.72	38.9	4	mg/Kg	☼	128	75 - 125	9	20
Zinc	96		42.9	123	F	mg/Kg	☼	64	75 - 125	9	20
Selenium	0.51		0.858	1.16		mg/Kg	☼	75	75 - 125	11	20
Manganese	540		42.9	587	4	mg/Kg	☼	107	75 - 125	1	20
Chromium	21	B	17.2	36.5		mg/Kg	☼	92	75 - 125	9	20
Cobalt	7.2		42.9	41.4		mg/Kg	☼	80	75 - 125	6	20
Sodium	170		4290	4090		mg/Kg	☼	91	75 - 125	9	20
Potassium	1500		4290	6550		mg/Kg	☼	118	75 - 125	7	20
Barium	27		172	179		mg/Kg	☼	88	75 - 125	7	20
Calcium	79000		4290	85100	4	mg/Kg	☼	148	75 - 125	3	20
Vanadium	21	B	42.9	61.7		mg/Kg	☼	96	75 - 125	7	20
Magnesium	40000	B	4290	45500	4	mg/Kg	☼	117	75 - 125	0	20
Boron	13	B	85.8	104		mg/Kg	☼	107	75 - 125	5	20

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-18771/1-A
Matrix: Water
Analysis Batch: 19204

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 18771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.11	ug/L		10/27/11 11:48	10/31/11 14:44	1
Antimony	0.0640	J	2.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:44	1
Beryllium	ND		1.0	0.037	ug/L		10/27/11 11:48	10/31/11 14:44	1
Thallium	ND		1.0	0.015	ug/L		10/27/11 11:48	10/31/11 14:44	1
Iron	8.24	J	50	6.1	ug/L		10/27/11 11:48	10/31/11 14:44	1
Nickel	ND		1.0	0.17	ug/L		10/27/11 11:48	10/31/11 14:44	1
Silver	ND		1.0	0.036	ug/L		10/27/11 11:48	10/31/11 14:44	1
Arsenic	ND		1.0	0.29	ug/L		10/27/11 11:48	10/31/11 14:44	1
Copper	0.342	J	2.0	0.24	ug/L		10/27/11 11:48	10/31/11 14:44	1
Lead	0.0910	J	1.0	0.019	ug/L		10/27/11 11:48	10/31/11 14:44	1
Zinc	ND		5.0	0.96	ug/L		10/27/11 11:48	10/31/11 14:44	1
Selenium	ND		5.0	0.42	ug/L		10/27/11 11:48	10/31/11 14:44	1
Manganese	0.187	J	5.0	0.039	ug/L		10/27/11 11:48	10/31/11 14:44	1
Chromium	0.582	J	2.0	0.54	ug/L		10/27/11 11:48	10/31/11 14:44	1
Cobalt	ND		0.50	0.026	ug/L		10/27/11 11:48	10/31/11 14:44	1
Sodium	ND		100	3.8	ug/L		10/27/11 11:48	10/31/11 14:44	1
Potassium	ND		100	5.8	ug/L		10/27/11 11:48	10/31/11 14:44	1
Barium	ND		10	0.098	ug/L		10/27/11 11:48	10/31/11 14:44	1
Calcium	27.2	J	100	2.8	ug/L		10/27/11 11:48	10/31/11 14:44	1
Vanadium	0.589	J	1.0	0.082	ug/L		10/27/11 11:48	10/31/11 14:44	1
Magnesium	1.74	J	100	1.2	ug/L		10/27/11 11:48	10/31/11 14:44	1
Boron	ND		5.0	0.28	ug/L		10/27/11 11:48	10/31/11 14:44	1

Lab Sample ID: LCS 180-18771/2-A
Matrix: Water
Analysis Batch: 19204

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 18771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	50.5		ug/L		101	80 - 120
Antimony	500	511		ug/L		102	80 - 120
Beryllium	50.0	46.6		ug/L		93	80 - 120
Thallium	50.0	50.9		ug/L		102	80 - 120
Iron	1000	1010		ug/L		101	80 - 120
Nickel	500	491		ug/L		98	80 - 120
Silver	50.0	49.0		ug/L		98	80 - 120
Arsenic	40.0	39.5		ug/L		99	80 - 120
Copper	250	245		ug/L		98	80 - 120
Lead	20.0	21.1		ug/L		106	80 - 120
Zinc	500	510		ug/L		102	80 - 120
Selenium	10.0	8.72		ug/L		87	80 - 120
Manganese	500	489		ug/L		98	80 - 120
Chromium	200	197		ug/L		99	80 - 120
Cobalt	500	491		ug/L		98	80 - 120
Sodium	50000	43800		ug/L		88	80 - 120
Potassium	50000	46700		ug/L		93	80 - 120
Barium	2000	1880		ug/L		94	80 - 120
Calcium	50000	46400		ug/L		93	80 - 120
Vanadium	500	476		ug/L		95	80 - 120
Magnesium	50000	45200		ug/L		90	80 - 120
Boron	1000	871		ug/L		87	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-5257-C-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 19204 — **Prep Batch: 18771**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.11	J	50.0	50.3		ug/L		101	75 - 125
Antimony	0.78	J B	500	514		ug/L		103	75 - 125
Beryllium	0.038	J	50.0	45.6		ug/L		91	75 - 125
Thallium	ND		50.0	51.9		ug/L		104	75 - 125
Iron	52000	B	1000	52000	4	ug/L		39	75 - 125
Nickel	7.2		500	495		ug/L		97	75 - 125
Silver	ND		50.0	49.4		ug/L		99	75 - 125
Arsenic	41		40.0	79.2		ug/L		97	75 - 125
Copper	2.5	B	250	244		ug/L		97	75 - 125
Lead	1.2	B	20.0	22.4		ug/L		106	75 - 125
Zinc	10		500	505		ug/L		99	75 - 125
Selenium	1.3	J	10.0	11.7		ug/L		104	75 - 125
Chromium	2.0	B	200	194		ug/L		96	75 - 125
Cobalt	18		500	512		ug/L		99	75 - 125
Sodium	77000		50000	121000		ug/L		88	75 - 125
Potassium	16000		50000	62500		ug/L		94	75 - 125
Barium	440		2000	2350		ug/L		95	75 - 125
Calcium	180000	B	50000	230000		ug/L		97	75 - 125
Vanadium	2.2	B	500	479		ug/L		95	75 - 125
Magnesium	43000	B	50000	87000		ug/L		89	75 - 125
Boron	240		1000	1100		ug/L		86	75 - 125

Lab Sample ID: 180-5257-C-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 19204 — **Prep Batch: 18771**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.11	J	50.0	50.6		ug/L		101	75 - 125	1	20
Antimony	0.78	J B	500	512		ug/L		102	75 - 125	0	20
Beryllium	0.038	J	50.0	45.9		ug/L		92	75 - 125	1	20
Thallium	ND		50.0	52.9		ug/L		106	75 - 125	2	20
Iron	52000	B	1000	54300	4	ug/L		262	75 - 125	4	20
Nickel	7.2		500	504		ug/L		99	75 - 125	2	20
Silver	ND		50.0	49.8		ug/L		100	75 - 125	1	20
Arsenic	41		40.0	82.9		ug/L		106	75 - 125	5	20
Copper	2.5	B	250	250		ug/L		99	75 - 125	2	20
Lead	1.2	B	20.0	22.8		ug/L		108	75 - 125	2	20
Zinc	10		500	508		ug/L		100	75 - 125	1	20
Selenium	1.3	J	10.0	11.7		ug/L		105	75 - 125	1	20
Chromium	2.0	B	200	198		ug/L		98	75 - 125	2	20
Cobalt	18		500	518		ug/L		100	75 - 125	1	20
Sodium	77000		50000	125000		ug/L		96	75 - 125	4	20
Potassium	16000		50000	64200		ug/L		97	75 - 125	3	20
Barium	440		2000	2400		ug/L		98	75 - 125	2	20
Calcium	180000	B	50000	239000		ug/L		115	75 - 125	4	20
Vanadium	2.2	B	500	490		ug/L		98	75 - 125	2	20
Magnesium	43000	B	50000	90200		ug/L		95	75 - 125	4	20
Boron	240		1000	1130		ug/L		89	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-19610/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:43	1

Lab Sample ID: LCS 180-19610/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00239		mg/L		96	80 - 120

Lab Sample ID: MB 180-20177/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20250 — **Prep Batch: 20177**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		11/09/11 13:24	11/09/11 17:50	1

Lab Sample ID: LCS 180-20177/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20250 — **Prep Batch: 20177**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.38		ug/L		95	80 - 120

Lab Sample ID: 180-5335-C-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20250 — **Prep Batch: 20177**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		1.00	0.999		ug/L		100	75 - 125

Lab Sample ID: 180-5335-C-2-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 20250 — **Prep Batch: 20177**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	0.974		ug/L		97	75 - 125	3	20

Lab Sample ID: LB 180-18692/14-C LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000038	mg/L		11/03/11 13:38	11/03/11 17:47	1

Lab Sample ID: 180-5219-A-8-G MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.000948		mg/L		95	75 - 125

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-5219-A-8-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 19656 — **Prep Batch: 19610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00103		mg/L		103	75 - 125	8	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 180-18871/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18906 — **Prep Batch: 18871**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0055	mg/Kg		10/28/11 03:39	10/28/11 08:05	1

Lab Sample ID: LCS 180-18871/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18906 — **Prep Batch: 18871**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.208	0.213		mg/Kg		102	80 - 120

Lab Sample ID: 180-5048-1 MS — **Client Sample ID: CH-2011-MU3-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18906 — **Prep Batch: 18871**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.077		0.149	0.234		mg/Kg	☼	105	75 - 125

Lab Sample ID: 180-5048-1 MSD — **Client Sample ID: CH-2011-MU3-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18906 — **Prep Batch: 18871**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.077		0.151	0.245		mg/Kg	☼	112	75 - 125	5	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-18216/6 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18216

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0204	J	0.050	0.0063	mg/Kg			10/20/11 11:38	1
Fluoride	0.0215	J	0.050	0.015	mg/Kg			10/20/11 11:38	1
Chloride	ND		1.0	0.22	mg/Kg			10/20/11 11:38	1
Sulfate	ND		1.0	0.12	mg/Kg			10/20/11 11:38	1

Lab Sample ID: LCS 180-18216/5 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18216

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.51		mg/Kg		100	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 180-18216/5 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18216

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.50	2.60		mg/Kg		104	90 - 110
Chloride	50.0	49.6		mg/Kg		99	90 - 110
Sulfate	50.0	49.1		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 180-18216/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18216

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.67		mg/Kg		107	90 - 110	6	20
Fluoride	2.50	2.75		mg/Kg		110	90 - 110	6	20
Chloride	50.0	52.6		mg/Kg		105	90 - 110	6	20
Sulfate	50.0	52.7		mg/Kg		105	90 - 110	7	20

Lab Sample ID: MB 180-18783/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.043	mg/L			10/26/11 11:34	1
Fluoride	0.0238	J	0.050	0.014	mg/L			10/26/11 11:34	1
Chloride	ND		1.0	0.20	mg/L			10/26/11 11:34	1
Sulfate	ND		1.0	0.21	mg/L			10/26/11 11:34	1

Lab Sample ID: LCS 180-18783/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.47		mg/L		99	90 - 110
Fluoride	2.50	2.56		mg/L		102	90 - 110
Chloride	50.0	48.7		mg/L		97	90 - 110
Sulfate	50.0	48.3		mg/L		97	90 - 110

Lab Sample ID: LCSD 180-18783/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18783

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.50	2.45		mg/L		98	90 - 110	0	20
Fluoride	2.50	2.55		mg/L		102	90 - 110	1	20
Chloride	50.0	48.6		mg/L		97	90 - 110	0	20
Sulfate	50.0	48.1		mg/L		96	90 - 110	0	20

Lab Sample ID: LB3 180-18128/4-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 18216

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.206	J	0.50	0.063	mg/Kg			10/20/11 19:35	1
Fluoride	ND		0.50	0.15	mg/Kg			10/20/11 19:35	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LB3 180-18128/4-A LB3 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Soluble**
Analysis Batch: 18216

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10	2.2	mg/Kg			10/20/11 19:35	1
Sulfate	ND		10	1.2	mg/Kg			10/20/11 19:35	1

Method: 335.1 - Cyanide, Amenable

Lab Sample ID: 180-5048-1 MS — **Client Sample ID: CH-2011-MU3-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20927 — **Prep Batch: 20863**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	1.6	B	3.57	3.96		mg/Kg	☼	66	42 - 140

Lab Sample ID: 180-5048-1 MSD — **Client Sample ID: CH-2011-MU3-G1**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20927 — **Prep Batch: 20863**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	1.6	B	3.60	3.62		mg/Kg	☼	56	42 - 140	9	20

Lab Sample ID: MB 240-21099/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		10/28/11 15:42	10/28/11 16:40	1

Lab Sample ID: MB 240-21099/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		10/28/11 15:42	10/28/11 16:40	1

Lab Sample ID: LCS 240-21099/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0449	0.0418		mg/L		93	62 - 118

Lab Sample ID: MRL 240-21114/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21114

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0100	0.00794	J	mg/L		79	70 - 130

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: MB 240-21848/2-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:27	1

Lab Sample ID: MB 240-21848/3-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:27	1

Lab Sample ID: LCS 240-21848/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0449	0.0353		mg/L		79	62 - 118

Lab Sample ID: MRL 240-21886/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21886

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.0100	0.00992	J	mg/L		99	70 - 130

Lab Sample ID: 180-5172-G-9-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.22		0.0400	0.222	4	mg/L		15	42 - 140

Lab Sample ID: 180-5172-G-9-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 21114 — **Prep Batch: 21099**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.22		0.0400	0.223	4	mg/L		16	42 - 140	0	20

Lab Sample ID: LB 240-21620/14-C LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Non-amenable	ND		0.010	0.0050	mg/L		11/03/11 13:42	11/03/11 16:38	1

Lab Sample ID: 180-5219-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Non-amenable	0.075		0.0400	0.0710	F	mg/L		-11	42 - 140

Method: 335.1 - Cyanide, Amenable (Continued)

Lab Sample ID: 180-5219-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21886 — **Prep Batch: 21848**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Non-amenable	0.075		0.0400	0.0739	F	mg/L		-4	42 - 140	4	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-19643/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19738 — **Prep Batch: 19643**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.0660	J	0.10	0.033	mg/L		11/03/11 16:15	11/04/11 12:11	1

Lab Sample ID: LCS 180-19643/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19738 — **Prep Batch: 19643**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	2.00	1.80		mg/L		90	90 - 110

Lab Sample ID: 180-5272-J-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19738 — **Prep Batch: 19643**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	0.12	B	2.00	2.13		mg/L		101	90 - 110

Lab Sample ID: 180-5272-J-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 19738 — **Prep Batch: 19643**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia, distilled	0.12	B	2.00	2.03		mg/L		96	90 - 110	5	20

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 240-22720/10-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphate	ND		9.6	0.095	mg/Kg		11/10/11 08:45	11/10/11 14:22	1

Lab Sample ID: LCS 240-22720/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphate	519	585		mg/Kg		113	75 - 125

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: 180-5172-C-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphate	380		110	493		mg/Kg	☼	104	75 - 125

Lab Sample ID: 180-5172-C-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 22782 — **Prep Batch: 22720**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphate	380		106	484		mg/Kg	☼	99	75 - 125	2	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 180-18104/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18297 — **Prep Batch: 18104**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.40	0.10	mg/Kg		10/22/11 10:00	10/23/11 13:42	1

Lab Sample ID: LCSI 180-18104/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18297 — **Prep Batch: 18104**

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	708	640		mg/Kg		90	80 - 120

Lab Sample ID: LCSS 180-18104/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18297 — **Prep Batch: 18104**

Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.0	18.7		mg/Kg		93	80 - 120

Lab Sample ID: 180-4987-B-5-E MSS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18297 — **Prep Batch: 18104**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	3.1		24.4	24.5		mg/Kg	☼	88	75 - 125

Lab Sample ID: 180-4987-B-5-F MSI — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18297 — **Prep Batch: 18104**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	3.1		849	820		mg/Kg	☼	96	75 - 125

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 180-4987-B-5-G DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18297 — **Prep Batch: 18104**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cr (VI)	3.1			3.61		mg/Kg	☼			16	20

Lab Sample ID: MB 180-18751/11 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/27/11 10:10	1

Lab Sample ID: LCS 180-18751/10 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18751

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)			0.250	0.264		mg/L		106	85 - 115		

Lab Sample ID: MB 180-18905/4 — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18905

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:32	1

Lab Sample ID: LCS 180-18905/3 — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 18905

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)			0.250	0.249		mg/L		100	85 - 115		

Lab Sample ID: 180-5272-B-2 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 18751

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	ND		0.250	0.244		mg/L		98	85 - 115		

Lab Sample ID: 180-5272-B-2 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 18751

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.241		mg/L		96	85 - 115	1	20

Lab Sample ID: LB 180-18695/14-A LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0017	mg/L			10/28/11 15:33	1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 180-5219-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	ND		0.250	0.257		mg/L		103	85 - 115		

Lab Sample ID: 180-5219-A-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP East**
Analysis Batch: 18905

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND		0.250	0.245		mg/L		98	85 - 115	5	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-20863/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20928 — **Prep Batch: 20863**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.51	0.10	mg/Kg		10/27/11 11:39	10/27/11 14:02	1

Lab Sample ID: LCS 240-20863/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20928 — **Prep Batch: 20863**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			2.20	2.15		mg/Kg		98	68 - 123		

Lab Sample ID: 240-5219-G-5-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20928 — **Prep Batch: 20863**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		2.28	2.13		mg/Kg	☼	93	50 - 134		

Lab Sample ID: 240-5219-G-5-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 20928 — **Prep Batch: 20863**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		2.28	2.14		mg/Kg	☼	94	50 - 134	0	20

Lab Sample ID: MB 240-21087/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		10/28/11 13:17	10/28/11 15:38	1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 240-21087/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0470		mg/L		105	69 - 120

Lab Sample ID: MB 240-21648/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

Lab Sample ID: LCS 240-21648/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0433		mg/L		96	69 - 118

Lab Sample ID: MRL 240-21689/6 MRL — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 21689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.00877	J	mg/L		88	70 - 130

Lab Sample ID: 180-5048-6 MS — **Client Sample ID: CH-2011-MU3-COMP**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.0400	0.0405		mg/L		101	42 - 140

Lab Sample ID: 180-5048-6 MSD — **Client Sample ID: CH-2011-MU3-COMP**
Matrix: SET, Dissolved — **Prep Type: Dissolved**
Analysis Batch: 21110 — **Prep Batch: 21087**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.0400	0.0396		mg/L		99	42 - 140	2	20

Lab Sample ID: LB 240-21620/14-B LB — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		11/02/11 13:21	11/02/11 15:14	1

Lab Sample ID: 240-5399-D-40-B MS — **Client Sample ID: Matrix Spike**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.0400	0.0382		mg/L		96	42 - 140

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 240-5399-D-40-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment — **Prep Type: SPLP**
Analysis Batch: 21689 — **Prep Batch: 21648**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.0400	0.0377		mg/L		94	42 - 140	1	20

Method: 9040B - pH

Lab Sample ID: LCS 180-18790/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18790

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	6.990		SU		100	99 - 101		

Lab Sample ID: 180-5273-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18790

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.46			8.480		SU				0.2	2

Method: Moisture - Percent Moisture

Lab Sample ID: 180-5036-A-7 DU — **Client Sample ID: Duplicate**
Matrix: Sediment — **Prep Type: Total/NA**
Analysis Batch: 17973

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	40			39		%				3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-18748/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			10/27/11 09:13	1

Lab Sample ID: LCS 180-18748/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			413	386		mg/L		93	80 - 120		

Lab Sample ID: 180-5266-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 18748

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	680			691		mg/L				1	20

QC Association Summary

Client: FutureNet Group, Inc
Project/Site: Calument Harbor

TestAmerica Job ID: 180-5048-1

GC/MS VOA

Prep Batch: 18064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	5035	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	5035	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	5035	
LCS 180-18064/4-A	Lab Control Sample	Total/NA	Sediment	5035	
LCSD 180-18064/5-A	Lab Control Sample Dup	Total/NA	Sediment	5035	
MB 180-18064/1-A	Method Blank	Total/NA	Sediment	5035	

Analysis Batch: 18133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8260B	18064
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8260B	18064
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8260B	18064
LCS 180-18064/4-A	Lab Control Sample	Total/NA	Sediment	8260B	18064
LCSD 180-18064/5-A	Lab Control Sample Dup	Total/NA	Sediment	8260B	18064
MB 180-18064/1-A	Method Blank	Total/NA	Sediment	8260B	18064

Analysis Batch: 19457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	8260B	
180-5224-M-1 MS	Matrix Spike	Total/NA	Water	8260B	
180-5224-N-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 180-19457/8	Lab Control Sample	Total/NA	Water	8260B	
MB 180-19457/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 18459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	3541	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	3541	
180-5048-2 MS	CH-2011-MU3-G2	Total/NA	Sediment	3541	
180-5048-2 MSD	CH-2011-MU3-G2	Total/NA	Sediment	3541	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	3541	
LCS 180-18459/2-A	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-18459/1-A	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 18786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8270C LL	18459
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8270C LL	18459
180-5048-2 MS	CH-2011-MU3-G2	Total/NA	Sediment	8270C LL	18459
180-5048-2 MSD	CH-2011-MU3-G2	Total/NA	Sediment	8270C LL	18459
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8270C LL	18459
LCS 180-18459/2-A	Lab Control Sample	Total/NA	Sediment	8270C LL	18459
MB 180-18459/1-A	Method Blank	Total/NA	Sediment	8270C LL	18459

Prep Batch: 19224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	3520C	
LCS 180-19224/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 180-19224/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 180-19224/1-A	Method Blank	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Analysis Batch: 19538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	8270C LL	19224
LCS 180-19224/2-A	Lab Control Sample	Total/NA	Water	8270C LL	19224
LCSD 180-19224/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	19224
MB 180-19224/1-A	Method Blank	Total/NA	Water	8270C LL	19224

GC VOA

Prep Batch: 19073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	DILeach_Prep	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	DILeach_Prep	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	DILeach_Prep	
LB 180-19073/1-A LB	Method Blank	Total/NA	Sediment	DILeach_Prep	
LCS 180-19073/2-A	Lab Control Sample	Total/NA	Sediment	DILeach_Prep	
LCSD 180-19073/3-A	Lab Control Sample Dup	Total/NA	Sediment	DILeach_Prep	

Analysis Batch: 19633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8015C	19073
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8015C	19073
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8015C	19073
LB 180-19073/1-A LB	Method Blank	Total/NA	Sediment	8015C	19073
LCS 180-19073/2-A	Lab Control Sample	Total/NA	Sediment	8015C	19073
LCSD 180-19073/3-A	Lab Control Sample Dup	Total/NA	Sediment	8015C	19073

GC Semi VOA

Prep Batch: 18160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5036-A-7-A MS	Matrix Spike	Total/NA	Sediment	8151A	
180-5036-A-7-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8151A	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8151A	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8151A	
LCS 180-18160/2-A	Lab Control Sample	Total/NA	Sediment	8151A	
MB 180-18160/1-A	Method Blank	Total/NA	Sediment	8151A	

Analysis Batch: 18813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5036-A-7-A MS	Matrix Spike	Total/NA	Sediment	8151A	18160
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8151A	18160
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8151A	18160
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8151A	18160
LCS 180-18160/2-A	Lab Control Sample	Total/NA	Sediment	8151A	18160
MB 180-18160/1-A	Method Blank	Total/NA	Sediment	8151A	18160

Analysis Batch: 18815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5036-A-7-A MS	Matrix Spike	Total/NA	Sediment	8151A	18160
180-5036-A-7-B MSD	Matrix Spike Duplicate	Total/NA	Sediment	8151A	18160

GC Semi VOA (Continued)

Prep Batch: 18835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	3510C	
LCS 180-18835/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 180-18835/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-18835/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 180-18835/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 180-18835/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 18845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	8151A	
LCS 180-18845/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 180-18845/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 180-18845/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 19080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	3541	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	3541	
180-5048-2 MS	CH-2011-MU3-G2	Total/NA	Sediment	3541	
180-5048-2 MSD	CH-2011-MU3-G2	Total/NA	Sediment	3541	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	3541	
LCS 180-19080/2-B	Lab Control Sample	Total/NA	Sediment	3541	
LCS 180-19080/5-B	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 19089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	8151A	18845
LCS 180-18845/2-A	Lab Control Sample	Total/NA	Water	8151A	18845
LCSD 180-18845/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	18845
MB 180-18845/1-A	Method Blank	Total/NA	Water	8151A	18845

Analysis Batch: 19205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	8081A	18835
LCS 180-18835/2-A	Lab Control Sample	Total/NA	Water	8081A	18835
LCSD 180-18835/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	18835
MB 180-18835/1-A	Method Blank	Total/NA	Water	8081A	18835

Analysis Batch: 19311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	8082A	18835
LCS 180-18835/4-A	Lab Control Sample	Total/NA	Water	8082A	18835
LCSD 180-18835/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	18835
MB 180-18835/1-A	Method Blank	Total/NA	Water	8082A	18835

Analysis Batch: 19915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8081A	19080
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8081A	19080
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8081A	19080
LCS 180-19080/2-B	Lab Control Sample	Total/NA	Sediment	8081A	19080

GC Semi VOA (Continued)

Analysis Batch: 19915 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	8081A	19080

Analysis Batch: 20521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	8082	19080
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	8082	19080
180-5048-2 MS	CH-2011-MU3-G2	Total/NA	Sediment	8082	19080
180-5048-2 MSD	CH-2011-MU3-G2	Total/NA	Sediment	8082	19080
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	8082	19080
LCS 180-19080/5-B	Lab Control Sample	Total/NA	Sediment	8082	19080
MB 180-19080/1-B	Method Blank	Total/NA	Sediment	8082	19080

Metals

Prep Batch: 18624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	3050B	
180-5048-1 MS	CH-2011-MU3-G1	Total/NA	Sediment	3050B	
180-5048-1 MSD	CH-2011-MU3-G1	Total/NA	Sediment	3050B	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	3050B	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	3050B	
LCS 180-18624/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
MB 180-18624/1-A	Method Blank	Total/NA	Sediment	3050B	

Leach Batch: 18692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	1312	
180-5172-A-4-F MS	Matrix Spike	SPLP East	Sediment	1312	
180-5172-A-4-G MSD	Matrix Spike Duplicate	SPLP East	Sediment	1312	
180-5219-A-8-G MS	Matrix Spike	SPLP East	Sediment	1312	
180-5219-A-8-H MSD	Matrix Spike Duplicate	SPLP East	Sediment	1312	
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	1312	
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	1312	

Prep Batch: 18771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	3005A	
180-5257-C-1-B MS	Matrix Spike	Dissolved	Water	3005A	
180-5257-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	
LCS 180-18771/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-18771/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 18871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	7471A	
180-5048-1 MS	CH-2011-MU3-G1	Total/NA	Sediment	7471A	
180-5048-1 MSD	CH-2011-MU3-G1	Total/NA	Sediment	7471A	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	7471A	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	7471A	
LCS 180-18871/2-A	Lab Control Sample	Total/NA	Sediment	7471A	
MB 180-18871/1-A	Method Blank	Total/NA	Sediment	7471A	

Metals (Continued)

Analysis Batch: 18906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	7471A	18871
180-5048-1 MS	CH-2011-MU3-G1	Total/NA	Sediment	7471A	18871
180-5048-1 MSD	CH-2011-MU3-G1	Total/NA	Sediment	7471A	18871
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	7471A	18871
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	7471A	18871
LCS 180-18871/2-A	Lab Control Sample	Total/NA	Sediment	7471A	18871
MB 180-18871/1-A	Method Blank	Total/NA	Sediment	7471A	18871

Analysis Batch: 19204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	6020	18771
180-5257-C-1-B MS	Matrix Spike	Dissolved	Water	6020	18771
180-5257-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	6020	18771
LCS 180-18771/2-A	Lab Control Sample	Total Recoverable	Water	6020	18771
MB 180-18771/1-A	Method Blank	Total Recoverable	Water	6020	18771

Prep Batch: 19329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	3010A	18692
180-5172-A-4-F MS	Matrix Spike	SPLP East	Sediment	3010A	18692
180-5172-A-4-G MSD	Matrix Spike Duplicate	SPLP East	Sediment	3010A	18692
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	3010A	18692
LCS 180-19329/16-A	Lab Control Sample	Total/NA	Sediment	3010A	
MB 180-19329/15-A	Method Blank	Total/NA	Sediment	3010A	

Analysis Batch: 19544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	6010B	19329
180-5172-A-4-F MS	Matrix Spike	SPLP East	Sediment	6010B	19329
180-5172-A-4-G MSD	Matrix Spike Duplicate	SPLP East	Sediment	6010B	19329
LB 180-18692/14-B LB	Method Blank	SPLP East	Sediment	6010B	19329
LCS 180-19329/16-A	Lab Control Sample	Total/NA	Sediment	6010B	19329
MB 180-19329/15-A	Method Blank	Total/NA	Sediment	6010B	19329

Prep Batch: 19610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	7470A	18692
180-5219-A-8-G MS	Matrix Spike	SPLP East	Sediment	7470A	18692
180-5219-A-8-H MSD	Matrix Spike Duplicate	SPLP East	Sediment	7470A	18692
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	7470A	18692
LCS 180-19610/2-A	Lab Control Sample	Total/NA	Sediment	7470A	
MB 180-19610/1-A	Method Blank	Total/NA	Sediment	7470A	

Analysis Batch: 19656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	7470A	19610
180-5219-A-8-G MS	Matrix Spike	SPLP East	Sediment	7470A	19610
180-5219-A-8-H MSD	Matrix Spike Duplicate	SPLP East	Sediment	7470A	19610
LB 180-18692/14-C LB	Method Blank	SPLP East	Sediment	7470A	19610
LCS 180-19610/2-A	Lab Control Sample	Total/NA	Sediment	7470A	19610
MB 180-19610/1-A	Method Blank	Total/NA	Sediment	7470A	19610

Metals (Continued)

Analysis Batch: 20157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	6020	18624
180-5048-1 MS	CH-2011-MU3-G1	Total/NA	Sediment	6020	18624
180-5048-1 MSD	CH-2011-MU3-G1	Total/NA	Sediment	6020	18624
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	6020	18624
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	6020	18624
LCS 180-18624/2-A	Lab Control Sample	Total/NA	Sediment	6020	18624
MB 180-18624/1-A	Method Blank	Total/NA	Sediment	6020	18624

Prep Batch: 20177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	7470A	
180-5335-C-2-C MS	Matrix Spike	Total/NA	Water	7470A	
180-5335-C-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
LCS 180-20177/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 180-20177/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 20250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	7470A	20177
180-5335-C-2-C MS	Matrix Spike	Total/NA	Water	7470A	20177
180-5335-C-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	20177
LCS 180-20177/2-A	Lab Control Sample	Total/NA	Water	7470A	20177
MB 180-20177/1-A	Method Blank	Total/NA	Water	7470A	20177

General Chemistry

Analysis Batch: 17973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5036-A-7 DU	Duplicate	Total/NA	Sediment	Moisture	
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	Moisture	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	Moisture	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	Moisture	

Prep Batch: 18104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-4987-B-5-E MSS	Matrix Spike	Total/NA	Sediment	3060A	
180-4987-B-5-F MSI	Matrix Spike	Total/NA	Sediment	3060A	
180-4987-B-5-G DU	Duplicate	Total/NA	Sediment	3060A	
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	3060A	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	3060A	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	3060A	
LCSI 180-18104/3-A	Lab Control Sample	Total/NA	Sediment	3060A	
LCSS 180-18104/2-A	Lab Control Sample	Total/NA	Sediment	3060A	
MB 180-18104/1-A	Method Blank	Total/NA	Sediment	3060A	

Leach Batch: 18128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Soluble	Sediment	DI Leach	
180-5048-2	CH-2011-MU3-G2	Soluble	Sediment	DI Leach	
180-5048-3	CH-2011-MU3-G3	Soluble	Sediment	DI Leach	
LB3 180-18128/4-A LB3	Method Blank	Soluble	Sediment	DI Leach	

General Chemistry (Continued)

Analysis Batch: 18216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Soluble	Sediment	300.0	
180-5048-2	CH-2011-MU3-G2	Soluble	Sediment	300.0	
180-5048-3	CH-2011-MU3-G3	Soluble	Sediment	300.0	
LB3 180-18128/4-A LB3	Method Blank	Soluble	Sediment	300.0	
LCS 180-18216/5	Lab Control Sample	Total/NA	Sediment	300.0	
LCSD 180-18216/7	Lab Control Sample Dup	Total/NA	Sediment	300.0	
MB 180-18216/6	Method Blank	Total/NA	Sediment	300.0	

Analysis Batch: 18297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-4987-B-5-E MSS	Matrix Spike	Total/NA	Sediment	7196A	18104
180-4987-B-5-F MSI	Matrix Spike	Total/NA	Sediment	7196A	18104
180-4987-B-5-G DU	Duplicate	Total/NA	Sediment	7196A	18104
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	7196A	18104
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	7196A	18104
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	7196A	18104
LCSI 180-18104/3-A	Lab Control Sample	Total/NA	Sediment	7196A	18104
LCSS 180-18104/2-A	Lab Control Sample	Total/NA	Sediment	7196A	18104
MB 180-18104/1-A	Method Blank	Total/NA	Sediment	7196A	18104

Leach Batch: 18695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	1312	
180-5219-A-2-B MS	Matrix Spike	SPLP East	Sediment	1312	
180-5219-A-2-B MSD	Matrix Spike Duplicate	SPLP East	Sediment	1312	
LB 180-18695/14-A LB	Method Blank	SPLP East	Sediment	1312	

Analysis Batch: 18748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	SM 2540C	
180-5266-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 180-18748/1	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 180-18748/2	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 18751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	7196A	
180-5272-B-2 MS	Matrix Spike	Dissolved	Water	7196A	
180-5272-B-2 MSD	Matrix Spike Duplicate	Dissolved	Water	7196A	
LCS 180-18751/10	Lab Control Sample	Total/NA	Water	7196A	
MB 180-18751/11	Method Blank	Total/NA	Water	7196A	

Analysis Batch: 18783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	300.0	
LCS 180-18783/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 180-18783/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 180-18783/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 18790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	9040B	

General Chemistry (Continued)

Analysis Batch: 18790 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5273-A-1 DU	Duplicate	Total/NA	Water	9040B	
LCS 180-18790/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 18905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP East	Sediment	7196A	
180-5219-A-2-B MS	Matrix Spike	SPLP East	Sediment	7196A	
180-5219-A-2-B MSD	Matrix Spike Duplicate	SPLP East	Sediment	7196A	
LB 180-18695/14-A LB	Method Blank	SPLP East	Sediment	7196A	
LCS 180-18905/3	Lab Control Sample	Total/NA	Sediment	7196A	
MB 180-18905/4	Method Blank	Total/NA	Sediment	7196A	

Prep Batch: 19643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	Distill/Ammonia	
180-5272-J-2-B MS	Matrix Spike	Total/NA	Water	Distill/Ammonia	
180-5272-J-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Ammonia	
LCS 180-19643/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 180-19643/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 19738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Total/NA	SET, Dissolved	350.1	19643
180-5272-J-2-B MS	Matrix Spike	Total/NA	Water	350.1	19643
180-5272-J-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	19643
LCS 180-19643/2-A	Lab Control Sample	Total/NA	Water	350.1	19643
MB 180-19643/1-A	Method Blank	Total/NA	Water	350.1	19643

Prep Batch: 20863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	Distill/CN	
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	9012A	
180-5048-1 MS	CH-2011-MU3-G1	Total/NA	Sediment	Distill/CN	
180-5048-1 MSD	CH-2011-MU3-G1	Total/NA	Sediment	Distill/CN	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	Distill/CN	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	9012A	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	Distill/CN	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	9012A	
240-5219-G-5-B MS	Matrix Spike	Total/NA	Sediment	9012A	
240-5219-G-5-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	9012A	
LCS 240-20863/2-A	Lab Control Sample	Total/NA	Sediment	9012A	
MB 240-20863/1-A	Method Blank	Total/NA	Sediment	9012A	

Analysis Batch: 20927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	335.1	20863
180-5048-1 MS	CH-2011-MU3-G1	Total/NA	Sediment	335.1	20863
180-5048-1 MSD	CH-2011-MU3-G1	Total/NA	Sediment	335.1	20863
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	335.1	20863
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	335.1	20863

General Chemistry (Continued)

Analysis Batch: 20928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	9012A	20863
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	9012A	20863
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	9012A	20863
240-5219-G-5-B MS	Matrix Spike	Total/NA	Sediment	9012A	20863
240-5219-G-5-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	9012A	20863
LCS 240-20863/2-A	Lab Control Sample	Total/NA	Sediment	9012A	20863
MB 240-20863/1-A	Method Blank	Total/NA	Sediment	9012A	20863

Analysis Batch: 20985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	9012A	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	9012A	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	9012A	

Prep Batch: 21087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	
180-5048-6 MS	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	
180-5048-6 MSD	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	
LCS 240-21087/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-21087/1-A	Method Blank	Total/NA	Water	9012A	

Prep Batch: 21099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	Distill/CN	
180-5172-G-9-C MS	Matrix Spike	Dissolved	Water	Distill/CN	
180-5172-G-9-D MSD	Matrix Spike Duplicate	Dissolved	Water	Distill/CN	
LCS 240-21099/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 240-21099/1-A	Method Blank	Total/NA	Water	Distill/CN	
MB 240-21099/2-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 21110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	21087
180-5048-6 MS	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	21087
180-5048-6 MSD	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	21087
LCS 240-21087/2-A	Lab Control Sample	Total/NA	Water	9012A	21087
MB 240-21087/1-A	Method Blank	Total/NA	Water	9012A	21087

Analysis Batch: 21114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	335.1	21099
180-5172-G-9-C MS	Matrix Spike	Dissolved	Water	335.1	21099
180-5172-G-9-D MSD	Matrix Spike Duplicate	Dissolved	Water	335.1	21099
LCS 240-21099/3-A	Lab Control Sample	Total/NA	Water	335.1	21099
MB 240-21099/1-A	Method Blank	Total/NA	Water	335.1	21099
MB 240-21099/2-A	Method Blank	Total/NA	Water	335.1	21099
MRL 240-21114/6 MRL	Lab Control Sample	Total/NA	Water	335.1	

Analysis Batch: 21417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-6	CH-2011-MU3-COMP	Dissolved	SET, Dissolved	9012A	

General Chemistry (Continued)

Leach Batch: 21620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP	Sediment	1312	
180-5219-A-1-H MS	Matrix Spike	SPLP	Sediment	1312	
180-5219-A-1-I MSD	Matrix Spike Duplicate	SPLP	Sediment	1312	
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	1312	
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	1312	

Prep Batch: 21648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP	Sediment	9012A	21620
240-5399-D-40-B MS	Matrix Spike	SPLP	Sediment	9012A	
240-5399-D-40-C MSD	Matrix Spike Duplicate	SPLP	Sediment	9012A	
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	9012A	21620
LCS 240-21648/2-A	Lab Control Sample	Total/NA	Sediment	9012A	
MB 240-21648/1-A	Method Blank	Total/NA	Sediment	9012A	

Analysis Batch: 21689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP	Sediment	9012A	21648
240-5399-D-40-B MS	Matrix Spike	SPLP	Sediment	9012A	21648
240-5399-D-40-C MSD	Matrix Spike Duplicate	SPLP	Sediment	9012A	21648
LB 240-21620/14-B LB	Method Blank	SPLP	Sediment	9012A	21648
LCS 240-21648/2-A	Lab Control Sample	Total/NA	Sediment	9012A	21648
MB 240-21648/1-A	Method Blank	Total/NA	Sediment	9012A	21648
MRL 240-21689/6 MRL	Lab Control Sample	Total/NA	Sediment	9012A	

Prep Batch: 21848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP	Sediment	Distill/CN	21620
180-5219-A-1-H MS	Matrix Spike	SPLP	Sediment	Distill/CN	21620
180-5219-A-1-I MSD	Matrix Spike Duplicate	SPLP	Sediment	Distill/CN	21620
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	Distill/CN	21620
LCS 240-21848/1-A	Lab Control Sample	Total/NA	Sediment	Distill/CN	
MB 240-21848/2-A	Method Blank	Total/NA	Sediment	Distill/CN	
MB 240-21848/3-A	Method Blank	Total/NA	Sediment	Distill/CN	

Analysis Batch: 21886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP	Sediment	335.1	21848
180-5219-A-1-H MS	Matrix Spike	SPLP	Sediment	335.1	21848
180-5219-A-1-I MSD	Matrix Spike Duplicate	SPLP	Sediment	335.1	21848
LB 240-21620/14-C LB	Method Blank	SPLP	Sediment	335.1	21848
LCS 240-21848/1-A	Lab Control Sample	Total/NA	Sediment	335.1	21848
MB 240-21848/2-A	Method Blank	Total/NA	Sediment	335.1	21848
MB 240-21848/3-A	Method Blank	Total/NA	Sediment	335.1	21848
MRL 240-21886/6 MRL	Lab Control Sample	Total/NA	Sediment	335.1	

Prep Batch: 22720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	365.2/365.3/365	
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	365.2/365.3/365	
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	365.2/365.3/365	
180-5172-C-1-G MS	Matrix Spike	Total/NA	Sediment	365.2/365.3/365	

General Chemistry (Continued)

Prep Batch: 22720 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5172-C-1-H MSD	Matrix Spike Duplicate	Total/NA	Sediment	365.2/365.3/365	
LCS 240-22720/11-A	Lab Control Sample	Total/NA	Sediment	365.2/365.3/365	
MB 240-22720/10-A	Method Blank	Total/NA	Sediment	365.2/365.3/365	

Analysis Batch: 22782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-1	CH-2011-MU3-G1	Total/NA	Sediment	365.1	22720
180-5048-2	CH-2011-MU3-G2	Total/NA	Sediment	365.1	22720
180-5048-3	CH-2011-MU3-G3	Total/NA	Sediment	365.1	22720
180-5172-C-1-G MS	Matrix Spike	Total/NA	Sediment	365.1	22720
180-5172-C-1-H MSD	Matrix Spike Duplicate	Total/NA	Sediment	365.1	22720
LCS 240-22720/11-A	Lab Control Sample	Total/NA	Sediment	365.1	22720
MB 240-22720/10-A	Method Blank	Total/NA	Sediment	365.1	22720

Analysis Batch: 23504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	SPLP	Sediment	9012A	

Organic Prep

Analysis Batch: 18631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-5048-5	CH-2011-MU3-COMP	Total/NA	Sediment	35 ILL C-395	

4.00
0.50
2.90
1.30 # 2

180-5048

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

5/15/2012

Client Contact				
Company Name: Future Net Group	Client Project Manager: Alli Al-Saffar	Site Contact:	Lab Contact:	COC No:
Address: 12801 Auburn St.	Telephone: (313) 544-7117	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: Detroit, MI 48223	Email: alia@futurenetgroup.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: (313) 544-7117		TAT if different from below ____		Walk-in client ☐
Project Name: Calumet Harbor	Method of Shipment/Carrier:	☒ 3 weeks		Lab pickup ☐
Project Number: 11655-004	Shipping/Tracking No:	☐ 2 weeks		Lab sampling ☐
PO#		☐ 1 week		Job/SDG No:
		☐ 2 days		
		☐ 1 day		

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/Grab=G	Bulk chemistry	VOC	Grain size	SPLP	Elutriate						Sample Specific Notes / Special Instructions:
CH-2011-MU3-G1	10/18	12:00			X										N	C	X	X	X								
CH-2011-MU3-G2	10/18	2:00			X										N	C	X	X	X								
CH-2011-MU3-G3	10/18	4:00			X										N	C	X	X	X								
CH-2011-MU3-comp	10/18	4:00		X	X										N	C				X	X						

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:
see SOW for analysis required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Alli Al-Saffar	FNG	10/18 7:00 pm		TDA	10/19/11 1000
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

ORIGIN ID: JOTA (313) 544-7117
FUTURENET GROUP, INC.
12801 AUBURN ST
DETROIT, MI 482233413
UNITED STATES US

SHIP DATE: 18OCT11
ACTWGT: 46.3 LB
CAD: /DFFC1242
DIMS: 24x14x14 IN
BILL SENDER

TO SAMPLE RECIEVING
TEST AMERICA
301 ALPHA DRIVE

PITTSBURG PA 15238
(412) 963-7058 REF:
INV: DEPT:
PO:

FEDEX Express

2 of 3
MPS# 7957 5955 5857
0681
Mstr# 8741 9090 2355
020D

WED - 19 OCT A2
PRIORITY OVERNIGHT
DSR
15238
PA-US PIT

NA AGCA

Part # 156287-435-2 HLI2 10/11 SEC
DSPARDS 10/18 GS

5/15/2012

ORIGIN ID: JOTA (313) 544-7117
FUTURENET GROUP, INC.

12801 AUBURN ST

DETROIT, MI 482233413
UNITED STATES US

SHIP DATE: 18OCT11
ACTWGT: 86.5 LB
CAD: /OFFC1242
DIMS: 24x14x14 IN

BILL SENDER

TO SAMPLE RECIEVING
TEST AMERICA
301 ALPHA DRIVE

PITTSBURG PA 15238

(412) 963-7058 REF:
INV:
PO: DEPT:

FedEx Express

3 of 3

MPS# 7957 5955 5868
0681
Mstr# 8741 9090 2355
0200

WED - 19 OCT A2
PRIORITY OVERNIGHT
DSR
15238
PIT
PA-US

NA AGCA

FedEx Express **US Airbill** FedEx Tracking Number 8741 9090 2355

0200 Form ID No. **FedEx Retrieval Copy**

1 From

Date 10/18/2011 Sender's FedEx Account Number 427870103

Sender's Name ALI AL SAFFAR Phone 313 544 7117

Company Future Net Group, Inc.

Address 12801 Auburn Dept./Floor/Suite/Room

City Detroit, State MI ZIP 48223

2 Your Internal Billing Reference 11655-004

3 To

Recipient's Name Sample Recieving Phone 412 963-7058

Company Test America

Address 301 Alpha Drive Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address RIDC PARK
Use this line for the HOLD location address or for continuation of your shipping address.

City Pittsburg State PA ZIP 15238

01 ☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8741 9090 2355

4a Express Package Service • To most locations. *Packages up to 150 lbs.*

01 ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

06 ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.*

03 ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service • To most locations. *Packages over 150 lbs.*

70 ☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.

80 ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

83 ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging • Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?
One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☒ Sender — Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 3 Total Weight 35 lbs. [redacted] Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

606

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5/15/2012

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5048-1

Login Number: 5048
List Number: 1
Creator: Gamber, Tom

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5048-1

Login Number: 5048
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton
List Creation: 10/21/11 10:22 AM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5048-1

Login Number: 5048
List Number: 2
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 10/28/11 01:02 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5048-1

Login Number: 5048
List Number: 3
Creator: McFadden, John

List Source: TestAmerica Canton
List Creation: 11/01/11 03:09 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix G

ECCS Laboratory Analytical Report

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

10 April 2012

James Finetti
FutureNet Group
12801 Auburn St
Detroit, MI 48223

RE: Calumet Harbor - Chicago, IL

Enclosed are revised analytical results for the samples received by the laboratory on 10/20/2011. The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica Esser

Project Manager

Certification List			Expires
ILEPA	Illinois Secondary NELAP Accreditation	200062	04/30/2012
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2012
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2012
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2012
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2012

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CH-2011-MU3-COMP	A114210-01	Soil	10/18/2011	10/20/2011
CH-2011-MU2-COMP	A114302-01	Soil	10/21/2011	10/25/2011
CH-2011-MU1-COMP	A114302-02	Soil	10/21/2011	10/25/2011

Samples A114302-01 and A114302-02 had label discrepancies between the chain of custody and the sample containers. Per the client, the sample container descriptions are correct.

Samples A114210-01, A114302-01 and A114302-02 were re-extracted and re-analyzed for the n-methyl carbamate pesticides by EPA Method 8318 due to a surrogate failure. The re-analysis confirmed the original low surrogate value. Both sets of data are in this report.

The confirmation column for the organochlorine pesticides by EPA Method 8081 analysis had an interference peak present for dieldrin in the matrix spike and matrix spike duplicate samples.

The LC footnote on samples A114210-01, A114302-01 and A114302-02 states that there were low continuing calibration verification (CCV) recoveries for 4,4'-DDT and methoxychlor. The lower control limit is 80% and the recoveries were 73.9% and 79.7%, respectively. The LC footnote on samples A114210-01, A114302-01 and A1143202-02 states that there were low CCV recoveries for aldicarb, carbaryl, methiocarb, methomyl and propoxur. The lower control limit is 85% and the recoveries were 82.9%, 82.8%, 84.2%, 84.5% and 83.1%, respectively.

Reason for Revised Report

The report was revised to add the following case narrative comment. This report should replace A114210,A114302 FINAL 11 09 2011 0922.

Please note that all samples were reported to the limit of detection per client request.

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU3-COMP

A114210-01 (Soil)

Date Sampled
10/18/2011 16:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry									
Acetochlor	ND	19	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Alachlor	ND	19	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Atrazine	ND	9.9	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Butylate	ND	19	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Chlorpyrifos	ND	7.7	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Cyanazine	ND	29	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Desethylatrazine	ND	14	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Deisopropylatrazine	ND	25	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Dimethenamid	ND	8.0	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
EPTC	ND	9.9	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Metolachlor	ND	5.7	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Metribuzin	ND	11	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Pendimethalin	ND	7.5	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Prometon	ND	23	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Propazine	ND	11	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Simazine	ND	15	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Trifluralin	ND	7.7	96	ug/kg dry	1	10/24/2011	10/27/2011 06:46	EPA 8270	
Surrogate: Atrazine-d5			*89.8 %*	*48.9-129*		*10/24/2011*	*10/27/2011 06:46*	*EPA 8270*	
Surrogate: Parathion-d10			*129 %*	*40-140*		*10/24/2011*	*10/27/2011 06:46*	*EPA 8270*	
Surrogate: Triphenyl phosphate			*126 %*	*18.8-205*		*10/24/2011*	*10/27/2011 06:46*	*EPA 8270*	
N-Methyl Carbamate Pesticides by EPA Method 8318									
Aldicarb	ND	7.7	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	LC
Aldicarb sulfone	ND	7.5	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	
Aldicarb sulfoxide	ND	7.3	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	
Carbaryl	ND	7.3	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	LC
Carbofuran	ND	8.0	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	
3-Hydroxycarbofuran	ND	8.2	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	
Methiocarb	ND	8.4	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	LC
Methomyl	ND	7.1	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	LC
Oxamyl	ND	7.1	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	
Propoxur	ND	7.1	19	ug/kg dry	1	10/31/2011	11/02/2011 15:16	EPA 8318	LC
Surrogate: Promecarb			*44.7 %*	*60-140*		*10/31/2011*	*11/02/2011 15:16*	*EPA 8318*	*S*

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU3-COMP

A114210-01 (Soil)

Date Sampled
10/18/2011 16:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Organochlorine Pesticides by EPA Method 8081A									
alpha-BHC	ND	0.42	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
beta-BHC	ND	0.48	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
gamma-BHC (Lindane)	ND	0.38	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
delta-BHC	ND	1.5	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Heptachlor	ND	2.5	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Aldrin	ND	0.42	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Heptachlor epoxide	ND	0.42	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
gamma-Chlordane	ND	0.36	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Endosulfan I	ND	0.38	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
alpha-Chlordane	ND	0.29	3.8	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
4,4´-DDE	ND	0.75	7.7	ug/kg dry	1	10/28/2011	10/28/2011 23:07	EPA 8081A	
Dieldrin	ND	0.96	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Endrin	ND	1.1	7.7	ug/kg dry	1	10/28/2011	10/28/2011 23:07	EPA 8081A	
Endosulfan II	ND	0.75	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
4,4´-DDD	**7.6**	0.96	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	J
Endrin aldehyde	ND	1.7	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Endosulfan sulfate	ND	1.3	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
4,4´-DDT	ND	1.2	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	LC
Endrin ketone	ND	0.86	7.7	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Methoxychlor	ND	4.6	38	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	LC
Chlordane (tech)	ND	8.4	77	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Toxaphene	ND	0.096	190	ug/kg dry	1	10/28/2011	10/28/2011 22:20	EPA 8081A	
Surrogate: Decachlorobiphenyl			*101 %*	*64.4-149*		*10/28/2011*	*10/28/2011 22:20*	*EPA 8081A*	
Surrogate: Tetrachloro-meta-xylene			*83.2 %*	*73-138*		*10/28/2011*	*10/28/2011 22:20*	*EPA 8081A*	
Acid Herbicides by Gas Chromatography/Mass Spectrometry									
Acifluorfen	ND	36	190	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Bentazon	ND	11	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Bromoxynil	ND	6.5	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
2,4-D	ND	27	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Dacthal	ND	8.2	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Dalapon	ND	86	480	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
2,4-DB	ND	27	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Dicamba	ND	15	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Dichlorprop	ND	15	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Dinoseb	ND	13	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
MCPA	ND	9.8	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
MCPP	ND	18	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Pentachlorophenol	ND	16	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Picloram	ND	12	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU3-COMP

A114210-01 (Soil)

Date Sampled
10/18/2011 16:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Acid Herbicides by Gas Chromatography/Mass Spectrometry									
2,4,5-T	ND	34	96	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
2,4,5-TP (Silvex)	ND	11	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Triclopyr	ND	13	48	ug/kg dry	1	10/28/2011	10/29/2011 04:38	EPA 8151A	
Surrogate: 2,4-D-d5			*96.5 %*	*50.8-116*		*10/28/2011*	*10/29/2011 04:38*	*EPA 8151A*	
Classical Chemistry Parameters									
% Solids	**52.3**		0.00	% by Weight	1	10/24/2011	10/25/2011 09:15	SM 2540B	

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608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU3-COMP

A114210-01RE1 (Soil)

Date Sampled
10/18/2011 16:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
N-Methyl Carbamate Pesticides by EPA Method 8318									**H**
Aldicarb	ND	7.7	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Aldicarb sulfone	ND	7.5	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Aldicarb sulfoxide	ND	7.3	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Carbaryl	ND	7.3	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Carbofuran	ND	8.0	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
3-Hydroxycarbofuran	ND	8.2	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Methiocarb	ND	8.4	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Methomyl	ND	7.1	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Oxamyl	ND	7.1	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Propoxur	ND	7.1	19	ug/kg dry	1	11/03/2011	11/03/2011 22:53	EPA 8318	
Surrogate: Promecarb			*31.1 %*	*60-140*		*11/03/2011*	*11/03/2011 22:53*	*EPA 8318*	*S*

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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU2-COMP

A114302-01 (Soil)

Date Sampled
10/21/2011 17:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry									
Acetochlor	ND	15	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Alachlor	ND	15	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Atrazine	ND	8.1	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Butylate	ND	15	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Chlorpyrifos	ND	6.2	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Cyanazine	ND	23	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Desethylatrazine	ND	11	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Deisopropylatrazine	ND	20	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Dimethenamid	ND	6.5	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
EPTC	ND	8.1	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Metolachlor	ND	4.6	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Metribuzin	ND	8.8	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Pendimethalin	ND	6.0	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Prometon	ND	19	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Propazine	ND	8.8	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Simazine	ND	12	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Trifluralin	ND	6.2	77	ug/kg dry	1	10/27/2011	10/29/2011 08:56	EPA 8270	
Surrogate: Atrazine-d5			*92.9 %*	*48.9-129*		*10/27/2011*	*10/29/2011 08:56*	*EPA 8270*	
Surrogate: Parathion-d10			*128 %*	*40-140*		*10/27/2011*	*10/29/2011 08:56*	*EPA 8270*	
Surrogate: Triphenyl phosphate			*116 %*	*18.8-205*		*10/27/2011*	*10/29/2011 08:56*	*EPA 8270*	
N-Methyl Carbamate Pesticides by EPA Method 8318									
Aldicarb	ND	6.2	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	LC
Aldicarb sulfone	ND	6.0	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	
Aldicarb sulfoxide	ND	5.9	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	
Carbaryl	ND	5.9	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	LC
Carbofuran	ND	6.5	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	
3-Hydroxycarbofuran	ND	6.7	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	
Methiocarb	ND	6.8	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	LC
Methomyl	ND	5.7	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	LC
Oxamyl	ND	5.7	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	
Propoxur	ND	5.7	15	ug/kg dry	1	10/31/2011	11/02/2011 18:07	EPA 8318	LC
Surrogate: Promecarb			*51.6 %*	*60-140*		*10/31/2011*	*11/02/2011 18:07*	*EPA 8318*	*S*

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608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU2-COMP

A114302-01 (Soil)

Date Sampled
10/21/2011 17:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
				ECCS					
Organochlorine Pesticides by EPA Method 8081A									
alpha-BHC	ND	0.34	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
beta-BHC	ND	0.39	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
gamma-BHC (Lindane)	ND	0.31	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
delta-BHC	ND	1.2	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Heptachlor	ND	2.0	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Aldrin	ND	0.34	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Heptachlor epoxide	ND	0.34	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
gamma-Chlordane	ND	0.29	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Endosulfan I	ND	0.31	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
alpha-Chlordane	ND	0.23	3.1	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
4,4´-DDE	**4.3**	0.60	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	J
Dieldrin	ND	0.77	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Endrin	ND	0.87	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Endosulfan II	ND	0.60	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
4,4´-DDD	**8.9**	0.77	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Endrin aldehyde	ND	1.4	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Endosulfan sulfate	ND	1.0	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
4,4´-DDT	ND	1.0	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	LC
Endrin ketone	ND	0.70	6.2	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Methoxychlor	ND	3.7	31	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	LC
Chlordane (tech)	ND	6.8	62	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Toxaphene	ND	0.077	150	ug/kg dry	1	10/28/2011	10/28/2011 22:55	EPA 8081A	
Surrogate: Decachlorobiphenyl			*94.2 %*	*64.4-149*		*10/28/2011*	*10/28/2011 22:55*	*EPA 8081A*	
Surrogate: Tetrachloro-meta-xylene			*82.8 %*	*73-138*		*10/28/2011*	*10/28/2011 22:55*	*EPA 8081A*	
Acid Herbicides by Gas Chromatography/Mass Spectrometry									
Acifluorfen	ND	29	150	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Bentazon	ND	9.0	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Bromoxynil	ND	5.3	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
2,4-D	ND	22	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Dacthal	ND	6.7	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Dalapon	ND	70	390	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
2,4-DB	ND	22	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Dicamba	ND	12	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Dichlorprop	ND	12	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Dinoseb	ND	11	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
MCPA	ND	7.9	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
MCPP	ND	14	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Pentachlorophenol	ND	13	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Picloram	ND	9.8	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	

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608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU2-COMP

A114302-01 (Soil)

Date Sampled
10/21/2011 17:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Acid Herbicides by Gas Chromatography/Mass Spectrometry									
2,4,5-T	ND	28	77	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
2,4,5-TP (Silvex)	ND	8.5	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Triclopyr	ND	10	39	ug/kg dry	1	10/28/2011	10/29/2011 05:11	EPA 8151A	
Surrogate: 2,4-D-d5			*94.9 %*	*50.8-116*		*10/28/2011*	*10/29/2011 05:11*	*EPA 8151A*	
Classical Chemistry Parameters									
% Solids	**64.6**		0.00	% by Weight	1	10/25/2011	10/26/2011 09:54	SM 2540B	

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608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU2-COMP

A114302-01RE1 (Soil)

Date Sampled
10/21/2011 17:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
N-Methyl Carbamate Pesticides by EPA Method 8318									
Aldicarb	ND	6.2	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Aldicarb sulfone	ND	6.0	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Aldicarb sulfoxide	ND	5.9	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Carbaryl	ND	5.9	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Carbofuran	ND	6.5	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
3-Hydroxycarbofuran	ND	6.7	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Methiocarb	ND	6.8	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Methomyl	ND	5.7	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Oxamyl	ND	5.7	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Propoxur	ND	5.7	15	ug/kg dry	1	11/03/2011	11/03/2011 23:50	EPA 8318	
Surrogate: Promecarb			*46.6 %*	*60-140*		*11/03/2011*	*11/03/2011 23:50*	*EPA 8318*	*S*

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608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU1-COMP

A114302-02 (Soil)

Date Sampled
10/21/2011 11:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry									
Acetochlor	ND	18	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Alachlor	ND	18	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Atrazine	ND	9.5	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Butylate	ND	18	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Chlorpyrifos	ND	7.3	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Cyanazine	ND	27	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Desethylatrazine	ND	14	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Deisopropylatrazine	ND	24	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Dimethenamid	ND	7.7	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
EPTC	ND	9.5	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Metolachlor	ND	5.5	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Metribuzin	ND	10	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Pendimethalin	ND	7.1	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Prometon	ND	22	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Propazine	ND	10	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Simazine	ND	14	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Trifluralin	ND	7.3	91	ug/kg dry	1	10/27/2011	10/29/2011 09:27	EPA 8270	
Surrogate: Atrazine-d5			*86.4 %*	*48.9-129*		*10/27/2011*	*10/29/2011 09:27*	*EPA 8270*	
Surrogate: Parathion-d10			*134 %*	*40-140*		*10/27/2011*	*10/29/2011 09:27*	*EPA 8270*	
Surrogate: Triphenyl phosphate			*124 %*	*18.8-205*		*10/27/2011*	*10/29/2011 09:27*	*EPA 8270*	
N-Methyl Carbamate Pesticides by EPA Method 8318									
Aldicarb	ND	7.3	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	LC
Aldicarb sulfone	ND	7.1	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	
Aldicarb sulfoxide	ND	6.9	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	
Carbaryl	ND	6.9	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	LC
Carbofuran	ND	7.7	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	
3-Hydroxycarbofuran	ND	7.9	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	
Methiocarb	ND	8.0	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	LC
Methomyl	ND	6.8	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	LC
Oxamyl	ND	6.8	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	
Propoxur	ND	6.8	18	ug/kg dry	1	10/31/2011	11/02/2011 20:02	EPA 8318	LC
Surrogate: Promecarb			*37.5 %*	*60-140*		*10/31/2011*	*11/02/2011 20:02*	*EPA 8318*	*S*

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU1-COMP

A114302-02 (Soil)

Date Sampled
10/21/2011 11:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
				ECCS					
Organochlorine Pesticides by EPA Method 8081A									
alpha-BHC	ND	0.40	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
beta-BHC	ND	0.46	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
gamma-BHC (Lindane)	ND	0.37	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
delta-BHC	ND	1.5	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Heptachlor	ND	2.4	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Aldrin	ND	0.40	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Heptachlor epoxide	ND	0.40	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
gamma-Chlordane	ND	0.35	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Endosulfan I	ND	0.37	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
alpha-Chlordane	ND	0.27	3.7	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
4,4´-DDE	**5.7**	0.71	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	J
Dieldrin	ND	0.91	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Endrin	ND	1.0	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Endosulfan II	ND	0.71	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
4,4´-DDD	**11**	0.91	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Endrin aldehyde	ND	1.7	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Endosulfan sulfate	ND	1.2	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
4,4´-DDT	ND	1.2	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	LC
Endrin ketone	ND	0.82	7.3	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Methoxychlor	ND	4.4	37	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	LC
Chlordane (tech)	ND	8.0	73	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Toxaphene	ND	0.091	180	ug/kg dry	1	10/28/2011	10/28/2011 23:30	EPA 8081A	
Surrogate: Decachlorobiphenyl			*108 %*	*64.4-149*		*10/28/2011*	*10/28/2011 23:30*	*EPA 8081A*	
Surrogate: Tetrachloro-meta-xylene			*95.1 %*	*73-138*		*10/28/2011*	*10/28/2011 23:30*	*EPA 8081A*	
Acid Herbicides by Gas Chromatography/Mass Spectrometry									
Acifluorfen	ND	35	180	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Bentazon	ND	11	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Bromoxynil	ND	6.2	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
2,4-D	ND	26	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Dacthal	ND	7.9	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Dalapon	ND	82	460	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
2,4-DB	ND	26	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Dicamba	ND	14	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Dichlorprop	ND	14	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Dinoseb	ND	12	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
MCPA	ND	9.3	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
MCPP	ND	17	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Pentachlorophenol	ND	15	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Picloram	ND	12	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	

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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU1-COMP

A114302-02 (Soil)

Date Sampled
10/21/2011 11:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
Acid Herbicides by Gas Chromatography/Mass Spectrometry									
2,4,5-T	ND	33	91	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
2,4,5-TP (Silvex)	ND	10	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Triclopyr	ND	12	46	ug/kg dry	1	10/28/2011	10/29/2011 05:43	EPA 8151A	
Surrogate: 2,4-D-d5			*88.4 %*	*50.8-116*		*10/28/2011*	*10/29/2011 05:43*	*EPA 8151A*	
Classical Chemistry Parameters									
% Solids	**54.7**		0.00	% by Weight	1	10/25/2011	10/26/2011 09:54	SM 2540B	

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608.221.8700 Phone
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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

CH-2011-MU1-COMP

A114302-02RE1 (Soil)

Date Sampled
10/21/2011 11:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
ECCS									
N-Methyl Carbamate Pesticides by EPA Method 8318									
Aldicarb	ND	7.3	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Aldicarb sulfone	ND	7.1	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Aldicarb sulfoxide	ND	6.9	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Carbaryl	ND	6.9	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Carbofuran	ND	7.7	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
3-Hydroxycarbofuran	ND	7.9	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Methiocarb	ND	8.0	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Methomyl	ND	6.8	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Oxamyl	ND	6.8	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Propoxur	ND	6.8	18	ug/kg dry	1	11/03/2011	11/04/2011 00:47	EPA 8318	
Surrogate: Promecarb			*32.2 %*	*60-140*		*11/03/2011*	*11/04/2011 00:47*	*EPA 8318*	*S*

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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110083 - EPA 3570										
Blank (A110083-BLK1)				Prepared: 10/24/2011 Analyzed: 10/27/2011 06:15						
Acetochlor	ND	50	ug/kg wet							
Alachlor	ND	50	ug/kg wet							
Atrazine	ND	50	ug/kg wet							
Butylate	ND	50	ug/kg wet							
Chlorpyrifos	ND	50	ug/kg wet							
Cyanazine	ND	50	ug/kg wet							
Desethylatrazine	ND	50	ug/kg wet							
Deisopropylatrazine	ND	50	ug/kg wet							
Dimethenamid	ND	50	ug/kg wet							
EPTC	ND	50	ug/kg wet							
Metolachlor	ND	50	ug/kg wet							
Metribuzin	ND	50	ug/kg wet							
Pendimethalin	ND	50	ug/kg wet							
Prometon	ND	50	ug/kg wet							
Propazine	ND	50	ug/kg wet							
Simazine	ND	50	ug/kg wet							
Trifluralin	ND	50	ug/kg wet							
Surrogate: Atrazine-d5	*175*		*ug/kg wet*	*200.0*		*87.6*	*48.9-129*			
Surrogate: Parathion-d10	*105*		*ug/kg wet*	*200.0*		*52.5*	*40-140*			
Surrogate: Triphenyl phosphate	*174*		*ug/kg wet*	*200.0*		*87.0*	*18.8-205*			
LCS (A110083-BS1)				Prepared: 10/24/2011 Analyzed: 10/27/2011 05:44						
Acetochlor	330	50	ug/kg wet	400.0		82.4	67.6-125			
Alachlor	349	50	ug/kg wet	400.0		87.2	76.2-119			
Atrazine	350	50	ug/kg wet	400.0		87.6	77.5-120			
Butylate	358	50	ug/kg wet	400.0		89.6	72.8-120			
Chlorpyrifos	353	50	ug/kg wet	400.0		88.1	72.5-122			
Cyanazine	344	50	ug/kg wet	400.0		85.9	64.8-130			
Desethylatrazine	372	50	ug/kg wet	400.0		93.0	74.1-122			
Deisopropylatrazine	363	50	ug/kg wet	400.0		90.6	53.2-135			
Dimethenamid	346	50	ug/kg wet	400.0		86.6	79.1-120			
EPTC	367	50	ug/kg wet	400.0		91.8	72.5-126			
Metolachlor	341	50	ug/kg wet	400.0		85.2	77.8-118			
Metribuzin	346	50	ug/kg wet	400.0		86.5	72.4-121			
Pendimethalin	332	50	ug/kg wet	400.0		82.9	68.6-118			
Prometon	344	50	ug/kg wet	400.0		86.1	71-123			
Propazine	353	50	ug/kg wet	400.0		88.3	79.5-118			
Simazine	367	50	ug/kg wet	400.0		91.7	74.7-123			
Trifluralin	319	50	ug/kg wet	400.0		79.7	75.8-120			
Surrogate: Atrazine-d5	*185*		*ug/kg wet*	*200.0*		*92.6*	*48.9-129*			
Surrogate: Parathion-d10	*189*		*ug/kg wet*	*200.0*		*94.7*	*40-140*			
Surrogate: Triphenyl phosphate	*183*		*ug/kg wet*	*200.0*		*91.4*	*18.8-205*			

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608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110083 - EPA 3570										
Matrix Spike (A110083-MS1)	**Source: A114213-01**		Prepared: 10/24/2011	Analyzed: 10/27/2011 07:48						
Acetochlor	454	61	ug/kg dry	487.8	ND	93.1	64.9-130			
Alachlor	465	61	ug/kg dry	487.8	ND	95.3	63.5-131			
Atrazine	427	61	ug/kg dry	487.8	ND	87.5	66.3-125			
Butylate	474	61	ug/kg dry	487.8	ND	97.2	79.1-119			
Chlorpyrifos	458	61	ug/kg dry	487.8	ND	93.9	72.8-124			
Cyanazine	474	61	ug/kg dry	487.8	ND	97.1	35.8-150			
Desethylatrazine	399	61	ug/kg dry	487.8	ND	81.7	34.1-136			
Deisopropylatrazine	311	61	ug/kg dry	487.8	ND	63.8	19.3-136			
Dimethenamid	432	61	ug/kg dry	487.8	ND	88.7	72.4-121			
EPTC	440	61	ug/kg dry	487.8	ND	90.2	77.2-121			
Metolachlor	452	61	ug/kg dry	487.8	ND	92.6	68.2-128			
Metribuzin	471	61	ug/kg dry	487.8	ND	96.6	41.4-146			
Pendimethalin	561	61	ug/kg dry	487.8	ND	115	63.7-140			
Prometon	479	61	ug/kg dry	487.8	ND	98.3	50.3-137			
Propazine	467	61	ug/kg dry	487.8	ND	95.8	72.1-121			
Simazine	419	61	ug/kg dry	487.8	ND	85.9	63.3-125			
Trifluralin	515	61	ug/kg dry	487.8	ND	106	66.7-132			
Surrogate: Atrazine-d5	*225*		*ug/kg dry*	*243.9*		*92.3*	*48.9-129*			
Surrogate: Parathion-d10	*277*		*ug/kg dry*	*243.9*		*114*	*40-140*			
Surrogate: Triphenyl phosphate	*275*		*ug/kg dry*	*243.9*		*113*	*18.8-205*			
Matrix Spike Dup (A110083-MSD1)	**Source: A114213-01**		Prepared: 10/24/2011	Analyzed: 10/27/2011 08:18						
Acetochlor	453	61	ug/kg dry	487.8	ND	92.8	64.9-130	0.360	20	
Alachlor	442	61	ug/kg dry	487.8	ND	90.6	63.5-131	5.01	20	
Atrazine	409	61	ug/kg dry	487.8	ND	83.9	66.3-125	4.25	20	
Butylate	495	61	ug/kg dry	487.8	ND	102	79.1-119	4.40	20	
Chlorpyrifos	444	61	ug/kg dry	487.8	ND	91.0	72.8-124	3.14	20	
Cyanazine	446	61	ug/kg dry	487.8	ND	91.4	35.8-150	6.00	20	
Desethylatrazine	389	61	ug/kg dry	487.8	ND	79.7	34.1-136	2.55	20	
Deisopropylatrazine	282	61	ug/kg dry	487.8	ND	57.9	19.3-136	9.69	20	
Dimethenamid	428	61	ug/kg dry	487.8	ND	87.8	72.4-121	1.01	20	
EPTC	462	61	ug/kg dry	487.8	ND	94.7	77.2-121	4.89	20	
Metolachlor	438	61	ug/kg dry	487.8	ND	89.8	68.2-128	3.07	20	
Metribuzin	487	61	ug/kg dry	487.8	ND	99.9	41.4-146	3.34	20	
Pendimethalin	568	61	ug/kg dry	487.8	ND	116	63.7-140	1.21	20	
Prometon	456	61	ug/kg dry	487.8	ND	93.5	50.3-137	5.00	20	
Propazine	441	61	ug/kg dry	487.8	ND	90.4	72.1-121	5.74	20	
Simazine	400	61	ug/kg dry	487.8	ND	81.9	63.3-125	4.76	20	
Trifluralin	510	61	ug/kg dry	487.8	ND	105	66.7-132	0.990	20	
Surrogate: Atrazine-d5	*213*		*ug/kg dry*	*243.9*		*87.3*	*48.9-129*			
Surrogate: Parathion-d10	*272*		*ug/kg dry*	*243.9*		*112*	*40-140*			
Surrogate: Triphenyl phosphate	*251*		*ug/kg dry*	*243.9*		*103*	*18.8-205*			

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110097 - EPA 3570										
Blank (A110097-BLK1)				Prepared: 10/27/2011 Analyzed: 10/29/2011 05:21						
Acetochlor	ND	50	ug/kg wet							
Alachlor	ND	50	ug/kg wet							
Atrazine	ND	50	ug/kg wet							
Butylate	ND	50	ug/kg wet							
Chlorpyrifos	ND	50	ug/kg wet							
Cyanazine	ND	50	ug/kg wet							
Desethylatrazine	ND	50	ug/kg wet							
Deisopropylatrazine	ND	50	ug/kg wet							
Dimethenamid	ND	50	ug/kg wet							
EPTC	ND	50	ug/kg wet							
Metolachlor	ND	50	ug/kg wet							
Metribuzin	ND	50	ug/kg wet							
Pendimethalin	ND	50	ug/kg wet							
Prometon	ND	50	ug/kg wet							
Propazine	ND	50	ug/kg wet							
Simazine	ND	50	ug/kg wet							
Trifluralin	ND	50	ug/kg wet							
Surrogate: Atrazine-d5	*179*		*ug/kg wet*	*200.0*		*89.6*	*48.9-129*			
Surrogate: Parathion-d10	*127*		*ug/kg wet*	*200.0*		*63.3*	*40-140*			
Surrogate: Triphenyl phosphate	*215*		*ug/kg wet*	*200.0*		*107*	*18.8-205*			
LCS (A110097-BS1)				Prepared: 10/27/2011 Analyzed: 10/29/2011 07:24						
Acetochlor	372	50	ug/kg wet	400.0		92.9	67.6-125			
Alachlor	360	50	ug/kg wet	400.0		90.0	76.2-119			
Atrazine	366	50	ug/kg wet	400.0		91.4	77.5-120			
Butylate	349	50	ug/kg wet	400.0		87.2	72.8-120			
Chlorpyrifos	351	50	ug/kg wet	400.0		87.8	72.5-122			
Cyanazine	393	50	ug/kg wet	400.0		98.3	64.8-130			
Desethylatrazine	369	50	ug/kg wet	400.0		92.3	74.1-122			
Deisopropylatrazine	371	50	ug/kg wet	400.0		92.8	53.2-135			
Dimethenamid	377	50	ug/kg wet	400.0		94.3	79.1-120			
EPTC	362	50	ug/kg wet	400.0		90.5	72.5-126			
Metolachlor	361	50	ug/kg wet	400.0		90.2	77.8-118			
Metribuzin	386	50	ug/kg wet	400.0		96.5	72.4-121			
Pendimethalin	398	50	ug/kg wet	400.0		99.5	68.6-118			
Prometon	378	50	ug/kg wet	400.0		94.5	71-123			
Propazine	364	50	ug/kg wet	400.0		90.9	79.5-118			
Simazine	357	50	ug/kg wet	400.0		89.3	74.7-123			
Trifluralin	371	50	ug/kg wet	400.0		92.7	75.8-120			
Surrogate: Atrazine-d5	*188*		*ug/kg wet*	*200.0*		*94.1*	*48.9-129*			
Surrogate: Parathion-d10	*231*		*ug/kg wet*	*200.0*		*115*	*40-140*			
Surrogate: Triphenyl phosphate	*196*		*ug/kg wet*	*200.0*		*97.9*	*18.8-205*			

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110097 - EPA 3570										
Matrix Spike (A110097-MS1)	**Source: A114305-02**		Prepared: 10/27/2011	Analyzed: 10/29/2011 07:55						
Acetochlor	537	68	ug/kg dry	542.4	ND	99.0	64.9-130			
Alachlor	552	68	ug/kg dry	542.4	66.3	89.5	63.5-131			
Atrazine	478	68	ug/kg dry	542.4	ND	88.2	66.3-125			
Butylate	538	68	ug/kg dry	542.4	ND	99.2	79.1-119			
Chlorpyrifos	513	68	ug/kg dry	542.4	ND	94.6	72.8-124			
Cyanazine	491	68	ug/kg dry	542.4	ND	90.5	35.8-150			
Desethylatrazine	399	68	ug/kg dry	542.4	ND	73.5	34.1-136			
Deisopropylatrazine	325	68	ug/kg dry	542.4	ND	59.9	19.3-136			
Dimethenamid	522	68	ug/kg dry	542.4	ND	96.3	72.4-121			
EPTC	520	68	ug/kg dry	542.4	ND	95.9	77.2-121			
Metolachlor	580	68	ug/kg dry	542.4	80.8	92.1	68.2-128			
Metribuzin	515	68	ug/kg dry	542.4	ND	94.9	41.4-146			
Pendimethalin	679	68	ug/kg dry	542.4	ND	125	63.7-140			
Prometon	493	68	ug/kg dry	542.4	ND	90.9	50.3-137			
Propazine	497	68	ug/kg dry	542.4	ND	91.5	72.1-121			
Simazine	450	68	ug/kg dry	542.4	ND	82.9	63.3-125			
Trifluralin	608	68	ug/kg dry	542.4	78.6	97.6	66.7-132			
Surrogate: Atrazine-d5	*224*		*ug/kg dry*	*271.2*		*82.5*	*48.9-129*			
Surrogate: Parathion-d10	*329*		*ug/kg dry*	*271.2*		*121*	*40-140*			
Surrogate: Triphenyl phosphate	*281*		*ug/kg dry*	*271.2*		*104*	*18.8-205*			
Matrix Spike Dup (A110097-MSD1)	**Source: A114305-02**		Prepared: 10/27/2011	Analyzed: 10/29/2011 08:25						
Acetochlor	544	68	ug/kg dry	542.4	ND	100	64.9-130	1.28	20	
Alachlor	562	68	ug/kg dry	542.4	66.3	91.5	63.5-131	2.18	20	
Atrazine	471	68	ug/kg dry	542.4	ND	86.7	66.3-125	1.67	20	
Butylate	533	68	ug/kg dry	542.4	ND	98.3	79.1-119	0.947	20	
Chlorpyrifos	510	68	ug/kg dry	542.4	ND	94.1	72.8-124	0.514	20	
Cyanazine	508	68	ug/kg dry	542.4	ND	93.7	35.8-150	3.50	20	
Desethylatrazine	401	68	ug/kg dry	542.4	ND	74.0	34.1-136	0.665	20	
Deisopropylatrazine	347	68	ug/kg dry	542.4	ND	63.9	19.3-136	6.54	20	
Dimethenamid	524	68	ug/kg dry	542.4	ND	96.7	72.4-121	0.394	20	
EPTC	552	68	ug/kg dry	542.4	ND	102	77.2-121	5.96	20	
Metolachlor	595	68	ug/kg dry	542.4	80.8	94.9	68.2-128	2.99	20	
Metribuzin	532	68	ug/kg dry	542.4	ND	98.1	41.4-146	3.29	20	
Pendimethalin	681	68	ug/kg dry	542.4	ND	125	63.7-140	0.263	20	
Prometon	490	68	ug/kg dry	542.4	ND	90.4	50.3-137	0.612	20	
Propazine	508	68	ug/kg dry	542.4	ND	93.7	72.1-121	2.35	20	
Simazine	445	68	ug/kg dry	542.4	ND	81.9	63.3-125	1.16	20	
Trifluralin	610	68	ug/kg dry	542.4	78.6	98.1	66.7-132	0.486	20	
Surrogate: Atrazine-d5	*234*		*ug/kg dry*	*271.2*		*86.2*	*48.9-129*			
Surrogate: Parathion-d10	*299*		*ug/kg dry*	*271.2*		*110*	*40-140*			
Surrogate: Triphenyl phosphate	*264*		*ug/kg dry*	*271.2*		*97.3*	*18.8-205*			

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

N-Methyl Carbamate Pesticides by EPA Method 8318 - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110106 - EPA 3570										
Blank (A110106-BLK1)				Prepared: 10/31/2011 Analyzed: 11/02/2011 13:22						
Aldicarb	ND	10	ug/kg wet							
Aldicarb sulfone	ND	10	ug/kg wet							
Aldicarb sulfoxide	ND	10	ug/kg wet							
Carbaryl	ND	10	ug/kg wet							
Carbofuran	ND	10	ug/kg wet							
3-Hydroxycarbofuran	ND	10	ug/kg wet							
Methiocarb	ND	10	ug/kg wet							
Methomyl	ND	10	ug/kg wet							
Oxamyl	ND	10	ug/kg wet							
Propoxur	ND	10	ug/kg wet							
Surrogate: Promecarb	*143*		*ug/kg wet*	*200.0*		*71.7*	*60-140*			
LCS (A110106-BS1)				Prepared: 10/31/2011 Analyzed: 11/02/2011 14:19						
Aldicarb	74.1	10	ug/kg wet	100.0		74.1	60-120			
Aldicarb sulfone	91.0	10	ug/kg wet	100.0		91.0	60-120			
Aldicarb sulfoxide	86.8	10	ug/kg wet	100.0		86.8	60-120			
Carbaryl	79.3	10	ug/kg wet	100.0		79.3	60-120			
Carbofuran	77.9	10	ug/kg wet	100.0		77.9	60-120			
3-Hydroxycarbofuran	86.8	10	ug/kg wet	100.0		86.8	60-120			
Methiocarb	80.9	10	ug/kg wet	100.0		80.9	60-120			
Methomyl	82.3	10	ug/kg wet	100.0		82.3	60-120			
Oxamyl	90.2	10	ug/kg wet	100.0		90.2	60-120			
Propoxur	73.4	10	ug/kg wet	100.0		73.4	60-120			
Surrogate: Promecarb	*145*		*ug/kg wet*	*200.0*		*72.7*	*60-140*			
Matrix Spike (A110106-MS1)	**Source: A114316-03**			Prepared: 10/31/2011 Analyzed: 11/02/2011 23:50						
Aldicarb	90.3	14	ug/kg dry	138.6	ND	65.1	60-120			
Aldicarb sulfone	123	14	ug/kg dry	138.6	ND	89.0	60-120			
Aldicarb sulfoxide	120	14	ug/kg dry	138.6	ND	86.9	60-120			
Carbaryl	106	14	ug/kg dry	138.6	ND	76.8	60-120			
Carbofuran	101	14	ug/kg dry	138.6	ND	72.6	60-120			
3-Hydroxycarbofuran	114	14	ug/kg dry	138.6	ND	82.0	60-120			
Methiocarb	99.0	14	ug/kg dry	138.6	ND	71.4	60-120			
Methomyl	99.4	14	ug/kg dry	138.6	ND	71.7	60-120			
Oxamyl	114	14	ug/kg dry	138.6	ND	81.9	60-120			
Propoxur	90.8	14	ug/kg dry	138.6	ND	65.5	60-120			
Surrogate: Promecarb	*168*		*ug/kg dry*	*277.3*		*60.6*	*60-140*			

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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

N-Methyl Carbamate Pesticides by EPA Method 8318 - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110106 - EPA 3570										
Matrix Spike Dup (A110106-MSD1)	**Source: A114316-03**		Prepared: 10/31/2011 Analyzed: 11/03/2011 00:47							
Aldicarb	90.2	14	ug/kg dry	138.6	ND	65.0	60-120	0.163	20	
Aldicarb sulfone	129	14	ug/kg dry	138.6	ND	93.3	60-120	4.63	20	
Aldicarb sulfoxide	127	14	ug/kg dry	138.6	ND	91.4	60-120	5.08	20	
Carbaryl	105	14	ug/kg dry	138.6	ND	75.9	60-120	1.10	20	
Carbofuran	101	14	ug/kg dry	138.6	ND	73.0	60-120	0.502	20	
3-Hydroxycarbofuran	119	14	ug/kg dry	138.6	ND	86.0	60-120	4.75	20	
Methiocarb	87.3	14	ug/kg dry	138.6	ND	63.0	60-120	12.5	20	
Methomyl	108	14	ug/kg dry	138.6	ND	77.9	60-120	8.30	20	
Oxamyl	120	14	ug/kg dry	138.6	ND	86.9	60-120	5.85	20	
Propoxur	90.6	14	ug/kg dry	138.6	ND	65.3	60-120	0.250	20	
Surrogate: Promecarb	*151*		*ug/kg dry*	*277.3*		*54.6*	*60-140*			*S*
Batch A111011 - EPA 3570										
Blank (A111011-BLK1)			Prepared: 11/03/2011 Analyzed: 11/03/2011 20:02							
Aldicarb	ND	10	ug/kg wet							
Aldicarb sulfone	ND	10	ug/kg wet							
Aldicarb sulfoxide	ND	10	ug/kg wet							
Carbaryl	ND	10	ug/kg wet							
Carbofuran	ND	10	ug/kg wet							
3-Hydroxycarbofuran	ND	10	ug/kg wet							
Methiocarb	ND	10	ug/kg wet							
Methomyl	ND	10	ug/kg wet							
Oxamyl	ND	10	ug/kg wet							
Propoxur	ND	10	ug/kg wet							
Surrogate: Promecarb	*137*		*ug/kg wet*	*200.0*		*68.7*	*60-140*			
LCS (A111011-BS1)			Prepared: 11/03/2011 Analyzed: 11/03/2011 21:56							
Aldicarb	76.6	10	ug/kg wet	100.0		76.6	60-120			
Aldicarb sulfone	95.7	10	ug/kg wet	100.0		95.7	60-120			
Aldicarb sulfoxide	90.5	10	ug/kg wet	100.0		90.5	60-120			
Carbaryl	82.8	10	ug/kg wet	100.0		82.8	60-120			
Carbofuran	80.5	10	ug/kg wet	100.0		80.5	60-120			
3-Hydroxycarbofuran	89.7	10	ug/kg wet	100.0		89.7	60-120			
Methiocarb	85.7	10	ug/kg wet	100.0		85.7	60-120			
Methomyl	82.3	10	ug/kg wet	100.0		82.3	60-120			
Oxamyl	94.4	10	ug/kg wet	100.0		94.4	60-120			
Propoxur	75.0	10	ug/kg wet	100.0		75.0	60-120			
Surrogate: Promecarb	*150*		*ug/kg wet*	*200.0*		*75.2*	*60-140*			

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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

N-Methyl Carbamate Pesticides by EPA Method 8318 - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A111011 - EPA 3570										
Matrix Spike (A111011-MS1)	**Source: A114316-03RE1**		Prepared: 11/03/2011	Analyzed: 11/04/2011 04:36						
Aldicarb	96.3	14	ug/kg dry	138.6	ND	69.5	60-120			
Aldicarb sulfone	131	14	ug/kg dry	138.6	ND	94.7	60-120			
Aldicarb sulfoxide	125	14	ug/kg dry	138.6	ND	89.8	60-120			
Carbaryl	113	14	ug/kg dry	138.6	ND	81.9	60-120			
Carbofuran	107	14	ug/kg dry	138.6	ND	77.2	60-120			
3-Hydroxycarbofuran	123	14	ug/kg dry	138.6	ND	89.0	60-120			
Methiocarb	104	14	ug/kg dry	138.6	ND	74.9	60-120			
Methomyl	112	14	ug/kg dry	138.6	ND	80.6	60-120			
Oxamyl	131	14	ug/kg dry	138.6	ND	94.5	60-120			
Propoxur	94.7	14	ug/kg dry	138.6	ND	68.3	60-120			
Surrogate: Promecarb	*176*		*ug/kg dry*	*277.3*		*63.5*	*60-140*			
Matrix Spike Dup (A111011-MSD1)	**Source: A114316-03RE1**		Prepared: 11/03/2011	Analyzed: 11/04/2011 05:33						
Aldicarb	102	14	ug/kg dry	138.6	ND	73.7	60-120	5.87	20	
Aldicarb sulfone	144	14	ug/kg dry	138.6	ND	104	60-120	9.34	20	
Aldicarb sulfoxide	138	14	ug/kg dry	138.6	ND	99.5	60-120	10.2	20	
Carbaryl	124	14	ug/kg dry	138.6	ND	89.5	60-120	8.91	20	
Carbofuran	117	14	ug/kg dry	138.6	ND	84.5	60-120	9.13	20	
3-Hydroxycarbofuran	135	14	ug/kg dry	138.6	ND	97.6	60-120	9.21	20	
Methiocarb	116	14	ug/kg dry	138.6	ND	83.7	60-120	11.1	20	
Methomyl	119	14	ug/kg dry	138.6	ND	85.6	60-120	6.07	20	
Oxamyl	146	14	ug/kg dry	138.6	ND	105	60-120	10.5	20	
Propoxur	102	14	ug/kg dry	138.6	ND	73.9	60-120	7.82	20	
Surrogate: Promecarb	*193*		*ug/kg dry*	*277.3*		*69.5*	*60-140*			

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608.221.4889 Fax

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FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Organochlorine Pesticides by EPA Method 8081A - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110102 - EPA 3570										
Blank (A110102-BLK1)				Prepared: 10/28/2011 Analyzed: 10/28/2011 20:01						
alpha-BHC	ND	2.0	ug/kg wet							
alpha-BHC [2C]	ND	2.0	ug/kg wet							
beta-BHC	ND	2.0	ug/kg wet							
beta-BHC [2C]	ND	2.0	ug/kg wet							
gamma-BHC (Lindane)	ND	2.0	ug/kg wet							
gamma-BHC (Lindane) [2C]	ND	2.0	ug/kg wet							
delta-BHC	ND	2.0	ug/kg wet							
delta-BHC [2C]	ND	2.0	ug/kg wet							
Heptachlor	ND	4.0	ug/kg wet							
Heptachlor [2C]	ND	4.0	ug/kg wet							
Aldrin	ND	2.0	ug/kg wet							
Aldrin [2C]	ND	2.0	ug/kg wet							
Heptachlor epoxide	ND	2.0	ug/kg wet							
Heptachlor epoxide [2C]	ND	2.0	ug/kg wet							
gamma-Chlordane	ND	2.0	ug/kg wet							
gamma-Chlordane [2C]	ND	2.0	ug/kg wet							
Endosulfan I	ND	2.0	ug/kg wet							
Endosulfan I [2C]	ND	2.0	ug/kg wet							
alpha-Chlordane	ND	2.0	ug/kg wet							
alpha-Chlordane [2C]	ND	2.0	ug/kg wet							
4,4´-DDE	ND	4.0	ug/kg wet							
4,4´-DDE [2C]	ND	4.0	ug/kg wet							
Dieldrin	ND	4.0	ug/kg wet							
Dieldrin [2C]	ND	4.0	ug/kg wet							
Endrin	ND	4.0	ug/kg wet							
Endrin [2C]	ND	4.0	ug/kg wet							
Endosulfan II	ND	4.0	ug/kg wet							
Endosulfan II [2C]	ND	4.0	ug/kg wet							
4,4´-DDD	ND	4.0	ug/kg wet							
4,4´-DDD [2C]	ND	4.0	ug/kg wet							
Endrin aldehyde	ND	4.0	ug/kg wet							
Endrin aldehyde [2C]	ND	4.0	ug/kg wet							
Endosulfan sulfate	ND	4.0	ug/kg wet							
Endosulfan sulfate [2C]	ND	4.0	ug/kg wet							
4,4´-DDT	ND	4.0	ug/kg wet							
4,4´-DDT [2C]	ND	4.0	ug/kg wet							
Endrin ketone	ND	4.0	ug/kg wet							
Endrin ketone [2C]	ND	4.0	ug/kg wet							
Methoxychlor	ND	20	ug/kg wet							
Methoxychlor [2C]	ND	20	ug/kg wet							
Chlordane (tech)	ND	40	ug/kg wet							
Toxaphene	ND	100	ug/kg wet							
Surrogate: Decachlorobiphenyl	*117*		*ug/kg wet*	*120.0*		*97.3*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*117*		*ug/kg wet*	*120.0*		*97.7*	*75.2-162*			

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Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Organochlorine Pesticides by EPA Method 8081A - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110102 - EPA 3570										
Blank (A110102-BLK1)				Prepared: 10/28/2011 Analyzed: 10/28/2011 20:01						
Surrogate: Tetrachloro-meta-xylene	*117*		*ug/kg wet*	*120.0*		*97.2*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*112*		*ug/kg wet*	*120.0*		*93.6*	*64.1-188*			
LCS (A110102-BS1)				Prepared: 10/28/2011 Analyzed: 10/28/2011 20:36						
alpha-BHC	34.7	2.0	ug/kg wet	32.00		108	71.2-135			
alpha-BHC [2C]	32.3	2.0	ug/kg wet	32.00		101	71.2-135			
beta-BHC	36.6	2.0	ug/kg wet	32.00		114	76.7-128			
beta-BHC [2C]	32.7	2.0	ug/kg wet	32.00		102	76.7-128			
gamma-BHC (Lindane)	35.1	2.0	ug/kg wet	32.00		110	73.3-134			
gamma-BHC (Lindane) [2C]	32.4	2.0	ug/kg wet	32.00		101	73.3-134			
delta-BHC	36.8	2.0	ug/kg wet	32.00		115	70.7-136			
delta-BHC [2C]	34.2	2.0	ug/kg wet	32.00		107	70.7-136			
Heptachlor	34.8	4.0	ug/kg wet	32.00		109	70.2-135			
Heptachlor [2C]	32.6	4.0	ug/kg wet	32.00		102	70.2-135			
Aldrin	34.6	2.0	ug/kg wet	32.00		108	71.5-130			
Aldrin [2C]	31.9	2.0	ug/kg wet	32.00		99.8	71.5-130			
Heptachlor epoxide	35.9	2.0	ug/kg wet	32.00		112	66.3-140			
Heptachlor epoxide [2C]	33.1	2.0	ug/kg wet	32.00		104	66.3-140			
gamma-Chlordane	35.8	2.0	ug/kg wet	32.00		112	70.5-134			
gamma-Chlordane [2C]	32.7	2.0	ug/kg wet	32.00		102	70.5-134			
Endosulfan I	34.2	2.0	ug/kg wet	32.00		107	63.8-139			
alpha-Chlordane	35.7	2.0	ug/kg wet	32.00		112	72.6-136			
4,4´-DDE	71.0	4.0	ug/kg wet	64.00		111	74.1-132			
4,4´-DDE [2C]	66.6	4.0	ug/kg wet	64.00		104	74.1-132			
Dieldrin	69.3	4.0	ug/kg wet	64.00		108	70.9-135			
Dieldrin [2C]	63.5	4.0	ug/kg wet	64.00		99.2	70.9-135			
Endrin	72.9	4.0	ug/kg wet	64.00		114	60.4-140			
Endrin [2C]	65.8	4.0	ug/kg wet	64.00		103	60.4-140			
Endosulfan II	70.7	4.0	ug/kg wet	64.00		110	69.8-134			
Endosulfan II [2C]	64.5	4.0	ug/kg wet	64.00		101	69.8-134			
4,4´-DDD	71.4	4.0	ug/kg wet	64.00		112	70-135			
4,4´-DDD [2C]	65.6	4.0	ug/kg wet	64.00		103	70-135			
Endrin aldehyde	71.5	4.0	ug/kg wet	64.00		112	62.3-135			
Endrin aldehyde [2C]	66.7	4.0	ug/kg wet	64.00		104	62.3-135			
Endosulfan sulfate	70.6	4.0	ug/kg wet	64.00		110	66.4-135			
Endosulfan sulfate [2C]	64.5	4.0	ug/kg wet	64.00		101	66.4-135			
4,4´-DDT	70.3	4.0	ug/kg wet	64.00		110	66.1-136			
4,4´-DDT [2C]	64.1	4.0	ug/kg wet	64.00		100	66.1-136			
Endrin ketone	70.8	4.0	ug/kg wet	64.00		111	73.7-140			
Endrin ketone [2C]	64.8	4.0	ug/kg wet	64.00		101	73.7-140			
Methoxychlor	351	20	ug/kg wet	320.0		110	58.3-145			
Methoxychlor [2C]	324	20	ug/kg wet	320.0		101	58.3-145			
Surrogate: Decachlorobiphenyl	*130*		*ug/kg wet*	*120.0*		*108*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*120*		*ug/kg wet*	*120.0*		*99.7*	*75.2-162*			

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Organochlorine Pesticides by EPA Method 8081A - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110102 - EPA 3570										
LCS (A110102-BS1)				Prepared: 10/28/2011	Analyzed: 10/28/2011 20:36					
Surrogate: Tetrachloro-meta-xylene	*123*		*ug/kg wet*	*120.0*		*103*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*118*		*ug/kg wet*	*120.0*		*98.7*	*64.1-188*			
LCS (A110102-BS2)				Prepared: 10/28/2011	Analyzed: 10/28/2011 21:11					
Chlordane (tech)	894	40	ug/kg wet	800.0		112	60-140			
Surrogate: Decachlorobiphenyl	*135*		*ug/kg wet*	*120.0*		*112*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*114*		*ug/kg wet*	*120.0*		*94.7*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*134*		*ug/kg wet*	*120.0*		*112*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*118*		*ug/kg wet*	*120.0*		*98.4*	*64.1-188*			
LCS (A110102-BS3)				Prepared: 10/28/2011	Analyzed: 10/28/2011 21:45					
Toxaphene	4260	100	ug/kg wet	4000		106	62.6-140			
Surrogate: Decachlorobiphenyl	*111*		*ug/kg wet*	*120.0*		*92.7*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*101*		*ug/kg wet*	*120.0*		*83.8*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*114*		*ug/kg wet*	*120.0*		*94.9*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*111*		*ug/kg wet*	*120.0*		*92.5*	*64.1-188*			
Matrix Spike (A110102-MS1)	**Source: A114210-01**			Prepared: 10/28/2011	Analyzed: 10/29/2011 00:04					
alpha-BHC	68.0	3.8	ug/kg dry	61.20	ND	111	68.5-146			
alpha-BHC [2C]	60.9	3.8	ug/kg dry	61.20	ND	99.5	46.9-184			
beta-BHC	63.7	3.8	ug/kg dry	61.20	ND	104	62.6-144			
beta-BHC [2C]	58.6	3.8	ug/kg dry	61.20	ND	95.8	36.8-186			
gamma-BHC (Lindane)	53.1	3.8	ug/kg dry	61.20	ND	86.8	65.3-149			
gamma-BHC (Lindane) [2C]	60.1	3.8	ug/kg dry	61.20	ND	98.2	47.9-187			
delta-BHC	68.2	3.8	ug/kg dry	61.20	ND	111	62.4-148			
delta-BHC [2C]	67.0	3.8	ug/kg dry	61.20	ND	109	42.7-191			
Heptachlor	53.5	7.7	ug/kg dry	61.20	ND	87.4	67.1-141			
Heptachlor [2C]	57.6	7.7	ug/kg dry	61.20	ND	94.2	43.9-175			
Aldrin	58.7	3.8	ug/kg dry	61.20	ND	96.0	69.2-137			
Aldrin [2C]	60.4	3.8	ug/kg dry	61.20	ND	98.6	51.2-173			
Heptachlor epoxide	65.9	3.8	ug/kg dry	61.20	ND	108	68.3-142			
Heptachlor epoxide [2C]	61.8	3.8	ug/kg dry	61.20	ND	101	53.2-177			
gamma-Chlordane	64.3	3.8	ug/kg dry	61.20	ND	105	65.1-141			
gamma-Chlordane [2C]	61.3	3.8	ug/kg dry	61.20	ND	100	51.8-177			
Endosulfan I	62.1	3.8	ug/kg dry	61.20	0.521	101	67.5-137			
alpha-Chlordane	64.2	3.8	ug/kg dry	61.20	ND	105	67.5-144			
4,4´-DDE	138	7.7	ug/kg dry	122.4	4.18	109	70.6-141			
4,4´-DDE [2C]	127	7.7	ug/kg dry	122.4	ND	104	57.2-166			
Dieldrin	132	7.7	ug/kg dry	122.4	ND	108	52.6-156			
Dieldrin [2C]	ND	7.7	ug/kg dry	122.4	ND		37.7-187			
Endrin	136	7.7	ug/kg dry	122.4	ND	111	38.6-163			
Endrin [2C]	131	7.7	ug/kg dry	122.4	ND	107	38.1-180			
Endosulfan II	132	7.7	ug/kg dry	122.4	ND	108	59.2-143			
Endosulfan II [2C]	132	7.7	ug/kg dry	122.4	ND	108	57.7-158			

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Organochlorine Pesticides by EPA Method 8081A - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110102 - EPA 3570										
Matrix Spike (A110102-MS1)	**Source: A114210-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 00:04						
4,4´-DDD	155	7.7	ug/kg dry	122.4	7.57	120	64.2-145			
4,4´-DDD [2C]	153	7.7	ug/kg dry	122.4	5.32	121	59.4-153			
Endrin aldehyde	137	7.7	ug/kg dry	122.4	ND	112	51.7-136			
Endrin aldehyde [2C]	128	7.7	ug/kg dry	122.4	ND	104	46.7-173			
Endosulfan sulfate	134	7.7	ug/kg dry	122.4	ND	110	40.3-154			
Endosulfan sulfate [2C]	132	7.7	ug/kg dry	122.4	ND	107	42.8-168			
4,4´-DDT	87.7	7.7	ug/kg dry	122.4	ND	71.6	47.3-153			
4,4´-DDT [2C]	81.4	7.7	ug/kg dry	122.4	1.74	65.1	50.5-162			
Endrin ketone	130	7.7	ug/kg dry	122.4	ND	107	72.9-137			
Endrin ketone [2C]	127	7.7	ug/kg dry	122.4	ND	104	43.7-169			
Methoxychlor	477	38	ug/kg dry	612.0	ND	78.0	32.6-162			
Methoxychlor [2C]	468	38	ug/kg dry	612.0	ND	76.4	26.5-165			
Surrogate: Decachlorobiphenyl	*243*		*ug/kg dry*	*229.5*		*106*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*261*		*ug/kg dry*	*229.5*		*114*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*197*		*ug/kg dry*	*229.5*		*85.9*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*228*		*ug/kg dry*	*229.5*		*99.4*	*64.1-188*			
Matrix Spike (A110102-MS2)	**Source: A114210-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 01:49						
Chlordane (tech)	1510	77	ug/kg dry	1530	ND	98.7	46.8-142			
Surrogate: Decachlorobiphenyl	*247*		*ug/kg dry*	*229.5*		*108*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*233*		*ug/kg dry*	*229.5*		*102*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*207*		*ug/kg dry*	*229.5*		*90.4*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*229*		*ug/kg dry*	*229.5*		*99.7*	*64.1-188*			
Matrix Spike (A110102-MS3)	**Source: A114210-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 02:59						
Toxaphene	5010	190	ug/kg dry	7650	ND	65.5	31.1-155			
Surrogate: Decachlorobiphenyl	*206*		*ug/kg dry*	*229.5*		*89.6*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*212*		*ug/kg dry*	*229.5*		*92.4*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*213*		*ug/kg dry*	*229.5*		*93.0*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*216*		*ug/kg dry*	*229.5*		*94.0*	*64.1-188*			
Matrix Spike Dup (A110102-MSD1)	**Source: A114210-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 00:39						
alpha-BHC	68.8	3.8	ug/kg dry	61.20	ND	112	68.5-146	1.18	20	
alpha-BHC [2C]	59.4	3.8	ug/kg dry	61.20	ND	97.1	46.9-184	2.43	20	
beta-BHC	60.3	3.8	ug/kg dry	61.20	ND	98.5	62.6-144	5.54	20	
beta-BHC [2C]	56.6	3.8	ug/kg dry	61.20	ND	92.5	36.8-186	3.55	20	
gamma-BHC (Lindane)	50.0	3.8	ug/kg dry	61.20	ND	81.7	65.3-149	6.11	20	
gamma-BHC (Lindane) [2C]	58.5	3.8	ug/kg dry	61.20	ND	95.6	47.9-187	2.64	20	
delta-BHC	65.2	3.8	ug/kg dry	61.20	ND	106	62.4-148	4.54	20	
delta-BHC [2C]	64.4	3.8	ug/kg dry	61.20	ND	105	42.7-191	3.95	20	
Heptachlor	52.0	7.7	ug/kg dry	61.20	ND	84.9	67.1-141	2.90	20	
Heptachlor [2C]	56.1	7.7	ug/kg dry	61.20	ND	91.7	43.9-175	2.68	20	
Aldrin	55.8	3.8	ug/kg dry	61.20	ND	91.2	69.2-137	5.10	20	
Aldrin [2C]	59.2	3.8	ug/kg dry	61.20	ND	96.8	51.2-173	1.92	20	

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Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Organochlorine Pesticides by EPA Method 8081A - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110102 - EPA 3570										
Matrix Spike Dup (A110102-MSD1)	**Source: A114210-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 00:39						
Heptachlor epoxide	62.8	3.8	ug/kg dry	61.20	ND	103	68.3-142	4.85	20	
Heptachlor epoxide [2C]	59.6	3.8	ug/kg dry	61.20	ND	97.4	53.2-177	3.60	20	
gamma-Chlordane	61.8	3.8	ug/kg dry	61.20	ND	101	65.1-141	3.97	20	
gamma-Chlordane [2C]	59.0	3.8	ug/kg dry	61.20	ND	96.5	51.8-177	3.75	20	
Endosulfan I	59.7	3.8	ug/kg dry	61.20	0.521	96.7	67.5-137	4.05	20	
alpha-Chlordane	61.4	3.8	ug/kg dry	61.20	ND	100	67.5-144	4.38	20	
4,4´-DDE	132	7.7	ug/kg dry	122.4	4.18	104	70.6-141	4.31	20	
4,4´-DDE [2C]	123	7.7	ug/kg dry	122.4	ND	100	57.2-166	3.65	20	
Dieldrin	126	7.7	ug/kg dry	122.4	ND	103	52.6-156	4.50	20	
Dieldrin [2C]	ND	7.7	ug/kg dry	122.4	ND		37.7-187		20	
Endrin	129	7.7	ug/kg dry	122.4	ND	106	38.6-163	5.22	20	
Endrin [2C]	124	7.7	ug/kg dry	122.4	ND	101	38.1-180	5.27	20	
Endosulfan II	126	7.7	ug/kg dry	122.4	ND	103	59.2-143	4.46	20	
Endosulfan II [2C]	125	7.7	ug/kg dry	122.4	ND	102	57.7-158	5.60	20	
4,4´-DDD	151	7.7	ug/kg dry	122.4	7.57	117	64.2-145	2.89	20	
4,4´-DDD [2C]	147	7.7	ug/kg dry	122.4	5.32	115	59.4-153	4.46	20	
Endrin aldehyde	127	7.7	ug/kg dry	122.4	ND	104	51.7-136	7.10	20	
Endrin aldehyde [2C]	118	7.7	ug/kg dry	122.4	ND	96.3	46.7-173	8.00	20	
Endosulfan sulfate	125	7.7	ug/kg dry	122.4	ND	102	40.3-154	6.87	20	
Endosulfan sulfate [2C]	122	7.7	ug/kg dry	122.4	ND	99.4	42.8-168	7.77	20	
4,4´-DDT	77.5	7.7	ug/kg dry	122.4	ND	63.3	47.3-153	12.3	20	
4,4´-DDT [2C]	73.9	7.7	ug/kg dry	122.4	1.74	59.0	50.5-162	9.87	20	
Endrin ketone	122	7.7	ug/kg dry	122.4	ND	99.9	72.9-137	6.45	20	
Endrin ketone [2C]	118	7.7	ug/kg dry	122.4	ND	96.5	43.7-169	7.36	20	
Methoxychlor	432	38	ug/kg dry	612.0	ND	70.6	32.6-162	10.0	20	
Methoxychlor [2C]	422	38	ug/kg dry	612.0	ND	69.0	26.5-165	10.2	20	
Surrogate: Decachlorobiphenyl	*229*		*ug/kg dry*	*229.5*		*99.8*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*246*		*ug/kg dry*	*229.5*		*107*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*192*		*ug/kg dry*	*229.5*		*83.4*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*222*		*ug/kg dry*	*229.5*		*96.9*	*64.1-188*			
Matrix Spike Dup (A110102-MSD2)	**Source: A114210-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 02:24						
Chlordane (tech)	1510	77	ug/kg dry	1530	ND	99.0	46.8-142	0.316	20	
Surrogate: Decachlorobiphenyl	*249*		*ug/kg dry*	*229.5*		*108*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*230*		*ug/kg dry*	*229.5*		*100*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*212*		*ug/kg dry*	*229.5*		*92.2*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*230*		*ug/kg dry*	*229.5*		*100*	*64.1-188*			

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Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Organochlorine Pesticides by EPA Method 8081A - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110102 - EPA 3570										
Matrix Spike Dup (A110102-MSD3)	**Source: A114210-01**		Prepared: 10/28/2011 Analyzed: 10/29/2011 03:33							
Toxaphene	4930	190	ug/kg dry	7650	ND	64.4	31.1-155	1.63	20	
Surrogate: Decachlorobiphenyl	*212*		*ug/kg dry*	*229.5*		*92.4*	*64.4-149*			
Surrogate: Decachlorobiphenyl [2C]	*216*		*ug/kg dry*	*229.5*		*94.0*	*75.2-162*			
Surrogate: Tetrachloro-meta-xylene	*223*		*ug/kg dry*	*229.5*		*97.3*	*73-138*			
Surrogate: Tetrachloro-meta-xylene [2C]	*218*		*ug/kg dry*	*229.5*		*94.8*	*64.1-188*			

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Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Acid Herbicides by Gas Chromatography/Mass Spectrometry - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110103 - EPA 3570										
Blank (A110103-BLK1)				Prepared: 10/28/2011 Analyzed: 10/29/2011 01:56						
Acifluorfen	ND	100	ug/kg wet							
Bentazon	ND	25	ug/kg wet							
Bromoxynil	ND	25	ug/kg wet							
2,4-D	ND	25	ug/kg wet							
Dacthal	ND	25	ug/kg wet							
Dalapon	ND	250	ug/kg wet							
2,4-DB	ND	25	ug/kg wet							
Dicamba	ND	25	ug/kg wet							
Dichlorprop	ND	25	ug/kg wet							
Dinoseb	ND	25	ug/kg wet							
MCPA	ND	25	ug/kg wet							
MCPP	ND	25	ug/kg wet							
Pentachlorophenol	ND	25	ug/kg wet							
Picloram	ND	25	ug/kg wet							
2,4,5-T	ND	50	ug/kg wet							
2,4,5-TP (Silvex)	ND	25	ug/kg wet							
Triclopyr	ND	25	ug/kg wet							
Surrogate: 2,4-D-d5	*443*		*ug/kg wet*	*500.0*		*88.6*	*50.8-116*			
LCS (A110103-BS1)				Prepared: 10/28/2011 Analyzed: 10/29/2011 02:28						
Acifluorfen	2400	100	ug/kg wet	2500		96.1	56.2-131			
Bentazon	238	25	ug/kg wet	250.0		95.2	56.7-120			
Bromoxynil	226	25	ug/kg wet	250.0		90.2	56.4-119			
2,4-D	492	25	ug/kg wet	500.0		98.3	59.4-126			
Dacthal	453	25	ug/kg wet	500.0		90.5	31.4-118			
Dalapon	1980	250	ug/kg wet	2000		99.2	36.9-118			
2,4-DB	477	25	ug/kg wet	500.0		95.5	55.7-134			
Dicamba	474	25	ug/kg wet	500.0		94.7	59.4-119			
Dichlorprop	535	25	ug/kg wet	500.0		107	60-127			
Dinoseb	423	25	ug/kg wet	500.0		84.7	30.6-122			
MCPA	477	25	ug/kg wet	500.0		95.3	57-122			
MCPP	499	25	ug/kg wet	500.0		99.7	58.1-118			
Pentachlorophenol	435	25	ug/kg wet	500.0		86.9	51.9-109			
Picloram	197	25	ug/kg wet	250.0		78.7	46.3-106			
2,4,5-T	474	50	ug/kg wet	500.0		94.9	50.1-130			
2,4,5-TP (Silvex)	499	25	ug/kg wet	500.0		99.8	67.7-130			
Triclopyr	502	25	ug/kg wet	500.0		100	58.5-123			
Surrogate: 2,4-D-d5	*473*		*ug/kg wet*	*500.0*		*94.5*	*50.8-116*			

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Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

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12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Acid Herbicides by Gas Chromatography/Mass Spectrometry - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110103 - EPA 3570										
Matrix Spike (A110103-MS1)	**Source: A114302-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 03:33						
Acifluorfen	3990	150	ug/kg dry	3872	ND	103	10.6-176			
Bentazon	335	39	ug/kg dry	387.2	ND	86.5	44.9-126			
Bromoxynil	302	39	ug/kg dry	387.2	ND	77.9	50.3-115			
2,4-D	693	39	ug/kg dry	774.4	ND	89.5	52.6-126			
Dacthal	642	39	ug/kg dry	774.4	ND	82.9	47.2-101			
Dalapon	2050	390	ug/kg dry	3098	ND	66.3	32.4-99.3			
2,4-DB	782	39	ug/kg dry	774.4	ND	101	34.6-155			
Dicamba	575	39	ug/kg dry	774.4	ND	74.3	29.7-129			
Dichlorprop	723	39	ug/kg dry	774.4	ND	93.3	43.7-131			
Dinoseb	538	39	ug/kg dry	774.4	ND	69.5	12.7-136			
MCPA	661	39	ug/kg dry	774.4	ND	85.4	41.8-132			
MCPP	623	39	ug/kg dry	774.4	ND	80.4	37.4-132			
Pentachlorophenol	518	39	ug/kg dry	774.4	ND	66.9	29.6-122			
Picloram	292	39	ug/kg dry	387.2	ND	75.5	51.5-104			
2,4,5-T	688	77	ug/kg dry	774.4	ND	88.8	37.7-134			
2,4,5-TP (Silvex)	644	39	ug/kg dry	774.4	ND	83.1	46-147			
Triclopyr	710	39	ug/kg dry	774.4	ND	91.7	38.8-135			
Surrogate: 2,4-D-d5	*639*		*ug/kg dry*	*774.4*		*82.5*	*50.8-116*			
Matrix Spike Dup (A110103-MSD1)	**Source: A114302-01**		Prepared: 10/28/2011	Analyzed: 10/29/2011 04:06						
Acifluorfen	3730	150	ug/kg dry	3872	ND	96.4	10.6-176	6.60	20	
Bentazon	337	39	ug/kg dry	387.2	ND	87.1	44.9-126	0.668	20	
Bromoxynil	292	39	ug/kg dry	387.2	ND	75.4	50.3-115	3.25	20	
2,4-D	647	39	ug/kg dry	774.4	ND	83.5	52.6-126	6.91	20	
Dacthal	627	39	ug/kg dry	774.4	ND	81.0	47.2-101	2.34	20	
Dalapon	2140	390	ug/kg dry	3098	ND	69.1	32.4-99.3	4.17	20	
2,4-DB	728	39	ug/kg dry	774.4	ND	94.0	34.6-155	7.21	20	
Dicamba	569	39	ug/kg dry	774.4	ND	73.4	29.7-129	1.18	20	
Dichlorprop	707	39	ug/kg dry	774.4	ND	91.3	43.7-131	2.25	20	
Dinoseb	562	39	ug/kg dry	774.4	ND	72.5	12.7-136	4.25	20	
MCPA	649	39	ug/kg dry	774.4	ND	83.8	41.8-132	1.92	20	
MCPP	627	39	ug/kg dry	774.4	ND	81.0	37.4-132	0.651	20	
Pentachlorophenol	548	39	ug/kg dry	774.4	ND	70.7	29.6-122	5.62	20	
Picloram	278	39	ug/kg dry	387.2	ND	71.8	51.5-104	5.08	20	
2,4,5-T	643	77	ug/kg dry	774.4	ND	83.1	37.7-134	6.68	20	
2,4,5-TP (Silvex)	629	39	ug/kg dry	774.4	ND	81.3	46-147	2.26	20	
Triclopyr	642	39	ug/kg dry	774.4	ND	82.9	38.8-135	9.99	20	
Surrogate: 2,4-D-d5	*607*		*ug/kg dry*	*774.4*		*78.4*	*50.8-116*			

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Classical Chemistry Parameters - Quality Control

ECCS

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A110082 - % Solids										
Duplicate (A110082-DUP1)	**Source: A114210-01**		Prepared: 10/24/2011	Analyzed: 10/25/2011 09:15						
% Solids	51.8	0.00	% by Weight		52.3			1.02	20	
Batch A110088 - % Solids										
Duplicate (A110088-DUP1)	**Source: A114302-01**		Prepared: 10/25/2011	Analyzed: 10/26/2011 09:54						
% Solids	65.5	0.00	% by Weight		64.6			1.44	20	

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Revised Report

FutureNet Group	Project: Calumet Harbor - Chicago, IL	
12801 Auburn St	Project Number: 11655-004	**Reported:**
Detroit MI, 48223	Project Manager: James Finetti	04/10/2012

Notes and Definitions

S	Surrogate recovery was outside of laboratory control limits due to an apparent matrix effect.
LC	Resuts may be biased low because of low continuing calibration verification (CCV).
J	Analyte was detected but is below the reporting limit. The concentration is estimated.
HC	Results may be biased high because of high continuing calibration verification (CCV).
H	The sample was held beyond the accepted holding time.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
RPD	Relative Percent Difference

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

EST. 1991

CHAIN OF CUSTODY

Lab Work Order #: A114210

Mail Report To: James Finetti 10-20-11
Company:
Address:

E-mail Address: alia@futurenetgroup.com
Invoice To: FNG, Dr. Ali Al-Saffar
Company: Future Net Group, Inc
Address: 12801 Auburn Street
Detroit, MI 48223

Project Number: 11655-004
Project Name: Calumet Harbor
Project Location: Chicago, IL
Turn Around (circle one): Normal Rush
If Rush, Report Due Date:
Sampled By (Print): ALI ALSAFFAR

Analyses Requested / Preservation Codes

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	① Extended pesticide / herbicide					Comments	Lab ID	Lab Receipt Time
CH-2011-MW3-comp	10/18	4:00	S	2	X						01	
	~~10/18~~		~~S~~	~~1~~								

① Acid Herbicides by method 8151
N-methyl carbamated by method 8318
Neutral Extractable Pests by method 8270
Organochlorine Pests by method 8081. 10-20-11

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Dr. Ali Al-Saffar	10/19		Jessica Edge	10-20-11	1200
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal Present/Absent Intact/Not Intact Seal #'s
Shipped Via: Fed Ex
Receipt Temp: On ice

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Rev. 11/08

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

Lab Work Order #: A114302

Project Number: 11655-004
Project Name: Calumet Harbor
Project Location: Calumet Harbor, Chicago, IL
Turn Around (circle one): Normal Rush
If Rush, Report Due Date:
Sampled By (Print): Ali Al-Saffar

Analyses Requested / Preservation Codes

Mail Report To:
Company:
Address:
E-mail Address: ali.a@FutureNetGroup.com
Invoice To: FNG
Company: FNG
Address: 12801 Auburn St. Detroit, MI 48223

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Extended pesticide	and Herbicide list					Comments	Lab ID	Lab Receipt Time
CH-2011-MU2-Comp ①	10/22	② 11:30	S	2	X	X					check the box for analysis list required	01	
CH-2011-MU1-Comp ①	10/22	② 5:10	S	2	X	X						02	

① Sample labeled as 10/21 collection date. ie 10-25-11
② Sample times reversed on sample containers

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Relinquished By	Date	Time	Received By	Date	Time
Dr. Ali Al-Saffar	10/27	10:00	Jessica Edda	10-25-11	1000

Custody Seal Present Absent Intact Not Intact Seal #'s
Shipped Via: FedEx
Receipt Temp On ice
Temp Blank Y N

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Appendix H

EMSL Laboratory Analytical Report

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/2/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/6/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/21/2011**	**Report Date:**	**11/8/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0001		Mass of Respirable Dust on Filter:	0.000147	g
Customer Sample Number:	CH-2011-MU1-G1		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	100	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	49.3	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1475.00	ml/min
Not Used <3/8"	125.250	g	Air Flow Rate Through IST opening of Dust Generator	98.00	ml/min
Used in Tumbler <3/8"	51.060	g	Estimated Total Air Flow Through Elutriator	1573.00	ml/min

Analytical Sensitivity: 1.98E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

Robyn Denton

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/2/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/6/2011
Project:	**Calumet Harbor Project / 11655-004**		11/7/2011
Date Sampled:	**10/21/2011**	**Report Date:**	**11/8/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0002		Mass of Respirable Dust on Filter:	0.00014	g
Customer Sample Number:	CH-2011-MU1-G2		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	105	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	47.3	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1490.00	ml/min
Not Used <3/8"	138.230	g	Air Flow Rate Through IST opening of Dust Generator	82.00	ml/min
Used in Tumbler <3/8"	52.590	g	Estimated Total Air Flow Through Elutriator	1572.00	ml/min

Analytical Sensitivity: 1.98E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

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Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/3/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/7/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/23/2011**	**Report Date:**	**11/8/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0003		Mass of Respirable Dust on Filter:	0.000149	g
Customer Sample Number:	CH-2011-MU1-CNU		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	98	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	49.3	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1441.00	ml/min
Not Used <3/8"	129.510	g	Air Flow Rate Through IST opening of Dust Generator	85.00	ml/min
Used in Tumbler <3/8"	46.800	g	Estimated Total Air Flow Through Elutriator	1526.00	ml/min

Analytical Sensitivity: 2.00E+06 Structure/g PM10

Note: Chrysotile present < 5um

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.97E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.97E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.97E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.97E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.97E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.97E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.97E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.97E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.97E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

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Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/2/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/8/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/22/2011**	**Report Date:**	**11/8/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0005		Mass of Respirable Dust on Filter:	0.000152	g
Customer Sample Number:	CH-2011-MU1-GS		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	96	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	37.7	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1440.00	ml/min
Not Used <3/8"	178.930	g	Air Flow Rate Through IST opening of Dust Generator	91.00	ml/min
Used in Tumbler <3/8"	45.810	g	Estimated Total Air Flow Through Elutriator	1531.00	ml/min

Analytical Sensitivity: 2.00E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

Robyn Denton

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/4/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/9/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/21/2011**	**Report Date:**	**11/14/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0006		Mass of Respirable Dust on Filter:	0.00015	g
Customer Sample Number:	CH-2011-MU2-G2		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	98	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	33.4	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1445.00	ml/min
Not Used <3/8"	207.830	g	Air Flow Rate Through IST opening of Dust Generator	95.00	ml/min
Used in Tumbler <3/8"	46.770	g	Estimated Total Air Flow Through Elutriator	1540.00	ml/min

Analytical Sensitivity: 1.98E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

Robyn Denton

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/7/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/8/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/22/2011**	**Report Date:**	**11/14/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0007		Mass of Respirable Dust on Filter:	0.000139	g
Customer Sample Number:	CH-2011-MU2-CN		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	105	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	54.3	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1460.00	ml/min
Not Used <3/8"	97.510	g	Air Flow Rate Through IST opening of Dust Generator	82.00	ml/min
Used in Tumbler <3/8"	42.180	g	Estimated Total Air Flow Through Elutriator	1542.00	ml/min

Analytical Sensitivity: 2.00E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

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Email: WestmontAsbLab@emsl.com

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	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/7/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/10/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/22/2011**	**Report Date:**	**11/14/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0008		Mass of Respirable Dust on Filter:	0.000153	g
Customer Sample Number:	CH-2011-MU2-CS		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	96	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	33.5	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1445.00	ml/min
Not Used <3/8"	212.170	g	Air Flow Rate Through IST opening of Dust Generator	86.00	ml/min
Used in Tumbler <3/8"	41.810	g	Estimated Total Air Flow Through Elutriator	1531.00	ml/min

Analytical Sensitivity: 1.99E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.94E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.94E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.94E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.94E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.94E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.94E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.94E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.94E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.94E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

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Email: WestmontAsbLab@emsl.com

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	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/8/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/10/2011
Project:	**Calumet Harbor Project / 11655-004**		11/11/2011
Date Sampled:	**10/18/2011**	**Report Date:**	**11/14/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0009		Mass of Respirable Dust on Filter:	0.000128	g
Customer Sample Number:	CH-2011-MU3-G1		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	114	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	39.2	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1445.00	ml/min
Not Used <3/8"	183.690	g	Air Flow Rate Through IST opening of Dust Generator	89.00	ml/min
Used in Tumbler <3/8"	40.660	g	Estimated Total Air Flow Through Elutriator	1534.00	ml/min

Analytical Sensitivity: 2.00E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.98E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.98E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.98E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

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Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

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	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/10/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/15/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/18/2011**	**Report Date:**	**11/23/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0010		Mass of Respirable Dust on Filter:	0.000133	g
Customer Sample Number:	CH-2011-MU3-G2		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	110	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	39.8	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1409.00	ml/min
Not Used <3/8"	192.320	g	Air Flow Rate Through IST opening of Dust Generator	86.00	ml/min
Used in Tumbler <3/8"	41.380	g	Estimated Total Air Flow Through Elutriator	1495.00	ml/min

Analytical Sensitivity: 1.99E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.96E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.96E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.96E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.96E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.96E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.96E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.96E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.96E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.96E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

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	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/9/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/11/2011
Project:	**Calumet Harbor Project / 11655-004**		11/12/2011
Date Sampled:	**10/22/2011**	**Report Date:**	**11/14/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0011		Mass of Respirable Dust on Filter:	0.000151	g
Customer Sample Number:	CH-2011-MU3-CN		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	97	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	45.5	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1450.00	ml/min
Not Used <3/8"	164.210	g	Air Flow Rate Through IST opening of Dust Generator	89.00	ml/min
Used in Tumbler <3/8"	41.550	g	Estimated Total Air Flow Through Elutriator	1539.00	ml/min

Analytical Sensitivity: 1.99E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.95E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.95E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.95E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.95E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.95E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.95E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.95E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.95E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.95E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

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Fax:	313-544-7111	**Analysis Date(s):**	11/12/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/22/2011**	**Report Date:**	**11/14/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0012		Mass of Respirable Dust on Filter:	0.00015	g
Customer Sample Number:	CH-2011-MU3-CS		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	98	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	44.0	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1455.00	ml/min
Not Used <3/8"	168.500	g	Air Flow Rate Through IST opening of Dust Generator	92.00	ml/min
Used in Tumbler <3/8"	40.620	g	Estimated Total Air Flow Through Elutriator	1547.00	ml/min

Analytical Sensitivity: 1.98E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

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	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	10/27/11 9:20 AM
	Detroit, MI 48223	**EMSL Order:**	041128659
Phone:	313-544-7117	**Date Prepared:**	11/16/2011
Fax:	313-544-7111	**Analysis Date(s):**	11/17/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/18/2011**	**Report Date:**	**11/23/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041128659-0009QC		Mass of Respirable Dust on Filter:	0.000132	g
Customer Sample Number:	CH-2011-MU3-G1		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	111	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	39.2	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1420.00	ml/min
Not Used <3/8"	184.350	g	Air Flow Rate Through IST opening of Dust Generator	93.00	ml/min
Used in Tumbler <3/8"	40.000	g	Estimated Total Air Flow Through Elutriator	1513.00	ml/min

Analytical Sensitivity: 1.99E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.95E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.95E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.95E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.95E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.95E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.95E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.95E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.95E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.95E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

Robyn Denton

Approved Signatory

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0001
Client Sample ID:	CH-2011-MU1-G1

Date:	11/2/2011
System:	1
Operator:	EM

Sample Drying:	
Temperature (C):	78 c
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	347.6 g	>3/8"	0 g	
Post Drying	176.31 g	<3/8"	51.06 g	(In Tumbler)
% moisure	49.3	<3/8"	125.3 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	2-Nov-11	10:00
Tumbling	02-Nov-11	10:40	2-Nov-11	16:10

Tumbling Speed: 30 rpm

ME	IST	
1475	98	mL/min

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	mo (mg)=	128			Resp.%=	ME Filter Information
Emission rate	k=	0.9927			0.25069	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.101	31.617	20	7.516	20	4.792	20	4.7915	4.8520
2	ME	24.259	35.626	20	18.883	40	4.692	40	4.6924	4.8520
3	ME	23.930	31.518	15	26.471	55	4.620	55	4.6203	4.8520
4	ME	23.937	31.143	15	33.677	70	4.547	70	4.5467	4.8520
5	ME	23.990	31.723	18	41.410	88	4.461	88	4.4612	4.8520
6	ME	24.189	31.969	20	49.190	108	4.367	108	4.3670	4.8520
7	ME	24.305	31.547	20	56.432	128	4.271	128	4.2706	4.8520
8	ME	24.140	31.599	20	63.891	148	4.161	148	4.1606	4.8520
9	ME	24.283	32.406	20	72.014	168	4.025	168	4.0251	4.8520
10	ME	24.180	30.757	20	78.591	188	3.900	188	3.9001	4.8520
11	ME	24.213	29.486	20	83.864	208	3.787	208	3.7873	4.8520
12	ME	24.092	24.514	20	84.286	228	3.778	228	3.7777	4.8520
13	ME	24.144	27.285	20	87.427	248	3.703	248	3.7031	4.8520
14	ME	24.221	27.300	20	90.506	268	3.624	268	3.6242	4.8520
15	ME	24.066	27.483	20	93.923	288	3.529	288	3.5286	4.8520
16	ME	23.900	30.476	20	100.499	308	3.314	308	3.3142	4.8520
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200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0001
Client Sample ID:	CH-2011-MU1-G1

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.391	27.559	0.168
2	IST	27.569	27.691	0.122
3	IST	27.42	27.567	0.147
4	IST	27.814	27.924	0.110
5	IST	27.774	27.945	0.171
6	IST	27.576	27.72	0.144
7	IST	27.935	28.188	0.253
8	IST	27.553	27.679	0.126
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

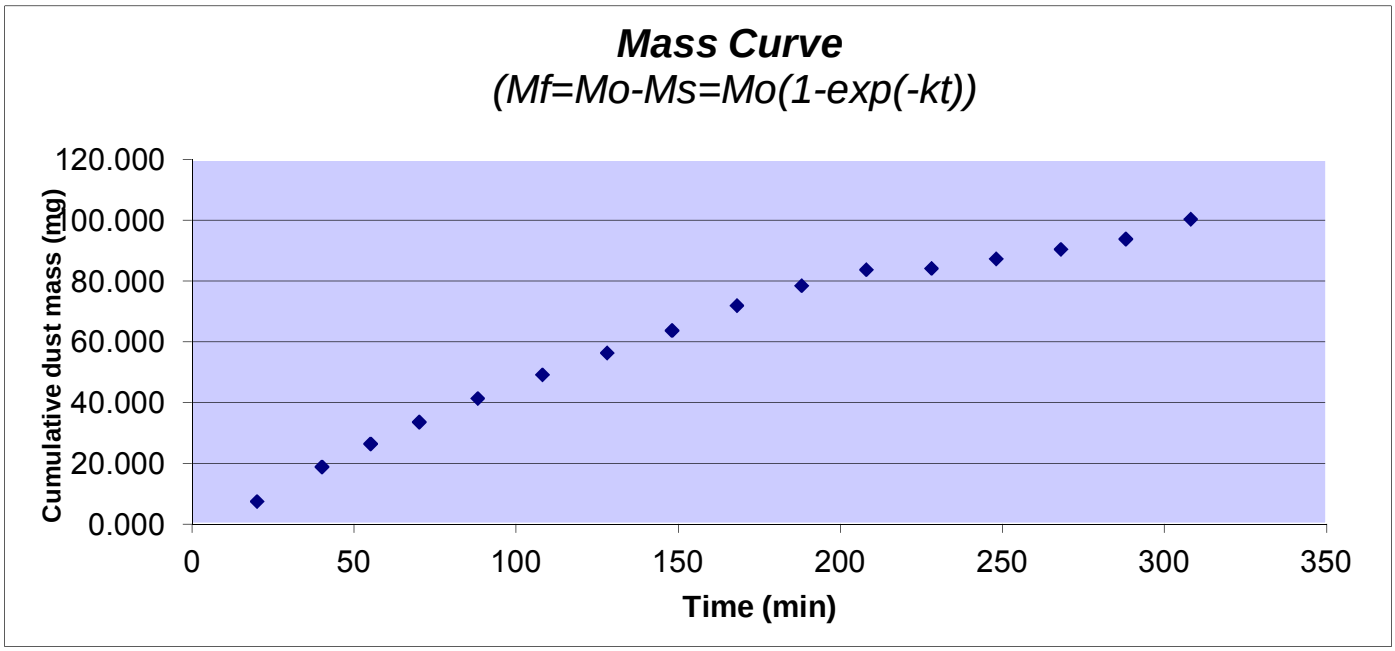
Filters sent to another lab for analysis
2
3
4
6
8

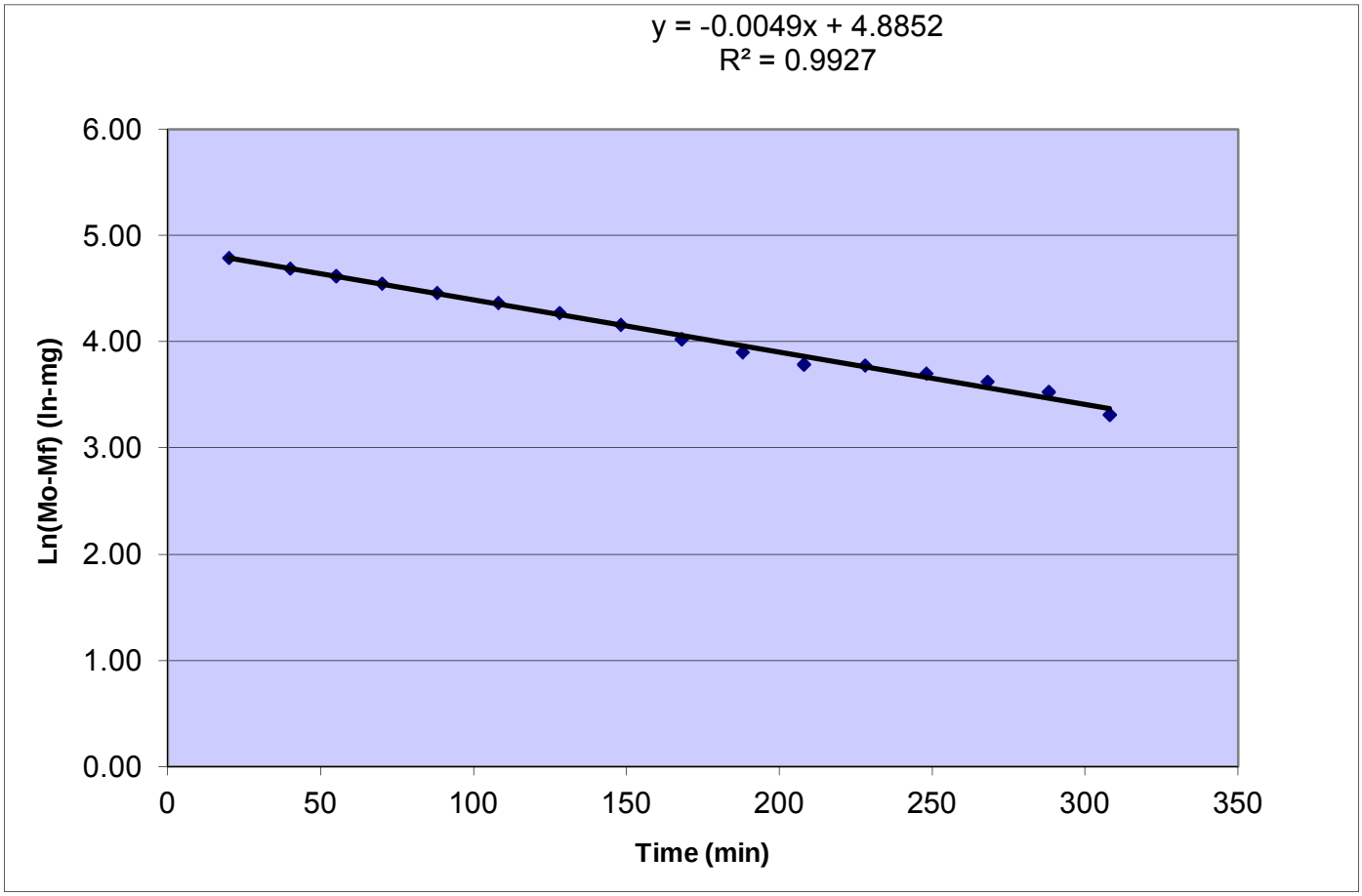
Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0001
Client Sample ID:	CH-2011-MU1-G1





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Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0002
Client Sample ID:	CH-2011-MU1-G2

Date:	11/2/2011
System:	3
Operator:	EM

Sample Drying:	
Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	361.9 g	>3/8"	0 g	
Post Drying	190.82 g	<3/8"	52.59 g	(In Tumbler)
% moisure	47.3	<3/8"	138.2 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	2-Nov-11	11:00
Tumbling	02-Nov-11	11:00	2-Nov-11	4:00

Tumbling Speed

30	rpm

1490	82	mL/min
ME	IST	

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	mo (mg)=	146			Resp.%=	ME Filter Information
Emission rate	k=	0.9967			0.27762	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.091	31.688	20	7.597	20	4.930	20	4.9302	4.9836
2	ME	23.691	35.485	18	19.391	38	4.841	38	4.8411	4.9836
3	ME	23.592	31.260	12	27.059	50	4.779	50	4.7786	4.9836
4	ME	23.937	32.402	14	35.524	64	4.705	64	4.7048	4.9836
5	ME	23.712	31.895	14	43.707	78	4.628	78	4.6278	4.9836
6	ME	23.670	31.296	15	51.333	93	4.550	93	4.5504	4.9836
7	ME	24.238	30.825	15	57.920	108	4.478	108	4.4782	4.9836
8	ME	24.377	30.374	15	63.917	123	4.408	123	4.4077	4.9836
9	ME	24.261	31.378	16	71.034	139	4.317	139	4.3170	4.9836
10	ME	24.214	30.643	16	77.463	155	4.227	155	4.2274	4.9836
11	ME	24.341	27.323	16	80.445	171	4.183	171	4.1829	4.9836
12	ME	24.192	29.309	16	85.562	187	4.102	187	4.1016	4.9836
13	ME	24.211	30.356	16	91.707	203	3.994	203	3.9944	4.9836
14	ME	24.231	24.296	16	91.772	219	3.993	219	3.9932	4.9836
15	ME	23.939	30.456	16	98.289	235	3.865	235	3.8652	4.9836
16	ME	23.900	30.432	20	104.821	255	3.718	255	3.7179	4.9836
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Remove Contents of cells that have no data

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0002
Client Sample ID:	CH-2011-MU1-G2

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.79	27.886	0.096
2	IST	27.595	27.702	0.107
3	IST	27.1433	27.293	0.150
4	IST	27.67	27.792	0.122
5	IST	27.613	27.744	0.131
6	IST	27.275	27.43	0.155
7	IST	26.967	27.107	0.140
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
2
3
4
6
5
7

Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

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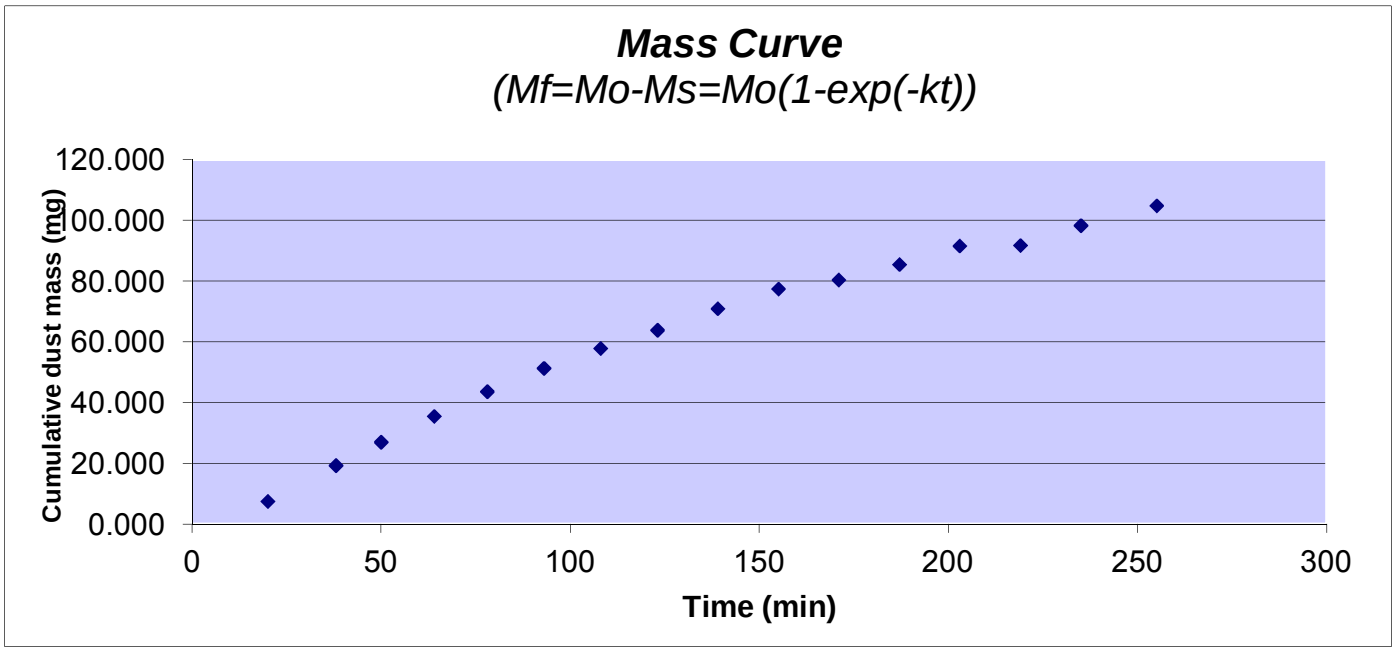
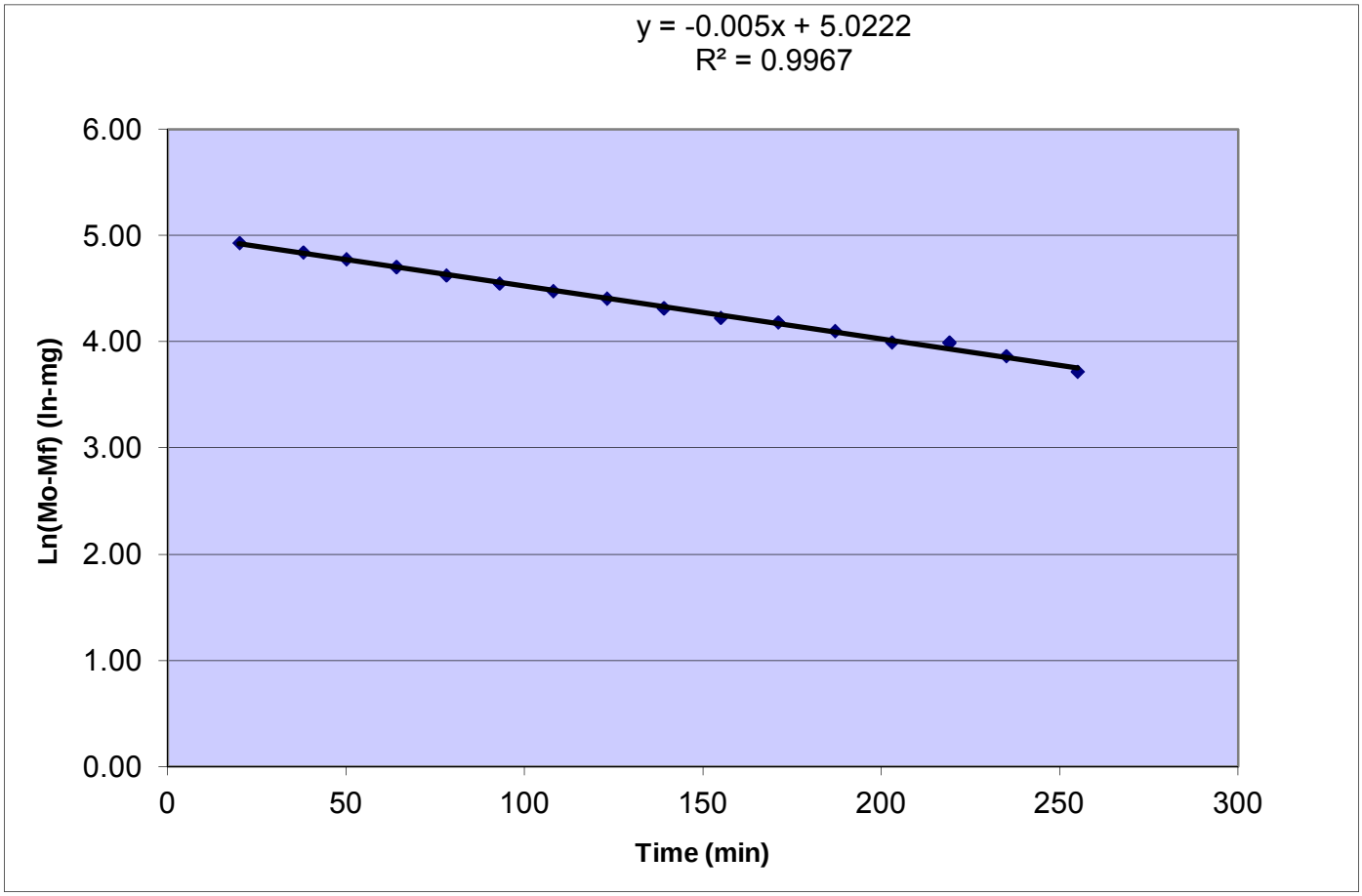
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0002
Client Sample ID:	CH-2011-MU1-G2





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Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0003
Client Sample ID:	CH-2011-MU1-CNU

Date:	11/3/2011
System:	1
Operator:	EM

Sample Drying:

Temperature (C):	78 c
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	347.6 g	>3/8"	0 g	
Post Drying	176.31 g	<3/8"	46.8 g	(In Tumbler)
% moisure	49.3	<3/8"	129.5 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	3-Nov-11	10:00
Tumbling	03-Nov-11	10:40	3-Nov-11	16:10

Tumbling Speed: 30 rpm

ME	IST	
1441	85	mL/min

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry _____ g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	**mo (mg)=**	**158**			**Resp.%=**	ME Filter Information
Emission rate	**k=**	**0.9960**			**0.33761**	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.120	42.442	20	18.322	20	4.939	20	4.9393	5.0626
2	ME	23.963	34.380	10	28.739	30	4.862	30	4.8618	5.0626
3	ME	24.360	34.445	10	38.824	40	4.781	40	4.7806	5.0626
4	ME	24.179	32.108	10	46.753	50	4.712	50	4.7118	5.0626
5	ME	24.016	32.072	10	54.809	60	4.637	60	4.6366	5.0626
6	ME	24.238	30.468	10	61.039	70	4.574	70	4.5743	5.0626
7	ME	24.302	30.775	12	67.512	82	4.505	82	4.5052	5.0626
8	ME	24.037	31.250	14	74.725	96	4.422	96	4.4221	5.0626
9	ME	24.239	31.226	17	81.712	113	4.335	113	4.3345	5.0626
10	ME	24.240	32.660	20	90.132	133	4.218	133	4.2176	5.0626
11	ME	24.261	30.834	22	96.705	155	4.116	155	4.1157	5.0626
12	ME	24.261	31.099	24	103.543	179	3.997	179	3.9974	5.0626
13	ME	24.131	30.213	24	109.625	203	3.879	203	3.8790	5.0626
14	ME	24.175	29.979	24	115.429	227	3.751	227	3.7512	5.0626
15	ME	24.029	29.337	24	120.737	251	3.618	251	3.6180	5.0626
16	ME	24.069	29.778	24	126.446	275	3.452	275	3.4517	5.0626
17	ME	23.995	29.935	24	132.386	299	3.243	299	3.2431	5.0626
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Remove Contents of cells that have no data

200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0003
Client Sample ID:	CH-2011-MU1-CNU

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.409	27.887	0.478
2	IST	27.164	27.31	0.146
3	IST	27.375	27.476	0.101
4	IST	27.292	27.441	0.149
5	IST	27.516	27.65	0.134
6	IST	27.15	27.29	0.140
7	IST			0.000
8	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
2
3
4
5
6

Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

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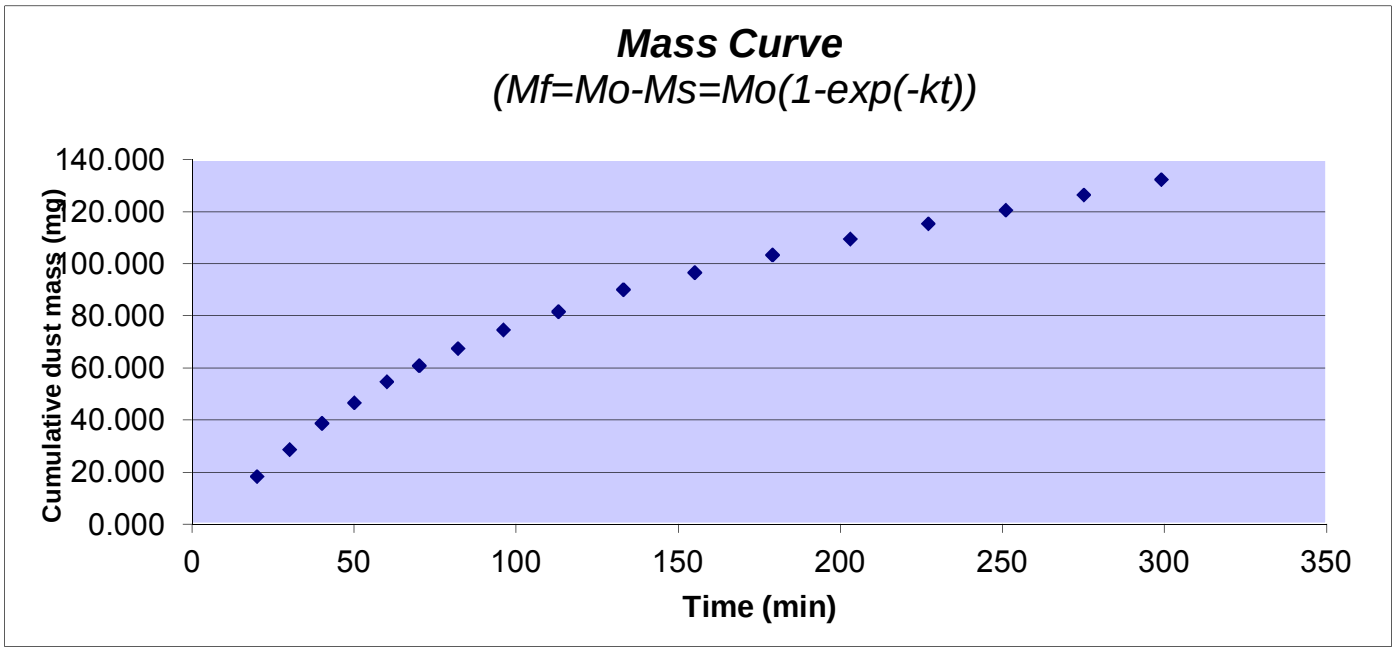
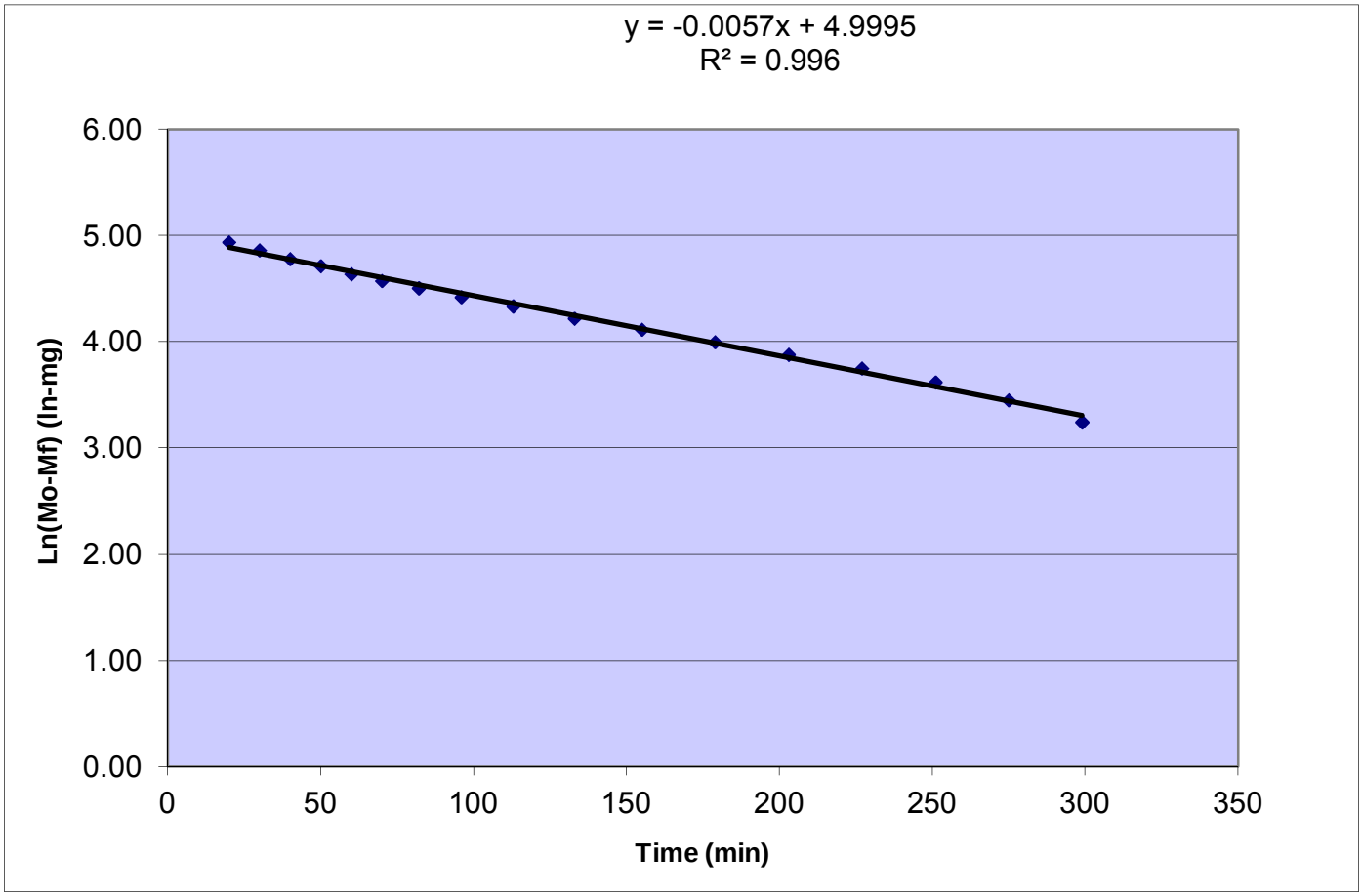
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0003
Client Sample ID:	CH-2011-MU1-CNU





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Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0005
Client Sample ID:	CH-2011-MU1-GS

Date:	11/2/2011
System:	3
Operator:	EM

Sample Drying:

Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)			Total Dried Sample Weight (g)		
Pre Drying	360.66	g	>3/8"	0	g
Post Drying	224.74	g	<3/8"	45.81	g (In Tumbler)
% moisure	37.7		<3/8"	178.9	g (Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	3-Nov-11	11:00
Tumbling	03-Nov-11	11:00	3-Nov-11	4:00

Tumbling Speed

30	rpm

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

1440	91	mL/min
ME	IST	

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass		**mo (mg)=**	**200**				**Resp.%=**			
Emission rate		**k=**	**0.9998**				**0.43659**	ME Filter Information		
Filter ID #	**Filter ME**	**Preweight (mg)**	**Post-Weight (mg)**	**Col. Time (minutes)**	**mf (mg)**	**Total Time (min)**	**ln(mo-mf)**	**t(min)**	**ln(mo-mf)**	**ln(mo)**
1	ME	24.352	30.740	20	6.388	20	5.266	20	5.2659	5.2983
2	ME	24.329	35.770	20	17.829	40	5.205	40	5.2049	5.2983
3	ME	24.377	30.875	12	24.327	52	5.169	52	5.1686	5.2983
4	ME	24.134	31.145	14	31.338	66	5.128	66	5.1279	5.2983
5	ME	24.337	32.688	17	39.689	83	5.077	83	5.0771	5.2983
6	ME	24.198	33.820	20	49.311	103	5.015	103	5.0152	5.2983
7	ME	24.107	32.667	20	57.871	123	4.957	123	4.9567	5.2983
8	ME	24.175	33.753	22	67.449	145	4.887	145	4.8870	5.2983
9	ME	24.365	33.696	22	76.780	167	4.814	167	4.8140	5.2983
10	ME	24.064	32.621	22	85.337	189	4.742	189	4.7420	5.2983
11	ME	23.821	31.419	22	92.935	211	4.673	211	4.6734	5.2983
12	ME	23.941	30.556	22	99.550	233	4.610	233	4.6097	5.2983
13	ME	24.075	30.614	22	106.089	255	4.542	255	4.5423	5.2983
14	ME	23.820	29.181	22	111.450	277	4.484	277	4.4836	5.2983
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200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0005
Client Sample ID:	CH-2011-MU1-GS

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.488	27.589	0.101
2	IST	27.115	27.24	0.125
3	IST	27.477	27.59	0.113
4	IST	27.337	27.477	0.140
5	IST	27.488	27.64	0.152
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

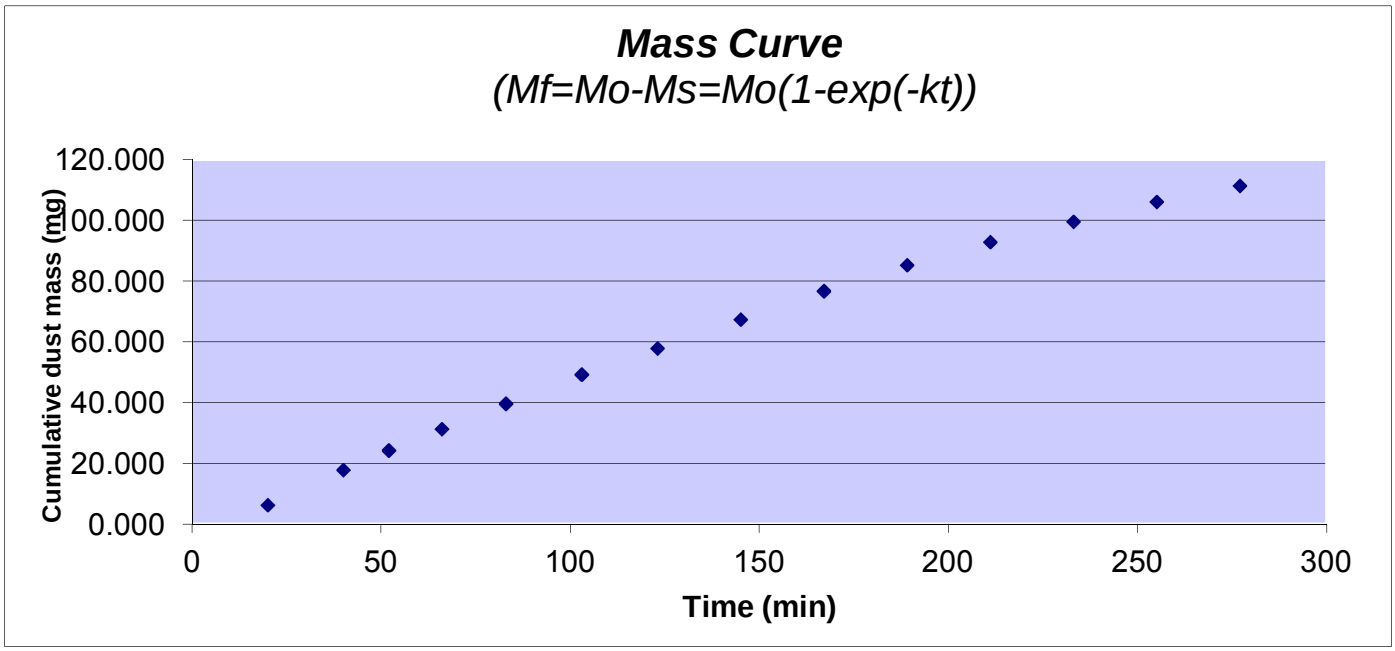
Filters sent to another lab for analysis
1
2
3
4
5

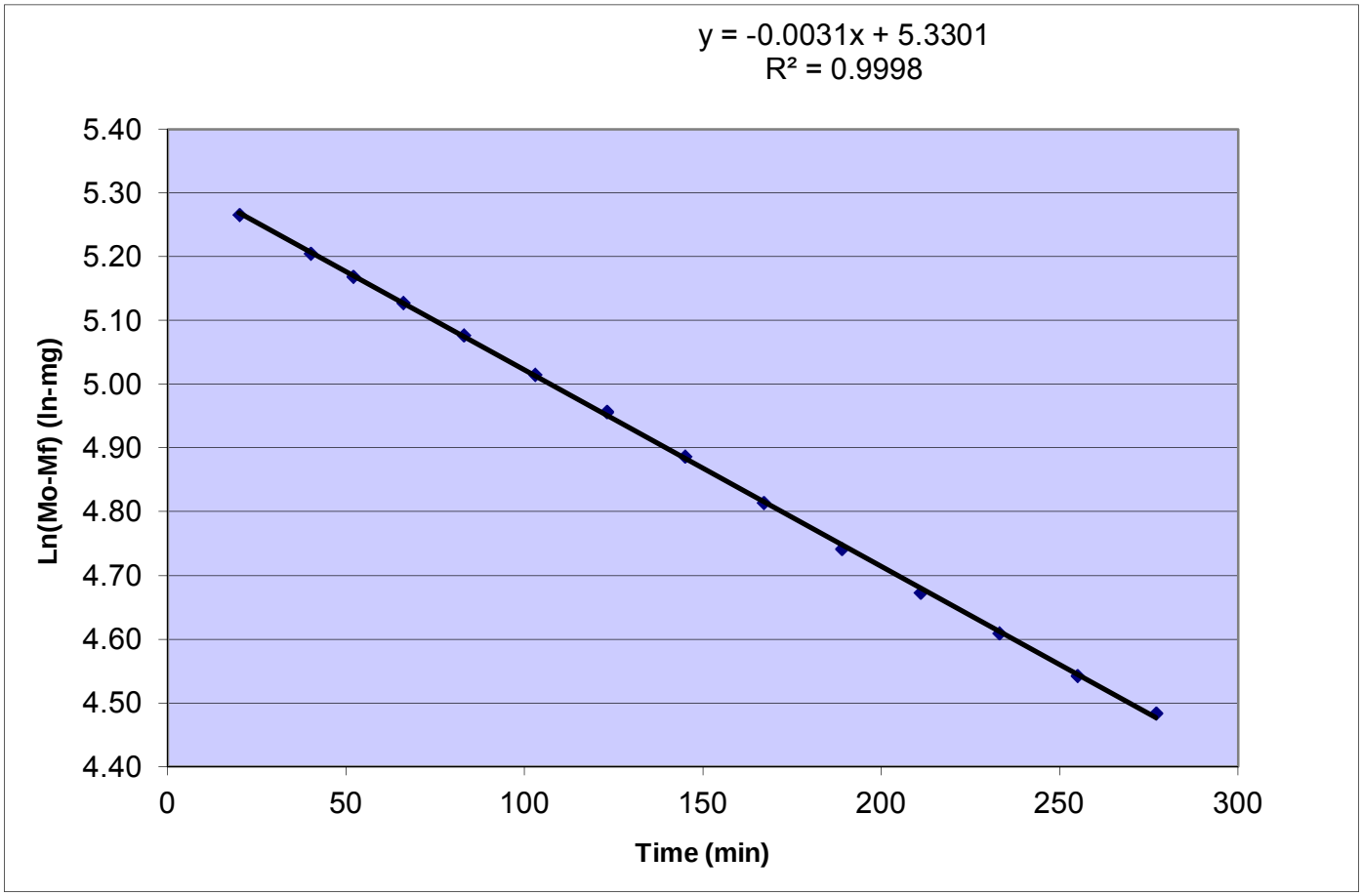
Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0005
Client Sample ID:	CH-2011-MU1-GS





200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0006
Client Sample ID:	CH-2011-MU2-G2

Date:	11/4/2011
System:	3
Operator:	EM

Sample Drying:

Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	382.17 g	>3/8"	0 g	
Post Drying	254.6 g	<3/8"	46.77 g	(In Tumbler)
% moisure	33.4	<3/8"	207.8 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	4-Nov-11	10:30
Tumbling	04-Nov-11	10:30	4-Nov-11	16:15

Tumbling Speed: 30 rpm

ME	IST	
1445	95	mL/min

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	**mo (mg)=**	**615**			**Resp.%=**	ME Filter Information
Emission rate	**k=**	**0.9991**			**1.31495**	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.011	32.942	20	8.931	20	6.407	20	6.4070	6.4216
2	ME	24.062	35.330	20	20.199	40	6.388	40	6.3882	6.4216
3	ME	23.770	29.454	13	25.883	53	6.379	53	6.3786	6.4216
4	ME	24.058	30.458	15	32.283	68	6.368	68	6.3677	6.4216
5	ME	23.897	30.980	18	39.366	86	6.355	86	6.3555	6.4216
6	ME	23.942	31.477	21	46.901	107	6.342	107	6.3423	6.4216
7	ME	24.041	32.572	24	55.432	131	6.327	131	6.3272	6.4216
8	ME	23.880	34.381	27	65.933	158	6.308	158	6.3082	6.4216
9	ME	24.058	34.105	28	75.980	186	6.290	186	6.2898	6.4216
10	ME	23.983	36.212	30	88.209	216	6.267	216	6.2668	6.4216
11	ME	23.857	36.120	33	100.472	249	6.243	249	6.2432	6.4216
12	ME	24.040	38.462	38	114.894	287	6.215	287	6.2148	6.4216
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Remove Contents of cells that have no data

200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0006
Client Sample ID:	CH-2011-MU2-G2

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.434	27.536	0.102
2	IST	27.411	27.516	0.105
3	IST	27.297	27.42	0.123
4	IST	27.481	27.581	0.100
5	IST	27.226	27.414	0.188
6	IST	27.609	27.759	0.150
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
3
6

Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

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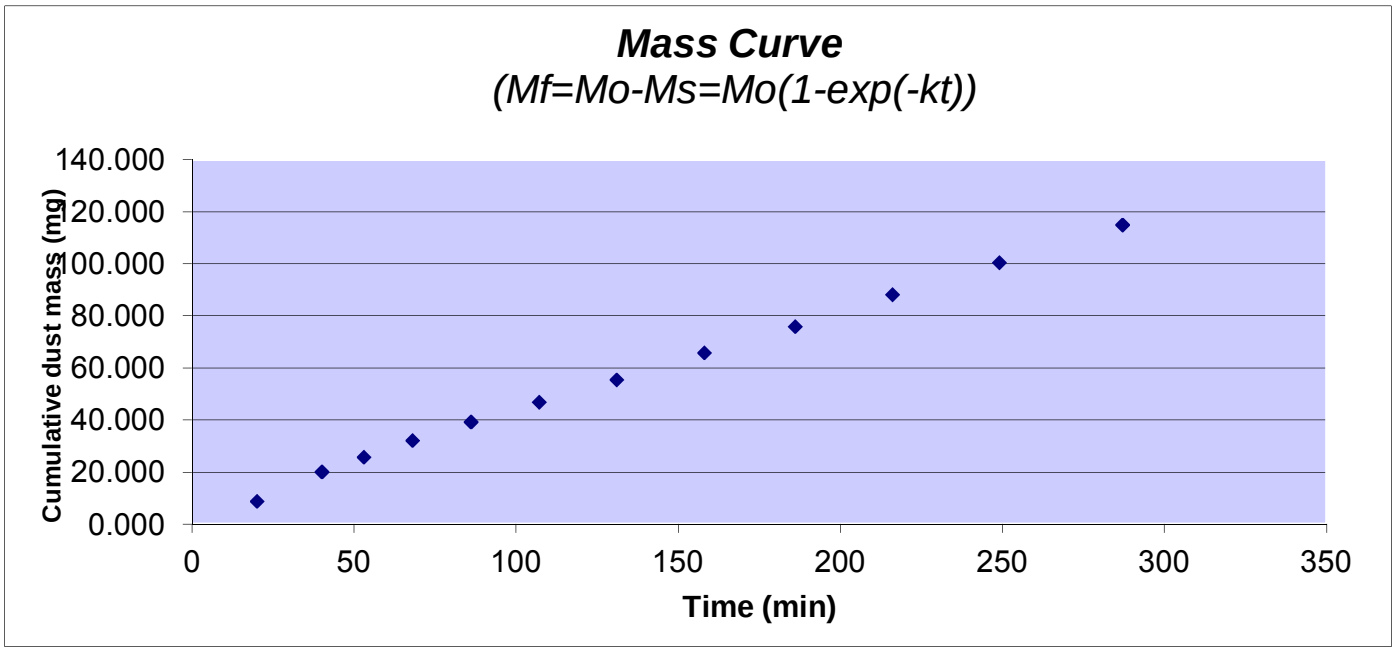
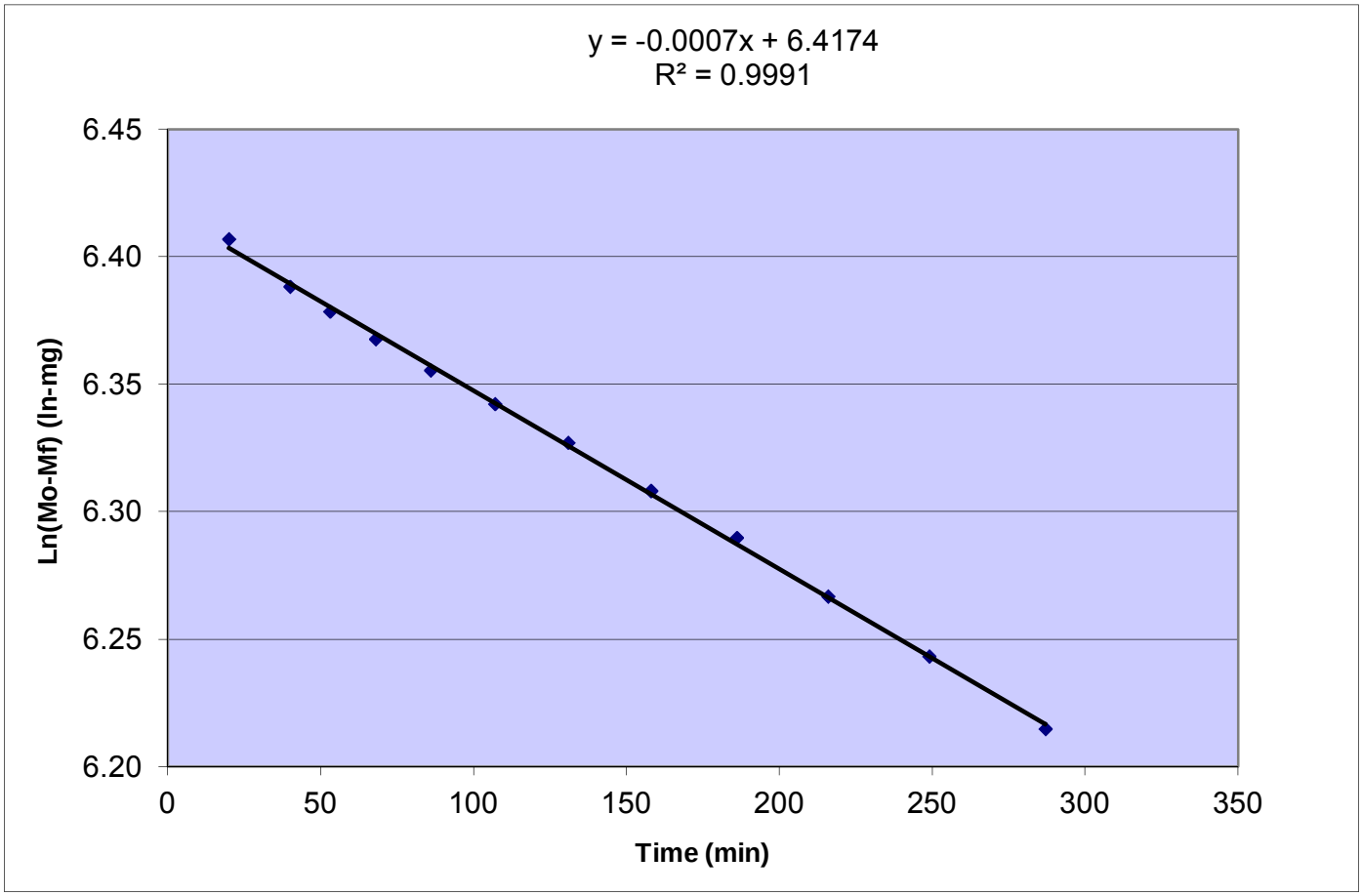
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0006
Client Sample ID:	CH-2011-MU2-G2





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Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0007
Client Sample ID:	CH-2011-MU2-CN

Date:	11/7/2011
System:	3
Operator:	EM

Sample Drying:

Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)			Total Dried Sample Weight (g)		
Pre Drying	305.41	g	>3/8"	0	g
Post Drying	139.69	g	<3/8"	42.18	g (In Tumbler)
% moisure	54.3		<3/8"	97.51	g (Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	7-Nov-11	11:00
Tumbling	07-Nov-11	11:00	7-Nov-11	16:15

Tumbling Speed

30	rpm

1460	82	mL/min
ME	IST	

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	**mo (mg)=**	**125**			**Resp.%=**	
Emission rate	**k=**	**0.9995**			**0.29635**	ME Filter Information

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.551	28.550	20	3.999	20	4.796	20	4.7958	4.8283
2	ME	24.509	31.092	15	10.582	35	4.740	35	4.7399	4.8283
3	ME	24.530	31.345	15	17.397	50	4.678	50	4.6784	4.8283
4	ME	24.465	30.231	15	23.163	65	4.623	65	4.6234	4.8283
5	ME	24.629	31.506	18	30.040	83	4.553	83	4.5535	4.8283
6	ME	24.537	31.939	20	37.442	103	4.472	103	4.4723	4.8283
7	ME	24.631	32.060	20	44.871	123	4.384	123	4.3836	4.8283
8	ME	24.899	31.010	20	50.982	143	4.304	143	4.3043	4.8283
9	ME	24.555	28.859	20	55.286	163	4.244	163	4.2444	4.8283
10	ME	24.201	29.609	20	60.694	183	4.164	183	4.1637	4.8283
11	ME	24.525	30.233	25	66.402	208	4.071	208	4.0707	4.8283
12	ME	24.424	30.121	25	72.099	233	3.968	233	3.9684	4.8283
13	ME	24.493	30.041	25	77.647	258	3.858	258	3.8576	4.8283
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200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0007
Client Sample ID:	CH-2011-MU2-CN

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.583	27.746	0.163
2	IST	27.099	27.264	0.165
3	IST	27.648	27.765	0.117
4	IST	27.36	27.476	0.116
5	IST	27.715	27.841	0.126
6	IST	27.709	27.848	0.139
7	IST	27.745	27.894	0.149
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
3
4
5
6
7

Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

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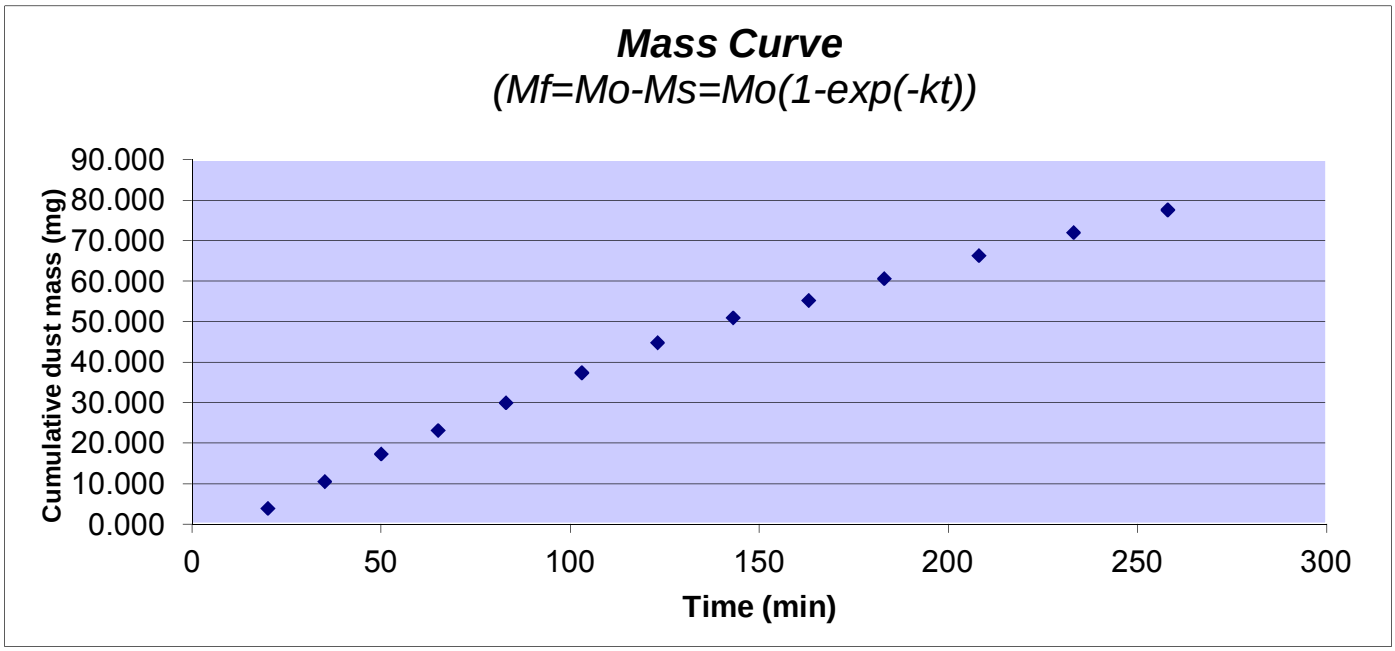
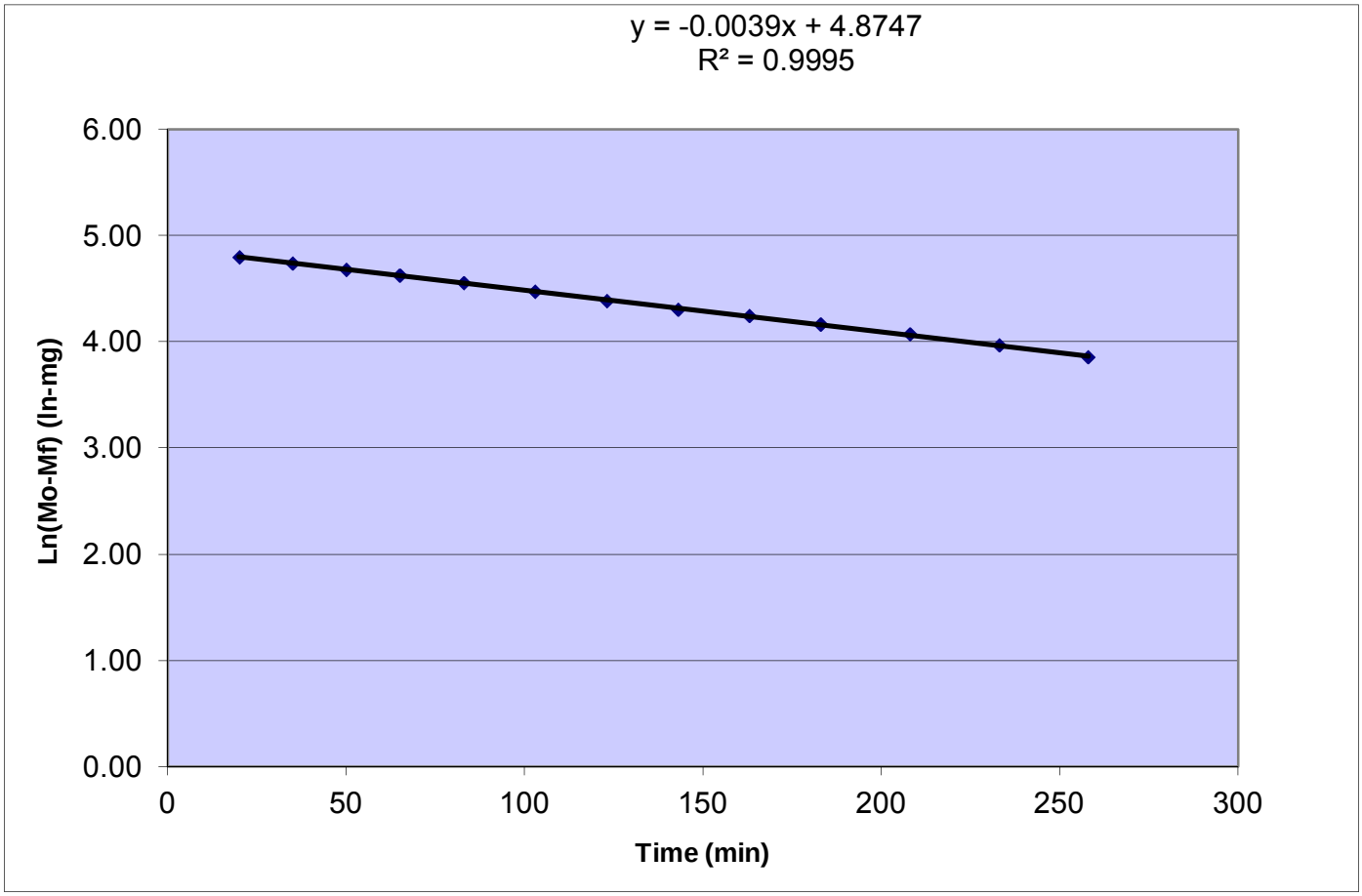
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0007
Client Sample ID:	CH-2011-MU2-CN





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EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0008
Client Sample ID:	CH-2011-MU2-CS

Date:	11/7/2011
System:	1
Operator:	EM

Sample Drying:

Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	382.1 g	>3/8"	0 g	
Post Drying	253.98 g	<3/8"	41.81 g	(In Tumbler)
% moisure	33.5	<3/8"	212.2 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	7-Nov-11	10:30
Tumbling	07-Nov-11	10:30	7-Nov-11	16:00

Tumbling Speed

30	rpm

1445	86	mL/min
ME	IST	

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	**mo (mg)=**	**206**			**Resp.%=**	
Emission rate	**k=**	**0.9921**			**0.49271**	ME Filter Information

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.473	33.184	20	8.711	20	5.285	20	5.2847	5.3279
2	ME	24.604	41.470	15	25.577	35	5.195	35	5.1953	5.3279
3	ME	24.482	35.753	10	36.848	45	5.131	45	5.1308	5.3279
4	ME	24.598	34.785	10	47.035	55	5.069	55	5.0687	5.3279
5	ME	24.847	33.270	10	55.458	65	5.014	65	5.0142	5.3279
6	ME	24.524	32.385	10	63.319	75	4.961	75	4.9606	5.3279
7	ME	24.563	32.018	10	70.774	85	4.907	85	4.9069	5.3279
8	ME	24.808	30.973	10	76.939	95	4.860	95	4.8603	5.3279
9	ME	24.513	30.009	10	82.435	105	4.817	105	4.8168	5.3279
10	ME	24.553	32.358	12	90.240	117	4.752	117	4.7515	5.3279
11	ME	24.572	32.811	12	98.479	129	4.678	129	4.6777	5.3279
12	ME	24.635	30.960	12	104.804	141	4.617	141	4.6171	5.3279
13	ME	24.646	29.881	12	110.039	153	4.564	153	4.5639	5.3279
14	ME	24.222	28.786	12	114.603	165	4.515	165	4.5152	5.3279
15	ME	24.807	27.744	12	117.540	177	4.483	177	4.4826	5.3279
16	ME	24.112	27.314	14	120.742	191	4.446	191	4.4457	5.3279
17	ME	24.594	28.978	14	125.126	205	4.393	205	4.3929	5.3279
18	ME	24.296	29.428	15	130.258	220	4.327	220	4.3273	5.3279
19	ME	24.200	29.914	15	135.972	235	4.249	235	4.2489	5.3279
20	ME	24.228	33.076	20	144.820	255	4.114	255	4.1138	5.3279
21	ME	24.272	35.132	25	155.680	280	3.918	280	3.9184	5.3279
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Remove Contents of cells that have no data

200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0008
Client Sample ID:	CH-2011-MU2-CS

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.368	27.486	0.118
2	IST	27.2	27.316	0.116
3	IST	27.429	27.549	0.120
4	IST	27.434	27.575	0.141
5	IST	27.703	27.856	0.153
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
1
2
3
4
5

Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

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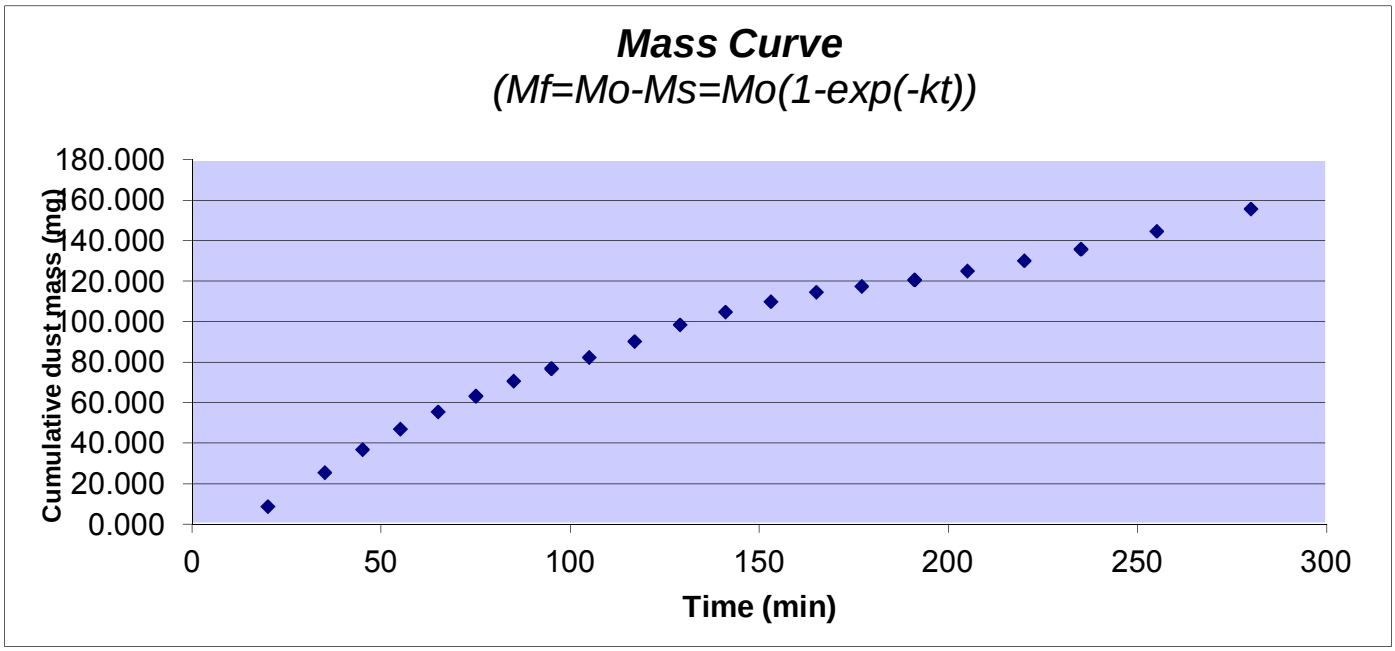
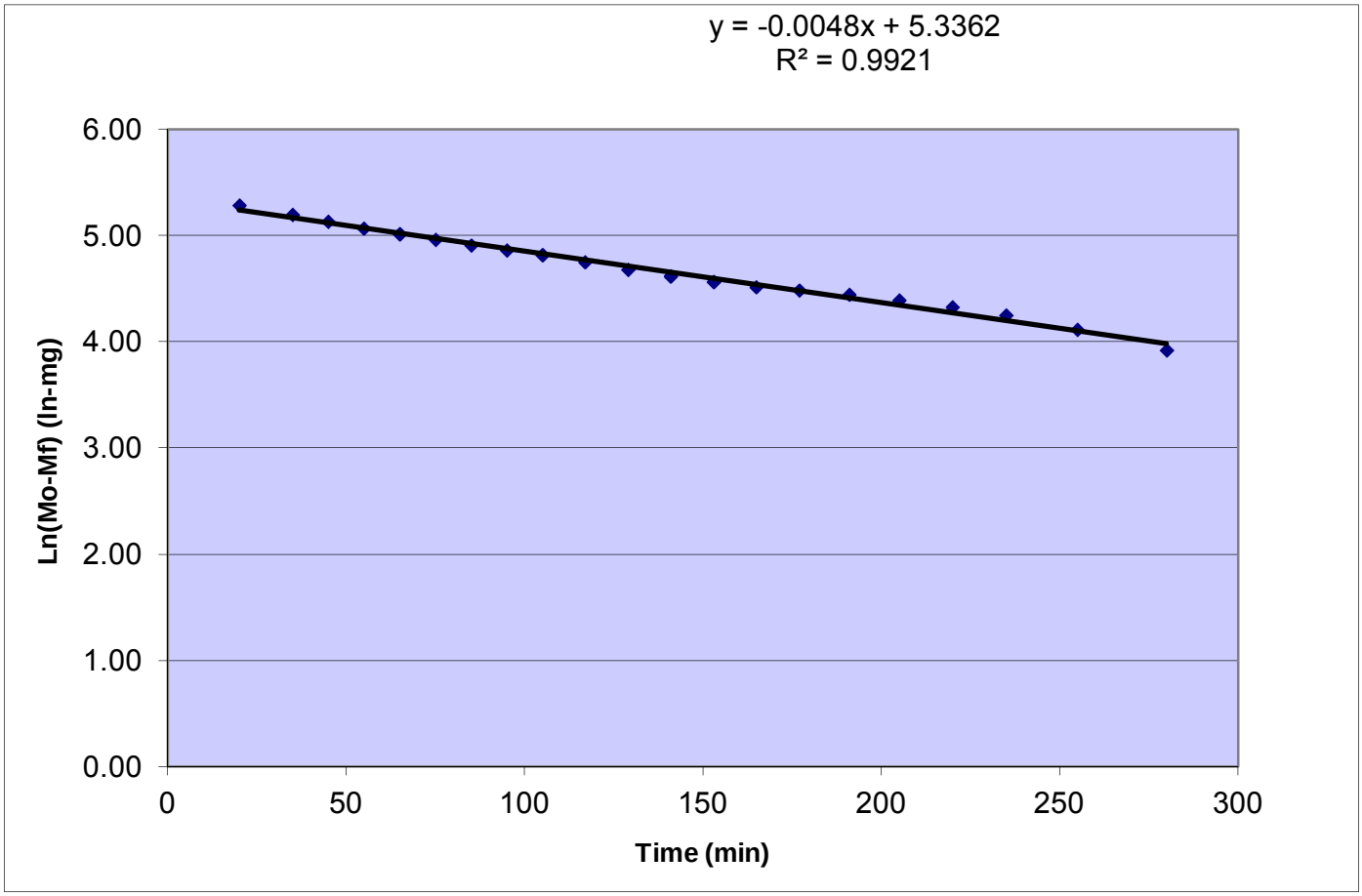
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0008
Client Sample ID:	CH-2011-MU2-CS





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EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0009
Client Sample ID:	CH-2011-MU3-G1

Date:	11/8/2011
System:	1
Operator:	EM

Sample Drying:	
Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	369.08 g	>3/8"	0 g	
Post Drying	224.35 g	<3/8"	40.66 g	(In Tumbler)
% moisure	39.2	<3/8"	183.7 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	8-Nov-11	11:15
Tumbling	08-Nov-11	11:15	8-Nov-11	3:36

Tumbling Speed: 30 rpm

1445	89	mL/min
ME	IST	

% Moisture from surrogate sample

Pre Dry _____ g % Moisture
Post Dry g

Reviewed:
Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	mo (mg)=	365			Resp.%=	ME Filter Information
Emission rate	k=	0.9983			0.89769	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.219	36.070	20	11.851	20	5.867	20	5.8669	5.8999
2	ME	24.291	37.188	10	24.748	30	5.830	30	5.8297	5.8999
3	ME	24.453	37.268	10	37.563	40	5.791	40	5.7913	5.8999
4	ME	24.325	35.123	10	48.361	50	5.758	50	5.7578	5.8999
5	ME	24.450	34.672	10	58.583	60	5.725	60	5.7249	5.8999
6	ME	24.239	40.123	10	74.467	70	5.672	70	5.6717	5.8999
7	ME	24.444	40.031	10	90.054	80	5.617	80	5.6166	5.8999
8	ME	24.514	38.776	10	104.316	90	5.563	90	5.5633	5.8999
9	ME	24.758	39.919	10	119.477	100	5.503	100	5.5034	5.8999
10	ME	24.645	39.350	10	134.182	110	5.442	110	5.4416	5.8999
11	ME	24.611	35.865	10	145.436	120	5.392	120	5.3916	5.8999
12	ME	24.922	33.505	10	154.019	130	5.352	130	5.3518	5.8999
13	ME	24.687	32.486	10	161.818	140	5.314	140	5.3141	5.8999
14	ME	24.639	31.661	10	168.840	150	5.279	150	5.2789	5.8999
15	ME	24.644	32.378	10	176.574	160	5.239	160	5.2387	5.8999
16	ME	24.775	32.667	10	184.466	170	5.196	170	5.1959	5.8999
17	ME	24.506	33.393	10	193.353	180	5.145	180	5.1454	5.8999
18	ME	24.916	33.834	10	202.271	190	5.092	190	5.0921	5.8999
19	ME	24.614	32.528	10	210.185	200	5.042	200	5.0422	5.8999
20	ME	24.885	32.835	10	218.135	210	4.990	210	4.9895	5.8999
21	ME	24.656	32.656	10	226.135	220	4.934	220	4.9335	5.8999
22	ME	24.703	32.312	11	233.744	231	4.877	231	4.8771	5.8999
23	ME	24.559	30.241	11	239.426	242	4.833	242	4.8329	5.8999
24	ME	24.607	29.507	10	244.326	252	4.793	252	4.7931	5.8999
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Remove Contents of cells that have no data

200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0009
Client Sample ID:	CH-2011-MU3-G1

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.595	27.701	0.106
2	IST	27.31	27.438	0.128
3	IST	27.481	27.633	0.152
4	IST	27.519	27.648	0.129
5	IST	27.568	27.684	0.116
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
2
4

Filter Lot Used	Filter Type:	Pore Size
121200	MCE	0.2
		microns

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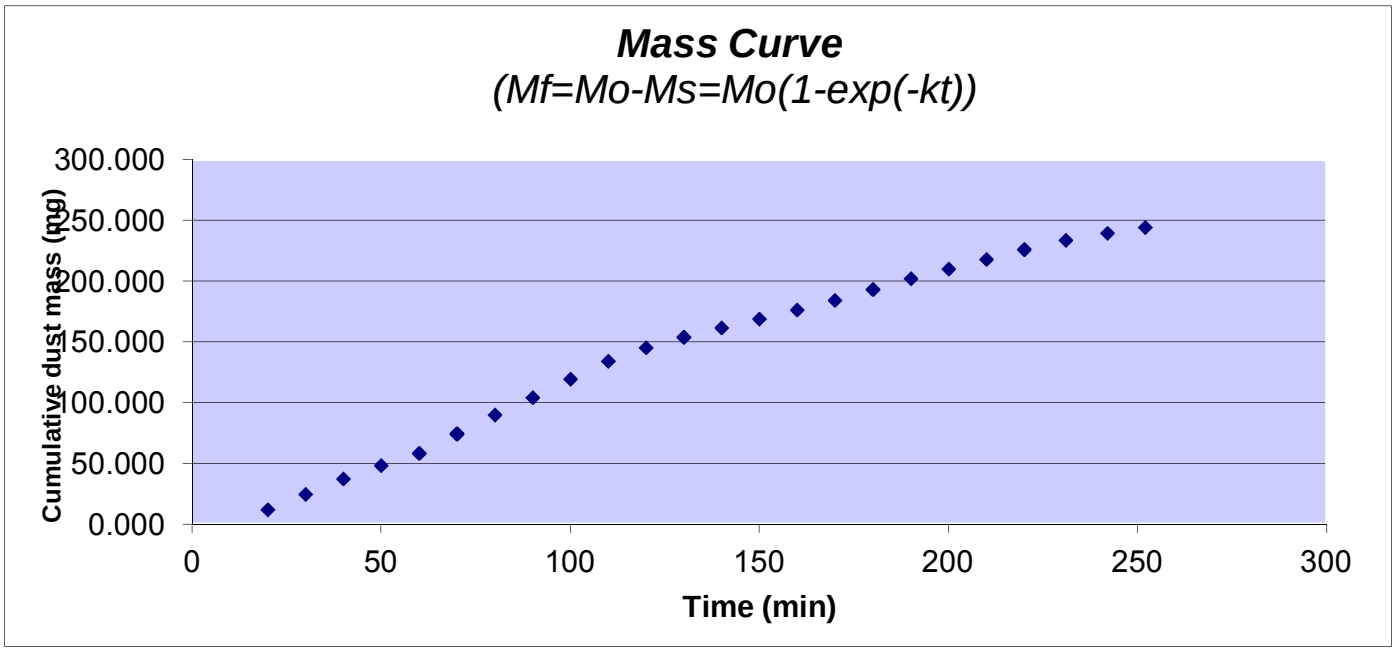
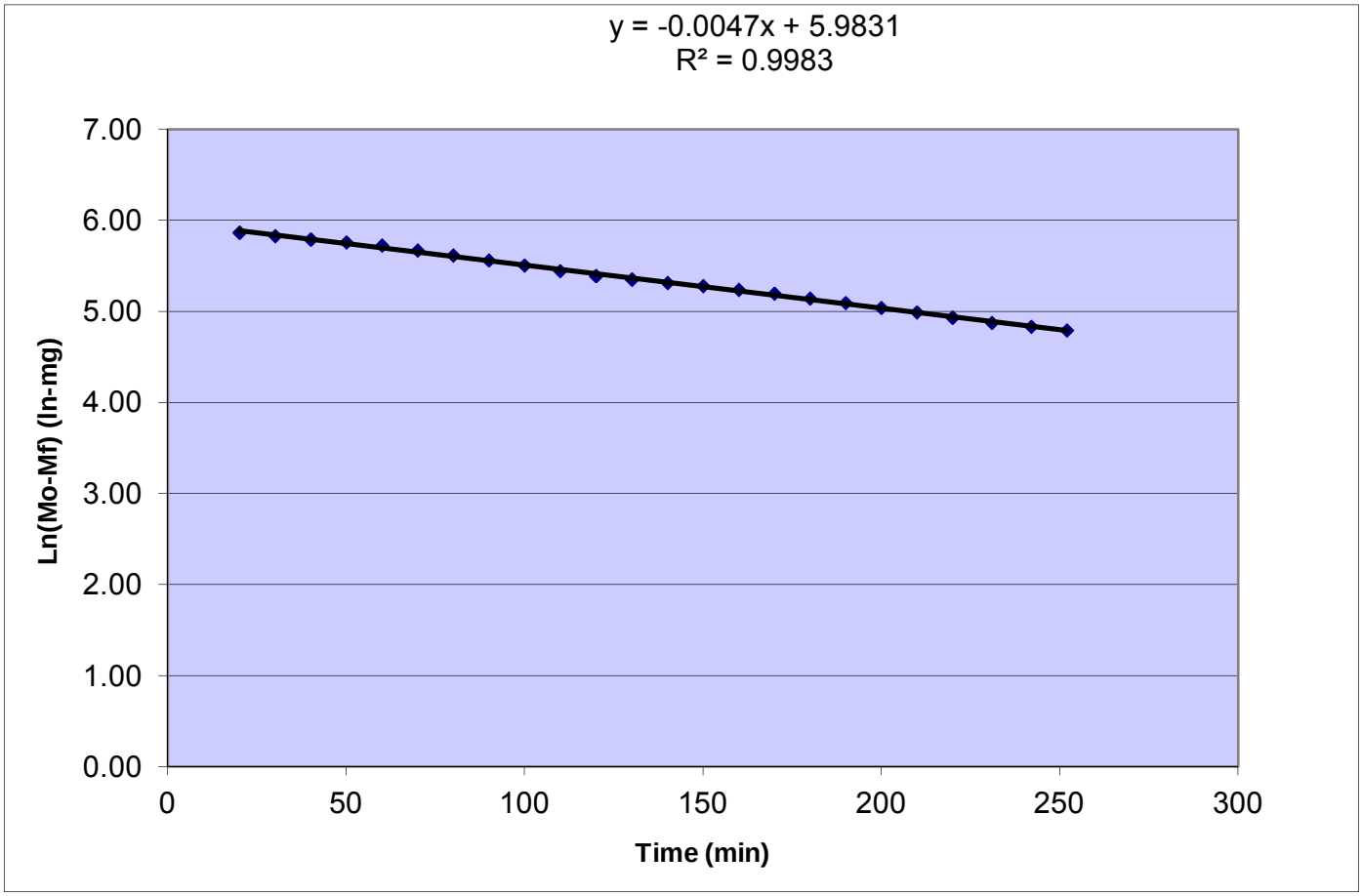
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0009
Client Sample ID:	CH-2011-MU3-G1





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Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0010
Client Sample ID:	CH-2011-MU3-G2

Date:	11/10/2011
System:	3
Operator:	EM

Sample Drying:

Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)			Total Dried Sample Weight (g)		
Pre Drying	387.98	g	>3/8"	0	g
Post Drying	233.7	g	<3/8"	41.38	g (In Tumbler)
% moisure	39.8		<3/8"	192.3	g (Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	10-Nov-11	11:00
Tumbling	10-Nov-11	11:00	10-Nov-11	16:00

Tumbling Speed

30	rpm

1409	86	mL/min
ME	IST	

% Moisture from surrogate sample

Pre Dry	_____ g	% Moisture	Reviewed:	
Post Dry	g		Date:	

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	**mo (mg)=**	**51**				**Resp.%=**	
Emission rate	**k=**	**0.9982**				**0.12325**	ME Filter Information

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	23.808	32.348	20	8.540	20	3.749	20	3.7486	3.9318
2	ME	23.722	29.367	10	14.185	30	3.606	30	3.6059	3.9318
3	ME	23.901	28.493	10	18.777	40	3.473	40	3.4727	3.9318
4	ME	23.838	28.171	12	23.110	52	3.328	52	3.3283	3.9318
5	ME	23.848	28.204	15	27.466	67	3.158	67	3.1584	3.9318
6	ME	24.127	29.885	19	33.224	86	2.878	86	2.8778	3.9318
7	ME	23.853	28.559	23	37.930	109	2.570	109	2.5703	3.9318
8	ME	23.902	27.823	27	41.851	136	2.214	136	2.2136	3.9318
9	ME	23.978	27.153	31	45.026	167	1.787	167	1.7874	3.9318
10	ME	23.951	25.344	31	46.419	198	1.522	198	1.5219	3.9318
11	ME	23.939	25.433	31	47.913	229	1.127	229	1.1272	3.9318
12	ME	23.927	25.077	31	49.063	260	0.661	260	0.6611	3.9318
13	ME	23.921	24.719	31	49.861	291	0.130	291	0.1302	3.9318
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Remove Contents of cells that have no data

200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0010
Client Sample ID:	CH-2011-MU3-G2

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.764	27.897	0.133
2	IST	28.134	28.283	0.149
3	IST	28.002	28.132	0.130
4	IST	27.901	28.03	0.129
5	IST	27.895	27.996	0.101
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

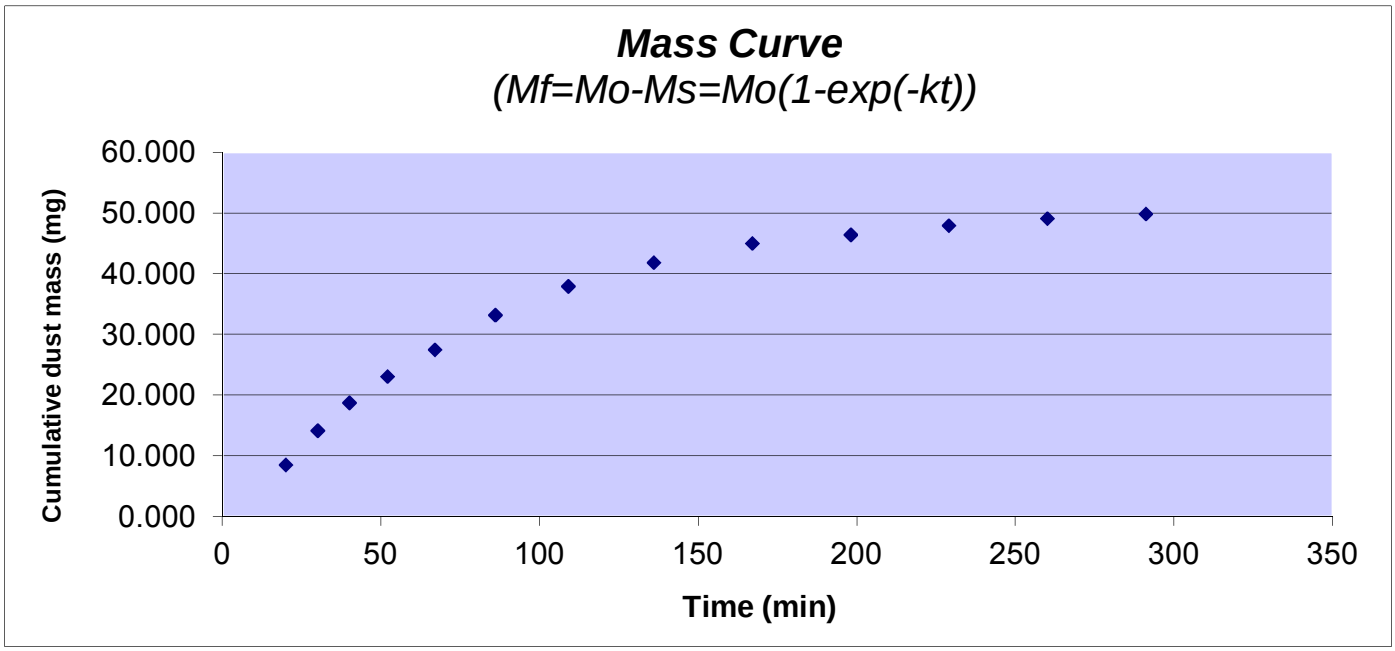
Filters sent to another lab for analysis
1
2

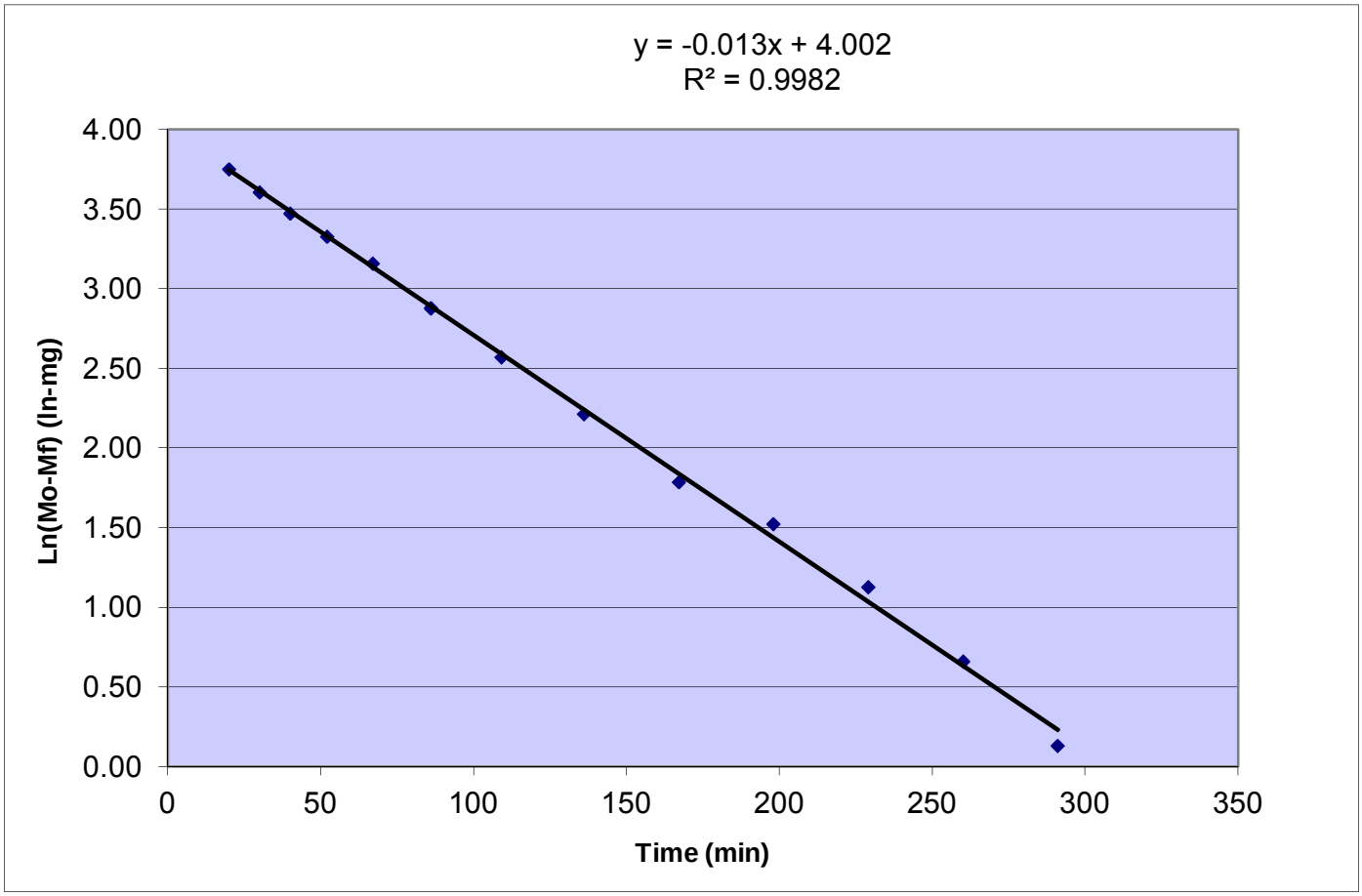
Filter Lot Used	Filter Type:	Pore Size
	MCE	0.2
		microns

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0010
Client Sample ID:	CH-2011-MU3-G2





200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0011
Client Sample ID:	CH-2011-MU3-CN

Date:	11/9/2011
System:	1
Operator:	EM

Sample Drying:	
Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	377.25 g	>3/8"	0 g	
Post Drying	205.76 g	<3/8"	41.55 g	(In Tumbler)
% moisure	45.5	<3/8"	164.2 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	9-Nov-11	10:30
Tumbling	09-Nov-11	10:30	9-Nov-11	16:15

Tumbling Speed: 30 rpm

ME	IST	
1450	89	mL/min

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	mo (mg)=	283			Resp.%=	ME Filter Information
Emission rate	k=	0.9988			0.68111	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.859	36.814	20	11.955	20	5.602	20	5.6023	5.6454
2	ME	24.602	37.165	10	24.518	30	5.555	30	5.5548	5.6454
3	ME	24.264	34.799	10	35.053	40	5.513	40	5.5132	5.6454
4	ME	24.396	33.201	10	43.858	50	5.477	50	5.4771	5.6454
5	ME	24.363	34.334	10	53.829	60	5.434	60	5.4345	5.6454
6	ME	24.604	33.642	10	62.867	70	5.394	70	5.3942	5.6454
7	ME	24.343	32.919	10	71.443	80	5.354	80	5.3545	5.6454
8	ME	24.423	30.798	10	77.818	90	5.324	90	5.3239	5.6454
9	ME	24.599	30.944	10	84.163	100	5.292	100	5.2925	5.6454
10	ME	24.403	31.505	11	91.265	111	5.256	111	5.2561	5.6454
11	ME	24.348	31.613	12	98.530	123	5.217	123	5.2175	5.6454
12	ME	24.170	31.945	12	106.305	135	5.174	135	5.1744	5.6454
13	ME	24.578	31.328	12	113.055	147	5.135	147	5.1355	5.6454
14	ME	24.374	31.892	13	120.573	160	5.090	160	5.0902	5.6454
15	ME	24.328	30.663	13	126.908	173	5.050	173	5.0504	5.6454
16	ME	24.287	31.593	13	134.214	186	5.003	186	5.0025	5.6454
17	ME	23.737	29.304	13	139.781	199	4.964	199	4.9644	5.6454
18	ME	23.703	28.520	13	144.598	212	4.930	212	4.9302	5.6454
19	ME	23.780	30.330	14	151.148	226	4.882	226	4.8817	5.6454
20	ME	23.763	28.504	14	155.889	240	4.845	240	4.8451	5.6454
21	ME	23.715	35.436	20	167.610	260	4.748	260	4.7483	5.6454
22	ME	23.614	29.493	15	173.489	275	4.696	275	4.6960	5.6454
23	ME	23.691	29.959	15	179.757	290	4.637	290	4.6371	5.6454
24	ME	23.536	28.275	15	184.496	305	4.590	305	4.5901	5.6454
25	ME	23.825	28.552	15	189.223	320	4.541	320	4.5409	5.6454
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	ME									
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	ME									

Remove Contents of cells that have no data

200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0011
Client Sample ID:	CH-2011-MU3-CN

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.643	27.874	0.231
2	IST	27.857	27.994	0.137
3	IST	27.795	27.896	0.101
4	IST	27.705	27.823	0.118
5	IST	27.805	27.956	0.151
6	IST	27.565	27.706	0.141
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
5
6

Filter Lot Used	Filter Type:	Pore Size
121200	MCE	0.2
		microns

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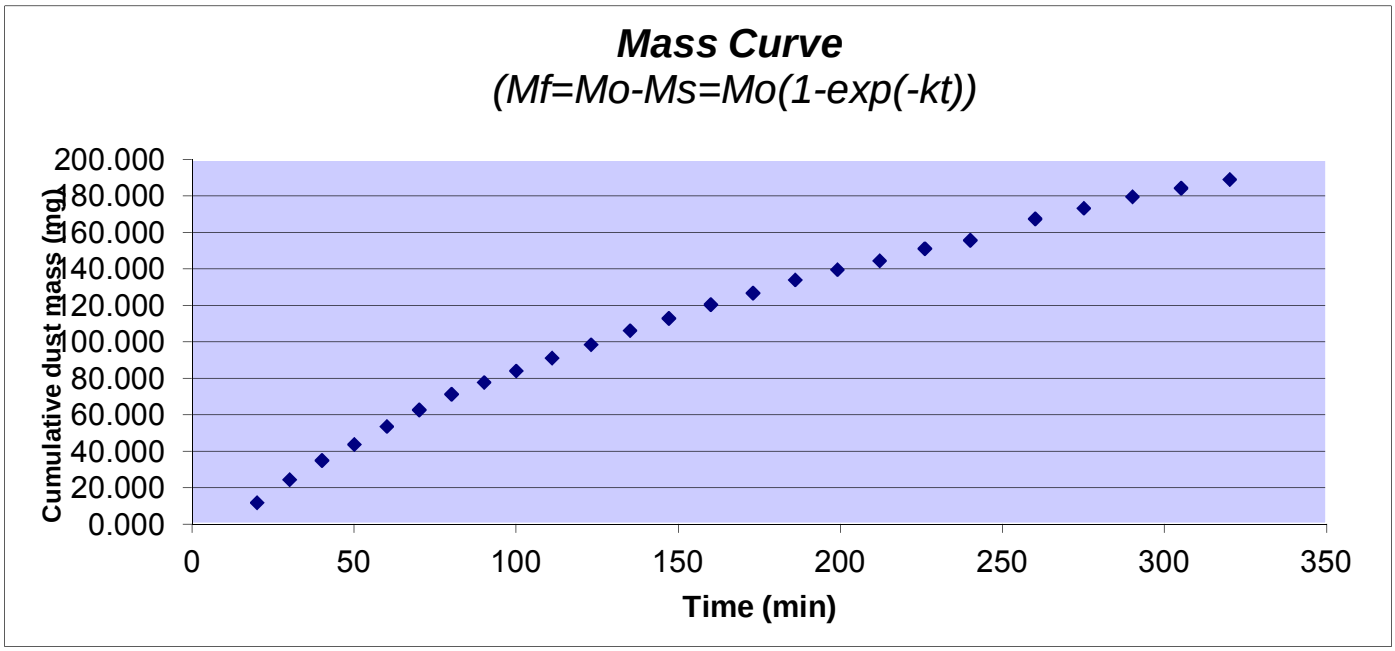
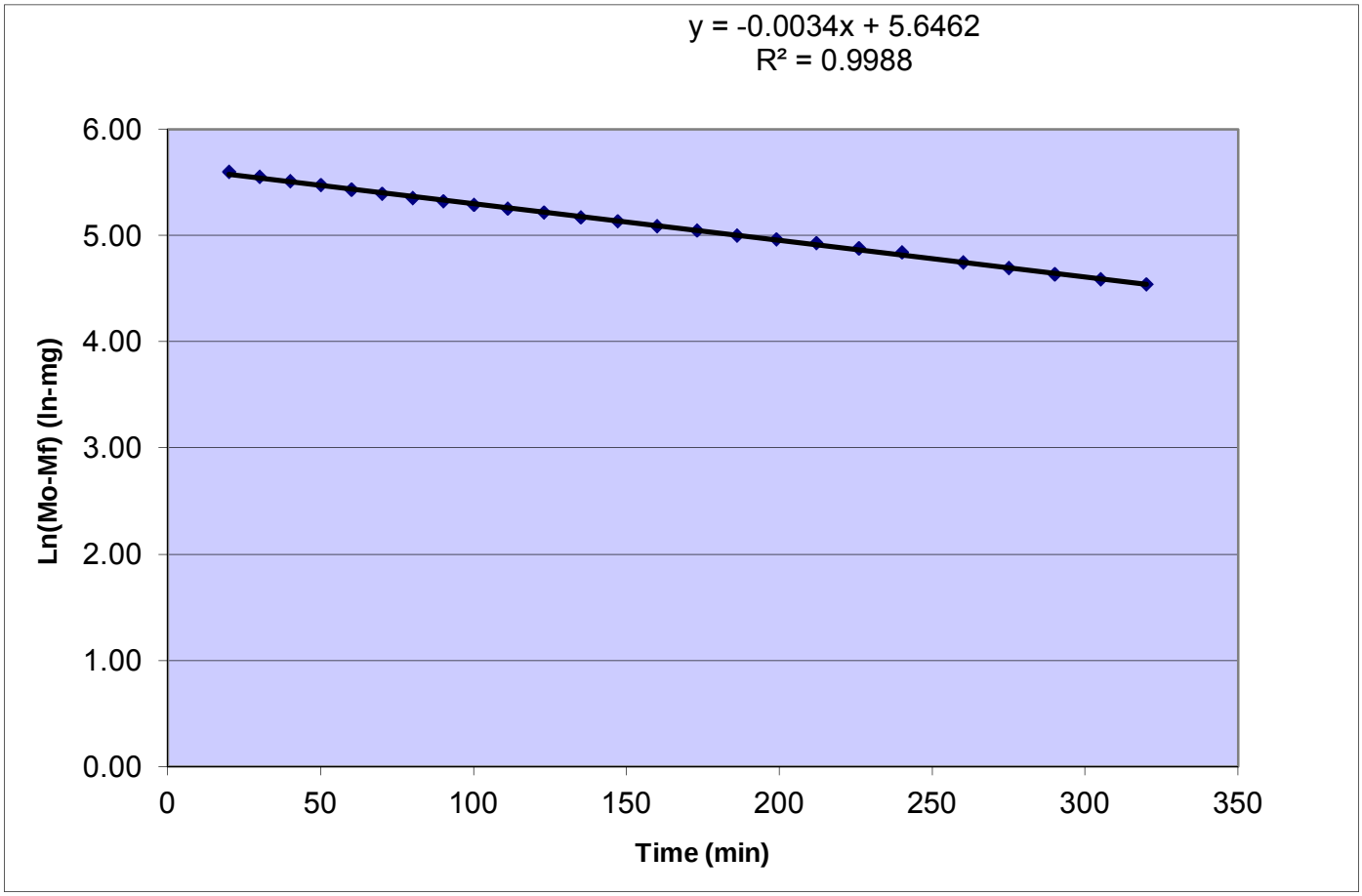
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0011
Client Sample ID:	CH-2011-MU3-CN





200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0012
Client Sample ID:	CH-2011-MU3-CS

Date:	11/9/2011
System:	2
Operator:	EM

Sample Drying:	
Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	373.75 g	>3/8"	0 g	
Post Drying	209.12 g	<3/8"	40.62 g	(In Tumbler)
% moisure	44.0	<3/8"	168.5 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	9-Nov-11	10:40
Tumbling	09-Nov-11	10:40	9-Nov-11	16:25

Tumbling Speed: 30 rpm

ME	IST	
1455	92	mL/min

% Moisture from surrogate sample

Pre Dry _____ g % Moisture
Post Dry g

Reviewed:
Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	mo (mg)=	180			Resp.%=	ME Filter Information
Emission rate	k=	0.9963			0.44313	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	24.704	34.487	20	9.783	20	5.137	20	5.1371	5.1930
2	ME	24.796	31.655	10	16.642	30	5.096	30	5.0959	5.1930
3	ME	24.247	31.424	10	23.819	40	5.051	40	5.0510	5.1930
4	ME	24.353	31.472	10	30.938	50	5.004	50	5.0044	5.1930
5	ME	24.425	31.031	10	37.544	60	4.959	60	4.9590	5.1930
6	ME	24.189	30.226	10	43.581	70	4.916	70	4.9157	5.1930
7	ME	24.552	31.302	12	50.331	82	4.865	82	4.8650	5.1930
8	ME	24.321	31.533	12	57.543	94	4.808	94	4.8078	5.1930
9	ME	24.229	31.674	13	64.988	107	4.745	107	4.7450	5.1930
10	ME	24.180	32.085	14	72.893	121	4.674	121	4.6738	5.1930
11	ME	24.564	32.031	14	80.360	135	4.602	135	4.6016	5.1930
12	ME	23.735	29.602	14	86.227	149	4.541	149	4.5409	5.1930
13	ME	24.354	30.033	14	91.906	163	4.478	163	4.4784	5.1930
14	ME	24.246	29.896	14	97.556	177	4.412	177	4.4121	5.1930
15	ME	24.400	31.011	14	104.167	191	4.329	191	4.3285	5.1930
16	ME	23.892	31.144	14	111.419	205	4.228	205	4.2280	5.1930
17	ME	23.584	29.593	14	117.428	219	4.136	219	4.1363	5.1930
18	ME	23.755	26.448	14	120.121	233	4.092	233	4.0923	5.1930
19	ME	23.679	26.089	15	122.531	248	4.051	248	4.0512	5.1930
20	ME	23.746	26.969	20	125.754	268	3.994	268	3.9935	5.1930
21	ME	23.579	27.337	20	129.512	288	3.922	288	3.9217	5.1930
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Remove Contents of cells that have no data

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0012
Client Sample ID:	CH-2011-MU3-CS

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.876	28.174	0.298
2	IST	27.671	27.783	0.112
3	IST	27.646	27.75	0.104
4	IST	27.714	27.864	0.150
5	IST	28.051	28.152	0.101
6	IST	27.71	27.86	0.150
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
4
6

Filter Lot Used	Filter Type:	Pore Size
121200	MCE	0.2
		microns

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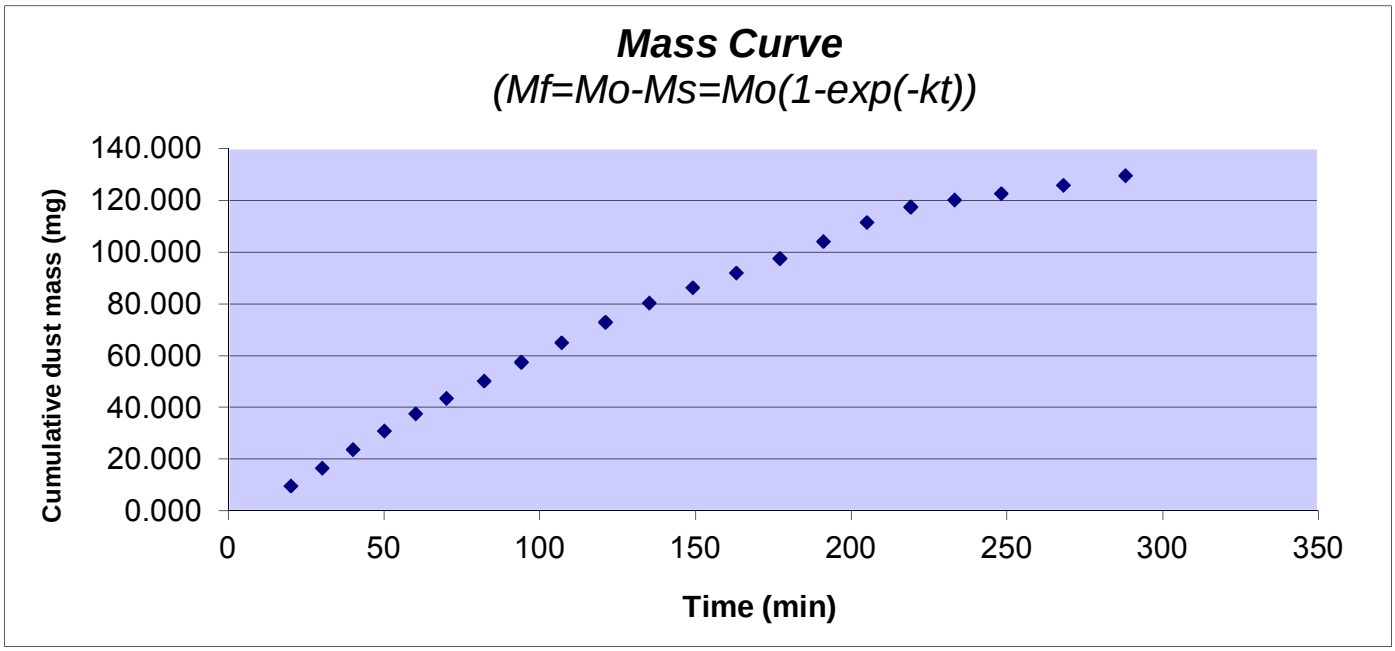
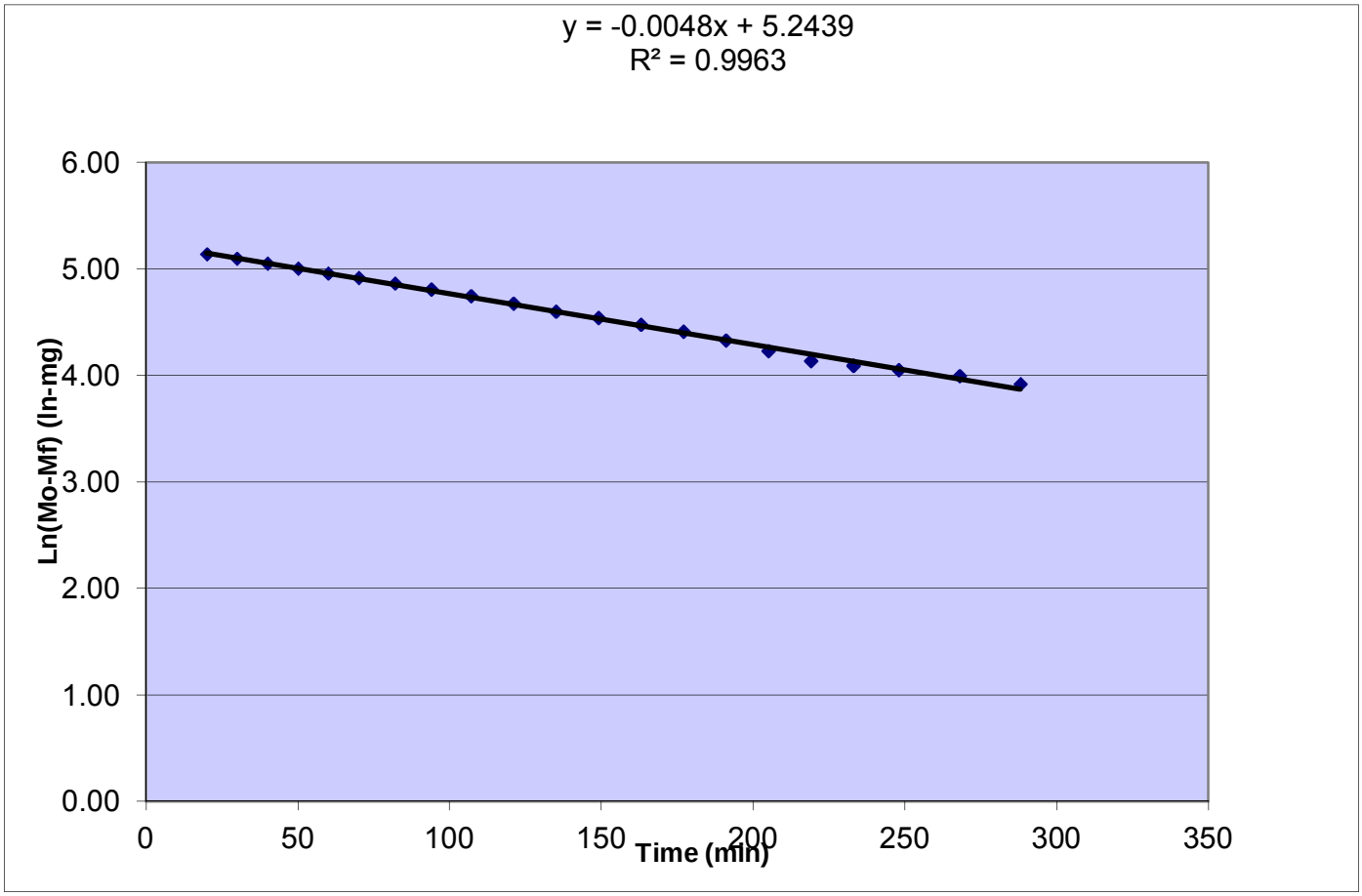
EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0012
Client Sample ID:	CH-2011-MU3-CS





200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659 -0009QC
Client Sample ID:	CH-2011-MU3-G1

Date:	11/16/2011
System:	2
Operator:	EM

Sample Drying:

Temperature (C):	78
Start Date:	10/27/2011
End Date:	11/1/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	369.08 g	>3/8"	0 g	
Post Drying	224.35 g	<3/8"	40 g	(In Tumbler)
% moisure	39.2	<3/8"	184.4 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	01-Nov-11	9:00	16-Nov-11	10:15
Tumbling	16-Nov-11	10:15	16-Nov-11	15:25

Tumbling Speed

30	rpm

1420	93	mL/min
ME	IST	

% Moisture from surrogate sample

Pre Dry _____ g % Moisture

Post Dry g

Reviewed:

Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	**mo (mg)=**	**87**			**Resp.%=**	
Emission rate	**k=**	**0.9991**			**0.2175**	ME Filter Information

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	23.851	39.904	20	16.053	20	4.262	20	4.2619	4.4659
2	ME	23.818	30.861	10	23.096	30	4.157	30	4.1574	4.4659
3	ME	23.745	30.544	10	29.895	40	4.045	40	4.0449	4.4659
4	ME	23.067	29.801	10	36.629	50	3.919	50	3.9194	4.4659
5	ME	23.872	29.062	10	41.819	60	3.811	60	3.8107	4.4659
6	ME	23.797	29.418	12	47.440	72	3.678	72	3.6778	4.4659
7	ME	23.718	28.706	14	52.428	86	3.543	86	3.5430	4.4659
8	ME	23.805	28.768	17	57.391	103	3.388	103	3.3881	4.4659
9	ME	23.818	28.690	21	62.263	124	3.208	124	3.2083	4.4659
10	ME	23.955	28.704	25	67.012	149	2.995	149	2.9951	4.4659
11	ME	23.783	29.274	29	72.503	178	2.674	178	2.6739	4.4659
12	ME	23.695	27.458	33	76.266	211	2.373	211	2.3734	4.4659
13	ME	23.920	27.360	37	79.706	248	1.987	248	1.9871	4.4659
14	ME	23.830	26.301	40	82.177	288	1.573	288	1.5734	4.4659
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200 Route 130 North, Cinnaminson, NJ 08077

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0009QC
Client Sample ID:	CH-2011-MU3-G1

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.48	27.58	0.100
2	IST	27.494	27.6	0.106
3	IST	27.372	27.504	0.132
4	IST	27.752	27.883	0.131
5	IST	27.61	27.72	0.110
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

Filters sent to another lab for analysis
3
4

Filter Lot Used	Filter Type:	Pore Size
121200	MCE	0.2
		microns

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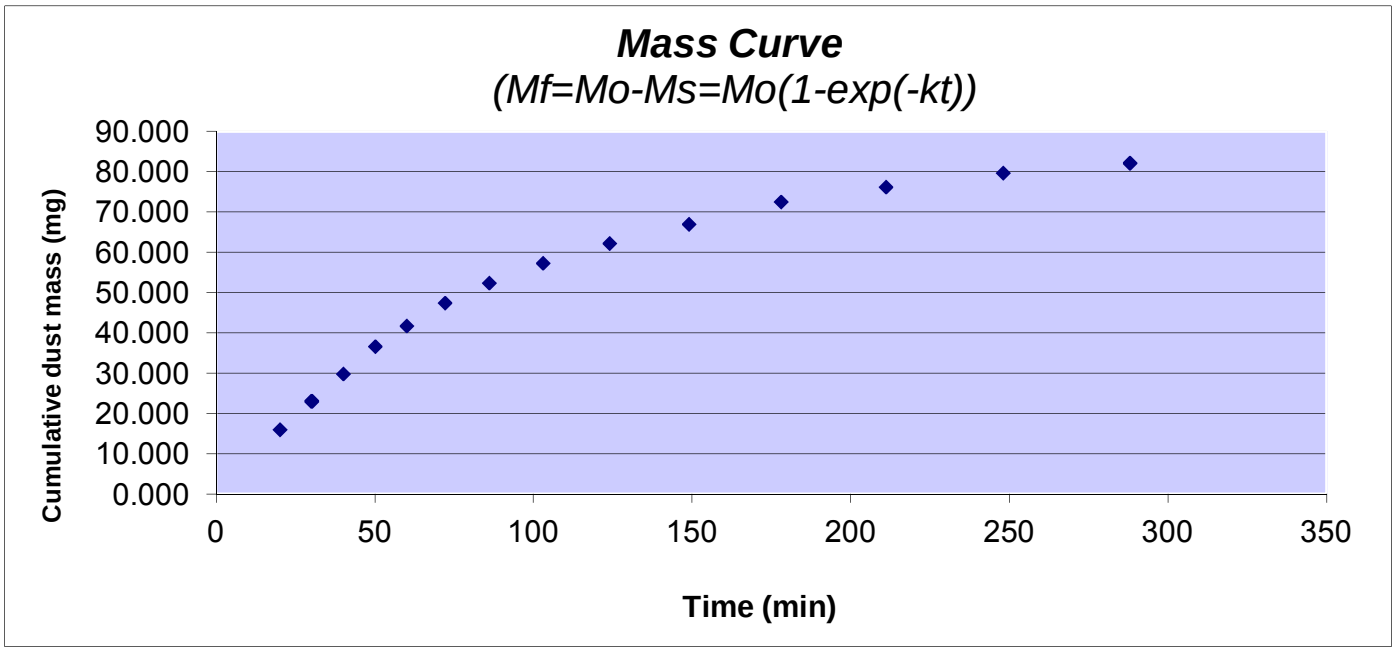
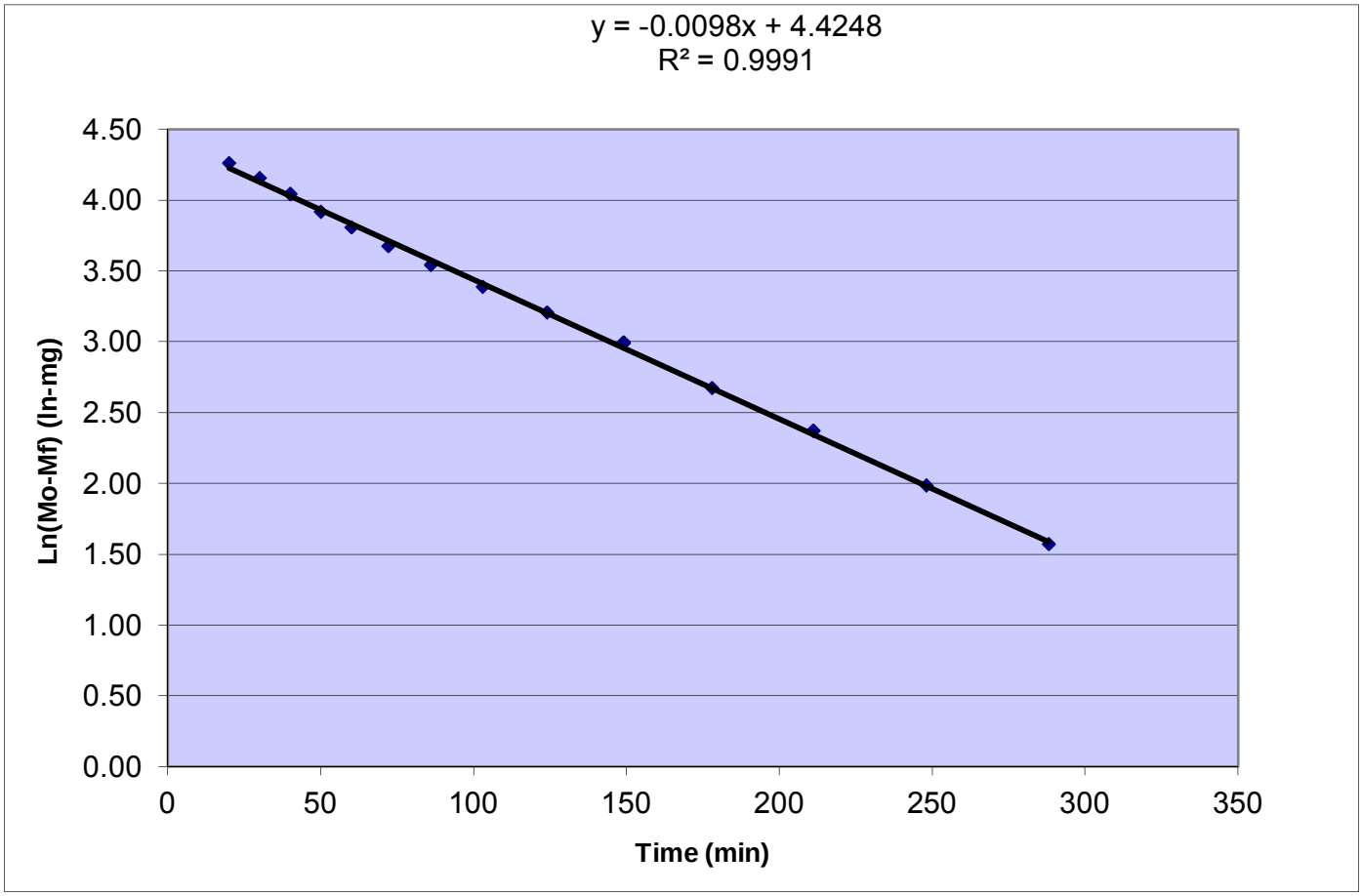
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041128659-0009QC
Client Sample ID:	CH-2011-MU3-G1





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Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0001	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU1-G1	Grid Box :	0411-ELUT-001: A	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/06/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
A1	A9	None Detected								
A1	A7	None Detected								
A1	A5	None Detected								
A1	B2	None Detected								
A1	B4	None Detected								
A1	B6	None Detected								
A1	B8	None Detected								
A1	B10	None Detected								
A1	C9	None Detected								
A1	C7	None Detected								
A1	C5	None Detected								
A1	C3	None Detected								
A1	C1	None Detected								
A1	D2	None Detected								
A1	D4	None Detected								
A1	D6	None Detected								
A1	D8	None Detected								
A1	D10	None Detected								
A1	E9	None Detected								
A1	E7	None Detected								
A1	E5	None Detected								
A1	E3	None Detected								
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A1	F2	None Detected								
A1	F4	None Detected								
A1	F6	None Detected								
A1	F8	None Detected								
A1	F10	None Detected								
A1	G9	None Detected								
A1	G7	None Detected								
A1	G5	None Detected								
A1	G3	None Detected								
A1	G1	None Detected								
A1	H2	None Detected								
A1	H4	None Detected								

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0001
Customer Sample:	CH-2011-MU1-G1

Analyzed By:	F Craig
Analysis Date:	11/06/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
A1	H8	None Detected								
A1	H10	None Detected								
A1	I9	None Detected								
A1	I7	None Detected								
A1	I5	None Detected								
A1	I3	None Detected								
A1	I1	None Detected								
A1	J4	None Detected								
A1	J6	None Detected								
A1	J8	None Detected								
A1	J10	None Detected								
A2	J10	None Detected								
A2	J8	None Detected								
A2	J6	None Detected								
A2	J4	None Detected								
A2	J2	None Detected								
A2	I1	None Detected								
A2	I3	None Detected								
A2	I5	None Detected								
A2	I7	None Detected								
A2	I9	None Detected								
A2	H10	None Detected								
A2	H8	None Detected								
A2	H6	None Detected								
A2	H4	None Detected								
A2	H2	None Detected								
A2	G1	None Detected								
A2	G3	None Detected								
A2	G5	None Detected								
A2	G7	None Detected								
A2	G9	None Detected								
A2	F10	None Detected								
A2	F8	None Detected								
A2	F6	None Detected								
A2	F4	None Detected								
A2	F2	None Detected								
A2	E1	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0001
Customer Sample:	CH-2011-MU1-G1

Analyzed By:	F Craig
Analysis Date:	11/06/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
A2	E3	None Detected								
A2	E5	None Detected								
A2	E7	None Detected								
A2	E9	None Detected								
A2	D10	None Detected								
A2	D8	None Detected								
A2	D6	None Detected								
A2	D4	None Detected								
A2	D2	None Detected								
A2	C1	None Detected								
A2	C3	None Detected								
A2	C5	None Detected								
A2	C7	None Detected								
A2	C9	None Detected								
A2	B10	None Detected								
A2	B8	None Detected								
A2	B6	None Detected								
A2	B4	None Detected								
A2	B2	None Detected								
A2	A1	None Detected								
A2	A3	None Detected								
A2	A5	None Detected								
A2	A7	None Detected								
A2	A9	None Detected								
A3	I4	None Detected								
A3	E9	None Detected								
A3	B5	None Detected								
A3	G7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0002	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU1-G2	Grid Box :	0411-ELUT-001: B	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/06/2011 & 11/07/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
B5	J2	None Detected								
B5	J4	None Detected								
B5	J6	None Detected								
B5	J8	None Detected								
B5	J10	None Detected								
B5	I9	None Detected								
B5	I7	None Detected								
B5	I5	None Detected								
B5	I3	None Detected								
B5	I1	None Detected								
B5	H2	None Detected								
B5	H4	None Detected								
B5	H6	None Detected								
B5	H8	None Detected								
B5	H10	None Detected								
B5	G9	None Detected								
B5	G7	None Detected								
B5	G5	None Detected								
B5	G3	None Detected								
B5	G1	None Detected								
B5	F2	None Detected								
B5	F6	None Detected								
B5	F8	None Detected								
B5	F10	None Detected								
B5	E9	None Detected								
B5	E7	None Detected								
B5	E3	None Detected								
B5	E1	None Detected								
B5	D2	None Detected								
B5	D4	None Detected								
B5	D6	None Detected								
B5	D8	None Detected								
B5	D10	None Detected								
B5	C9	None Detected								
B5	C7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0002
Customer Sample:	CH-2011-MU1-G2

Analyzed By:	F Craig
Analysis Date:	11/06/2011 & 11/07/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
B5	C5	None Detected								
B5	C3	None Detected								
B5	C1	None Detected								
B5	B2	None Detected								
B5	B4	None Detected								
B5	B6	None Detected								
B5	B8	None Detected								
B5	B10	None Detected								
B5	A9	None Detected								
B5	A7	None Detected								
B5	A5	None Detected								
B5	A3	None Detected								
B6	J2	None Detected								
B6	J6	None Detected								
B6	J8	None Detected								
B6	I9	None Detected								
B6	I7	None Detected								
B6	I5	None Detected								
B6	I3	None Detected								
B6	I1	None Detected								
B6	H2	None Detected								
B6	H4	None Detected								
B6	H6	None Detected								
B6	H8	None Detected								
B6	H10	None Detected								
B6	G9	None Detected								
B6	G7	None Detected								
B6	G5	None Detected								
B6	G3	None Detected								
B6	G1	None Detected								
B6	F2	None Detected								
B6	F4	None Detected								
B6	F6	None Detected								
B6	F8	None Detected								
B6	F10	None Detected								
B6	E9	None Detected								
B6	E7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0002
Customer Sample:	CH-2011-MU1-G2

Analyzed By:	F Craig
Analysis Date:	11/06/2011 & 11/07/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
B6	E5	None Detected								
B6	E3	None Detected								
B6	E1	None Detected								
B6	D2	None Detected								
B6	D4	None Detected								
B6	D6	None Detected								
B6	D8	None Detected								
B6	D10	None Detected								
B6	C9	None Detected								
B6	C7	None Detected								
B6	C5	None Detected								
B6	C3	None Detected								
B6	C1	None Detected								
B6	B2	None Detected								
B6	B4	None Detected								
B6	B6	None Detected								
B6	B8	None Detected								
B6	B10	None Detected								
B6	A9	None Detected								
B6	A7	None Detected								
B6	A5	None Detected								
B6	A3	None Detected								
B6	A1	None Detected								
B7	B2	None Detected								
B7	D3	None Detected								
B7	D7	None Detected								
B7	F9	None Detected								
B7	F3	None Detected								
B7	H2	None Detected								
B7	H4	None Detected								
B7	H6	None Detected								
B7	H8	None Detected								
B7	H10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0003	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU1-CNU	Grid Box :	0411-ELUT-001: C	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/07/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
C5	J2	None Detected								
C5	J4	None Detected								
C5	J6	None Detected								
C5	J8	None Detected								
C5	J10	None Detected								
C5	I7	None Detected								
C5	I5	None Detected								
C5	I3	None Detected								
C5	I1	None Detected								
C5	H2	None Detected								
C5	H4	None Detected								
C5	H6	None Detected								
C5	H8	None Detected								
C5	H10	None Detected								
C5	G9	None Detected								
C5	G7	None Detected								
C5	G5	None Detected								
C5	G3	None Detected								
C5	G1	None Detected								
C5	F2	None Detected								
C5	F4	None Detected								
C5	F6	None Detected								
C5	F8	None Detected								
C5	F10	None Detected								
C5	E9	None Detected								
C5	E7	None Detected								
C5	E5	None Detected								
C5	E3	None Detected								
C5	E1	None Detected								
C5	D2	None Detected								
C5	D4	None Detected								
C5	D6	None Detected								
C5	D8	F	0	0	1.25	0.03	CD	Chrysotile	011283D	
C5	D10	None Detected								
C5	C9	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0003
Customer Sample:	CH-2011-MU1-CNU

Analyzed By:	F Craig
Analysis Date:	11/07/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
C5	C7	None Detected								
C5	C5	None Detected								
C5	C3	None Detected								
C5	C1	None Detected								
C5	B2	None Detected								
C5	B4	None Detected								
C5	B6	None Detected								
C5	B8	None Detected								
C5	B10	None Detected								
C5	A9	None Detected								
C5	A7	None Detected								
C5	A5	None Detected								
C5	A3	None Detected								
C5	A1	None Detected								
C7	B6	None Detected								
C7	B8	None Detected								
C7	B10	None Detected								
C7	C9	None Detected								
C7	C7	None Detected								
C7	C5	None Detected								
C7	C3	None Detected								
C7	C1	None Detected								
C7	D2	None Detected								
C7	D4	None Detected								
C7	D6	None Detected								
C7	D8	None Detected								
C7	D10	None Detected								
C7	E9	None Detected								
C7	E7	None Detected								
C7	E5	None Detected								
C7	E3	None Detected								
C7	E1	None Detected								
C7	F2	None Detected								
C7	F4	None Detected								
C7	F6	None Detected								
C7	F8	None Detected								
C7	F10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0003
Customer Sample:	CH-2011-MU1-CNU

Analyzed By:	F Craig
Analysis Date:	11/07/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
C7	G9	None Detected								
C7	G7	None Detected								
C7	G5	None Detected								
C7	G3	None Detected								
C7	G1	None Detected								
C7	H2	None Detected								
C7	H4	None Detected								
C7	H6	None Detected								
C7	H8	None Detected								
C7	H10	None Detected								
C7	I9	None Detected								
C7	I7	None Detected								
C7	I5	None Detected								
C7	I3	None Detected								
C7	I1	None Detected								
C7	J2	None Detected								
C7	J4	None Detected								
C7	J6	None Detected								
C7	J8	None Detected								
C7	B4	None Detected								
C8	A9	None Detected								
C8	C6	None Detected								
C8	E7	None Detected								
C8	I3	None Detected								
C8	F4	None Detected								
C8	G8	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Structure Sketch Sheet for Direct Data Entry

EMSL Order ID: 041128659-03 C KB **Client:** Futurenet Group, Inc.

Client Sample: *CH-2011-MU1-GNU* 11/23/11 Page _____ of _____

Primary Structure # 0	Primary Structure #	Primary Structure #	Primary Structure #

Primary Structure #	Primary Structure #	Primary Structure #	Primary Structure #

Primary Structure #	Primary Structure #	Primary Structure #	Primary Structure #

Primary Structure #	Primary Structure #	Primary Structure #	Primary Structure #

Structure #	Structure #	Structure #	Structure #

Analyst:_____ Date: _____ Scope: _____

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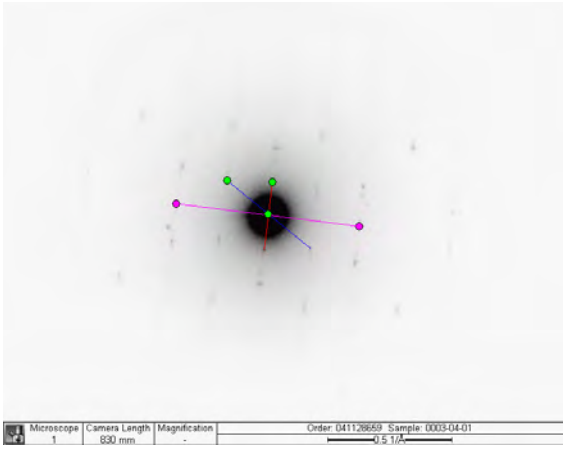
CHRYSOTILE SAED INDEXING FORM

EMSL Order Number:	041128659	**Date:**	Nov 07, 2011
Image Number:	011283		
Reference / Sample Number:	0003		
Preliminary ID:	Chrysotile		
Camera Constant:	2.943e-003	**1/A Pixels**	
Calibration Reference:	AuCal-110111_11270		

	Measured	Reference	-5%	+5%
Inter-row Spacing:	**5.374**	5.3	**5.06**	**5.56**
Vector Angle:	**59.4**	60	**58**	**63**
d2 or hk0 (Camera K/zero row dist.):	**7.257**	7.32	**6.95**	**7.68**
d1 or hkl (Camera K/slant vector dist.):	**4.619**	4.58	**4.35**	**4.81**



From SAED Reference Book, "unknown" diffraction pattern was found to be that of: **Chrysotile**

Indexed By: F Craig

Preliminary Identification was:

X	CORRECT
	INCORRECT

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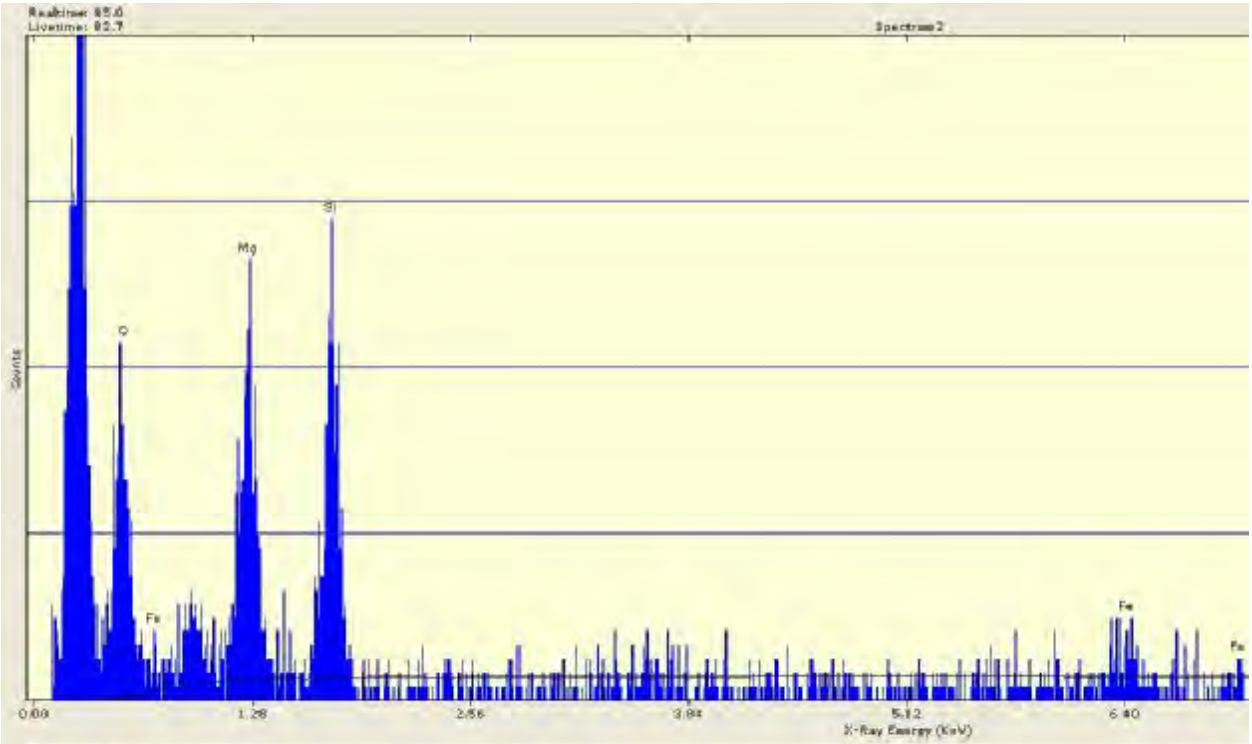
EMSL Analytical, Inc.w 200 Rt 130 North Cinnaminson, NJ 08077 w (800)220-3675

:

TEM EPA Superfund

EDXA Spectrum
Futurenet / Order # 041128659
Sample # CH-2011-MU1-CNU
Identification: Chrysotile
041128659-0003_TEM_ISO_ELUTRIATOR_Chrysotile



Quantitative Results for Spectrum2
Analysis: Thin Film Method: Standardless
Acquired 07-Nov-2011, 100.0 KeV @10 eV/channel

Element	Weight %	Std. Dev.	Atomic %	Oxide %		k-Ratio	Intensities	FWHM (eV)	ROI (eV)
Oxygen	46.33	3.38	58.67	0.00		0.0000	0.0	84.1	163.43
Magnesium	28.14	2.05	23.46	46.66	(MgO)	0.3287	188.2	94.0	190.10
Silicon	24.02	1.75	17.29	51.39	(SiO2)	0.2664	197.9	100.1	212.14
Iron	1.52	0.11	0.58	1.95	(FeO)	0.0168	5.8	145.1	25.00
Total	100.00			100.00					

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0005	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU1-GS	Grid Box :	0411-ELUT-001: D	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/08/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
D5	J2	None Detected								
D5	J4	None Detected								
D5	J6	None Detected								
D5	J8	None Detected								
D5	J10	None Detected								
D5	I9	None Detected								
D5	I7	None Detected								
D5	I5	None Detected								
D5	I3	None Detected								
D5	I1	None Detected								
D5	H2	None Detected								
D5	H4	None Detected								
D5	H6	None Detected								
D5	H8	None Detected								
D5	H10	None Detected								
D5	G9	None Detected								
D5	G7	None Detected								
D5	G5	None Detected								
D5	G3	None Detected								
D5	G1	None Detected								
D5	F2	None Detected								
D5	F4	None Detected								
D5	F6	None Detected								
D5	F8	None Detected								
D5	F10	None Detected								
D5	E9	None Detected								
D5	E7	None Detected								
D5	E5	None Detected								
D5	E3	None Detected								
D5	E1	None Detected								
D5	D2	None Detected								
D5	D4	None Detected								
D5	D6	None Detected								
D5	D8	None Detected								
D5	D10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0005
Customer Sample:	CH-2011-MU1-GS

Analyzed By:	F Craig
Analysis Date:	11/08/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
D5	C9	None Detected								
D5	C7	None Detected								
D5	C5	None Detected								
D5	C3	None Detected								
D5	C1	None Detected								
D5	B2	None Detected								
D5	B4	None Detected								
D5	B6	None Detected								
D5	B8	None Detected								
D5	B10	None Detected								
D5	A9	None Detected								
D5	A7	None Detected								
D5	A5	None Detected								
D5	A3	None Detected								
D5	A1	None Detected								
D6	A1	None Detected								
D6	A3	None Detected								
D6	A5	None Detected								
D6	A7	None Detected								
D6	A9	None Detected								
D6	B10	None Detected								
D6	B8	None Detected								
D6	B6	None Detected								
D6	B4	None Detected								
D6	B2	None Detected								
D6	C3	None Detected								
D6	C5	None Detected								
D6	C7	None Detected								
D6	C9	None Detected								
D6	D10	None Detected								
D6	D8	None Detected								
D6	D6	None Detected								
D6	D4	None Detected								
D6	D2	None Detected								
D6	E1	None Detected								
D6	E3	None Detected								
D6	E5	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0005
Customer Sample:	CH-2011-MU1-GS

Analyzed By:	F Craig
Analysis Date:	11/08/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
D6	E7	None Detected								
D6	E9	None Detected								
D6	F10	None Detected								
D6	F8	None Detected								
D6	F6	None Detected								
D6	F4	None Detected								
D6	F2	None Detected								
D6	G1	None Detected								
D6	G3	None Detected								
D6	G5	None Detected								
D6	G7	None Detected								
D6	G9	None Detected								
D6	H10	None Detected								
D6	H8	None Detected								
D6	H6	None Detected								
D6	H4	None Detected								
D6	H2	None Detected								
D6	I9	None Detected								
D6	I7	None Detected								
D6	I5	None Detected								
D6	I3	None Detected								
D6	I1	None Detected								
D6	J8	None Detected								
D6	J4	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0006	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU2-G2	Grid Box :	0411-ELUT-01: E	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/09/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
E5	J2	None Detected								
E5	J4	None Detected								
E5	J6	None Detected								
E5	J8	None Detected								
E5	J10	None Detected								
E5	I9	None Detected								
E5	I7	None Detected								
E5	I5	None Detected								
E5	I3	None Detected								
E5	H2	None Detected								
E5	H4	None Detected								
E5	H6	None Detected								
E5	H8	None Detected								
E5	H10	None Detected								
E5	G9	None Detected								
E5	G7	None Detected								
E5	G5	None Detected								
E5	G3	None Detected								
E5	F2	None Detected								
E5	F4	None Detected								
E5	F6	None Detected								
E5	F8	None Detected								
E5	F10	None Detected								
E5	E9	None Detected								
E5	E7	None Detected								
E5	E5	None Detected								
E5	E3	None Detected								
E5	D2	None Detected								
E5	D4	None Detected								
E5	D6	None Detected								
E5	D8	None Detected								
E5	D10	None Detected								
E5	C9	None Detected								
E5	C7	None Detected								
E5	C5	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0006
Customer Sample:	CH-2011-MU2-G2

Analyzed By:	F Craig
Analysis Date:	11/09/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
E5	C3	None Detected								
E5	B2	None Detected								
E5	B4	None Detected								
E5	B6	None Detected								
E5	B8	None Detected								
E5	B10	None Detected								
E5	A9	None Detected								
E5	A7	None Detected								
E5	A5	None Detected								
E5	A3	None Detected								
E6	J10	None Detected								
E6	J8	None Detected								
E6	J6	None Detected								
E6	J4	None Detected								
E6	J2	None Detected								
E6	I1	None Detected								
E6	I3	None Detected								
E6	I5	None Detected								
E6	I7	None Detected								
E6	I9	None Detected								
E6	H10	None Detected								
E6	H8	None Detected								
E6	H6	None Detected								
E6	H4	None Detected								
E6	H2	None Detected								
E6	G1	None Detected								
E6	G3	None Detected								
E6	G5	None Detected								
E6	G7	None Detected								
E6	G9	None Detected								
E6	F10	None Detected								
E6	F8	None Detected								
E6	F6	None Detected								
E6	F4	None Detected								
E6	F2	None Detected								
E6	E1	None Detected								
E6	E3	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0006
Customer Sample:	CH-2011-MU2-G2

Analyzed By:	F Craig
Analysis Date:	11/09/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
E6	E5	None Detected								
E6	E7	None Detected								
E6	E9	None Detected								
E6	D10	None Detected								
E6	D8	None Detected								
E6	D6	None Detected								
E6	D4	None Detected								
E6	D2	None Detected								
E6	C1	None Detected								
E6	C3	None Detected								
E6	C5	None Detected								
E6	C7	None Detected								
E6	C9	None Detected								
E6	B10	None Detected								
E6	B8	None Detected								
E6	B6	None Detected								
E6	B4	None Detected								
E6	B2	None Detected								
E6	A1	None Detected								
E6	A3	None Detected								
E6	A5	None Detected								
E6	A7	None Detected								
E6	A9	None Detected								
E7	B7	None Detected								
E7	E4	None Detected								
E7	H5	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0007	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU2-CN	Grid Box :	0411-ELUT-01: F	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/08/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
F1	A9	None Detected								
F1	A7	None Detected								
F1	A5	None Detected								
F1	A3	None Detected								
F1	A1	None Detected								
F1	B2	None Detected								
F1	B4	None Detected								
F1	B6	None Detected								
F1	B8	None Detected								
F1	B10	None Detected								
F1	C9	None Detected								
F1	C7	None Detected								
F1	C5	None Detected								
F1	C3	None Detected								
F1	C1	None Detected								
F1	D2	None Detected								
F1	D4	None Detected								
F1	D6	None Detected								
F1	D8	None Detected								
F1	D10	None Detected								
F1	E9	None Detected								
F1	E7	None Detected								
F1	E5	None Detected								
F1	E3	None Detected								
F1	E1	None Detected								
F1	F2	None Detected								
F1	F4	None Detected								
F1	F6	None Detected								
F1	F8	None Detected								
F1	F10	None Detected								
F1	G9	None Detected								
F1	G7	None Detected								
F1	G5	None Detected								
F1	G3	None Detected								
F1	G1	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0007
Customer Sample:	CH-2011-MU2-CN

Analyzed By:	F Craig
Analysis Date:	11/08/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
F1	H2	None Detected								
F1	H4	None Detected								
F1	H6	None Detected								
F1	H8	None Detected								
F1	H10	None Detected								
F1	I9	None Detected								
F1	I7	None Detected								
F1	I5	None Detected								
F1	I3	None Detected								
F1	I1	None Detected								
F1	J2	None Detected								
F1	J4	None Detected								
F1	J6	None Detected								
F1	J8	None Detected								
F1	J10	None Detected								
F2	A9	None Detected								
F2	A7	None Detected								
F2	A5	None Detected								
F2	A3	None Detected								
F2	A1	None Detected								
F2	B2	None Detected								
F2	B4	None Detected								
F2	B6	None Detected								
F2	B8	None Detected								
F2	B10	None Detected								
F2	C9	None Detected								
F2	C7	None Detected								
F2	C5	None Detected								
F2	C3	None Detected								
F2	C1	None Detected								
F2	D2	None Detected								
F2	D4	None Detected								
F2	D6	None Detected								
F2	D8	None Detected								
F2	D10	None Detected								
F2	E9	None Detected								
F2	E7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0007
Customer Sample:	CH-2011-MU2-CN

Analyzed By:	F Craig
Analysis Date:	11/08/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
F2	E5	None Detected								
F2	E3	None Detected								
F2	E1	None Detected								
F2	F2	None Detected								
F2	F4	None Detected								
F2	F6	None Detected								
F2	F8	None Detected								
F2	F10	None Detected								
F2	G9	None Detected								
F2	G7	None Detected								
F2	G5	None Detected								
F2	G3	None Detected								
F2	G1	None Detected								
F2	H2	None Detected								
F2	H4	None Detected								
F2	H6	None Detected								
F2	H8	None Detected								
F2	H10	None Detected								
F2	I9	None Detected								
F2	I7	None Detected								
F2	I5	None Detected								
F2	I3	None Detected								
F2	I1	None Detected								
F2	J2	None Detected								
F2	J4	None Detected								
F2	J6	None Detected								
F2	J8	None Detected								
F2	J10	None Detected								
F3	C6	None Detected								
F3	E8	None Detected								
F3	G2	None Detected								
F3	I7	None Detected								
F3	B4	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0008	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU2-CS	Grid Box :	0411-ELUT-01: G	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/10/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
G5	J2	None Detected								
G5	J4	None Detected								
G5	J6	None Detected								
G5	J8	None Detected								
G5	J10	None Detected								
G5	I9	None Detected								
G5	I7	None Detected								
G5	I5	None Detected								
G5	I3	None Detected								
G5	I1	None Detected								
G5	H2	None Detected								
G5	H4	None Detected								
G5	H6	None Detected								
G5	H8	None Detected								
G5	H10	None Detected								
G5	G9	None Detected								
G5	G7	None Detected								
G5	G5	None Detected								
G5	G3	None Detected								
G5	G1	None Detected								
G5	F2	None Detected								
G5	F4	None Detected								
G5	F6	None Detected								
G5	F8	None Detected								
G5	F10	None Detected								
G5	E9	None Detected								
G5	E7	None Detected								
G5	E5	None Detected								
G5	E3	None Detected								
G5	E1	None Detected								
G5	D2	None Detected								
G5	D4	None Detected								
G5	D6	None Detected								
G5	D8	None Detected								
G5	D10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0008
Customer Sample:	CH-2011-MU2-CS

Analyzed By:	F Craig
Analysis Date:	11/10/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
G5	C9	None Detected								
G5	C7	None Detected								
G5	C5	None Detected								
G5	C3	None Detected								
G5	C1	None Detected								
G5	B2	None Detected								
G5	B4	None Detected								
G5	B6	None Detected								
G5	B8	None Detected								
G5	B10	None Detected								
G5	A9	None Detected								
G5	A7	None Detected								
G5	A5	None Detected								
G5	A3	None Detected								
G5	A1	None Detected								
G6	J10	None Detected								
G6	J8	None Detected								
G6	J6	None Detected								
G6	J4	None Detected								
G6	J2	None Detected								
G6	I1	None Detected								
G6	I3	None Detected								
G6	I5	None Detected								
G6	I7	None Detected								
G6	I9	None Detected								
G6	H10	None Detected								
G6	H8	None Detected								
G6	H6	None Detected								
G6	H4	None Detected								
G6	H2	None Detected								
G6	G1	None Detected								
G6	G3	None Detected								
G6	G5	None Detected								
G6	G7	None Detected								
G6	G9	None Detected								
G6	F10	None Detected								
G6	F8	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0008
Customer Sample:	CH-2011-MU2-CS

Analyzed By:	F Craig
Analysis Date:	11/10/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
G6	F6	None Detected								
G6	F4	None Detected								
G6	F2	None Detected								
G6	E1	None Detected								
G6	E3	None Detected								
G6	E5	None Detected								
G6	E7	None Detected								
G6	E9	None Detected								
G6	D10	None Detected								
G6	D8	None Detected								
G6	D6	None Detected								
G6	D4	None Detected								
G6	D2	None Detected								
G6	C1	None Detected								
G6	C3	None Detected								
G6	C5	None Detected								
G6	C7	None Detected								
G6	C9	None Detected								
G6	B10	None Detected								
G6	B8	None Detected								
G6	B6	None Detected								
G6	B4	None Detected								
G6	B2	None Detected								
G6	A3	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0009	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU3-G1	Grid Box :	0411-ELUT-01: I	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/10/2011 & 11/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
I2	J2	None Detected								
I2	J4	None Detected								
I2	J6	None Detected								
I2	J8	None Detected								
I2	J10	None Detected								
I2	I9	None Detected								
I2	I7	None Detected								
I2	I5	None Detected								
I2	I3	None Detected								
I2	I1	None Detected								
I2	H2	None Detected								
I2	H4	None Detected								
I2	H6	None Detected								
I2	H8	None Detected								
I2	H10	None Detected								
I2	G9	None Detected								
I2	G7	None Detected								
I2	G5	None Detected								
I2	G3	None Detected								
I2	G1	None Detected								
I2	F2	None Detected								
I2	F4	None Detected								
I2	F6	None Detected								
I2	F8	None Detected								
I2	F10	None Detected								
I2	E9	None Detected								
I2	E7	None Detected								
I2	E5	None Detected								
I2	E3	None Detected								
I2	E1	None Detected								
I2	D2	None Detected								
I2	D3	None Detected								
I2	D6	None Detected								
I2	D8	None Detected								
I2	D10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0009
Customer Sample:	CH-2011-MU3-G1

Analyzed By:	F Craig
Analysis Date:	11/10/2011 & 11/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
I2	C9	None Detected								
I2	C7	None Detected								
I2	C5	None Detected								
I2	C3	None Detected								
I2	C1	None Detected								
I2	B2	None Detected								
I2	B4	None Detected								
I2	B6	None Detected								
I2	B8	None Detected								
I2	B10	None Detected								
I2	A9	None Detected								
I2	A7	None Detected								
I2	A5	None Detected								
I2	A3	None Detected								
I2	A1	None Detected								
I3	A9	None Detected								
I3	A7	None Detected								
I3	A5	None Detected								
I3	A3	None Detected								
I3	A1	None Detected								
I3	B2	None Detected								
I3	B4	None Detected								
I3	B6	None Detected								
I3	B8	None Detected								
I3	B10	None Detected								
I3	C9	None Detected								
I3	C3	None Detected								
I3	C1	None Detected								
I3	D4	None Detected								
I3	D6	None Detected								
I3	D8	None Detected								
I3	D10	None Detected								
I3	E9	None Detected								
I3	E7	None Detected								
I3	E5	None Detected								
I3	E3	None Detected								
I3	E1	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0009
Customer Sample:	CH-2011-MU3-G1

Analyzed By:	F Craig
Analysis Date:	11/10/2011 & 11/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
I3	F2	None Detected								
I3	F4	None Detected								
I3	F6	None Detected								
I3	F8	None Detected								
I3	F10	None Detected								
I3	G9	None Detected								
I3	G7	None Detected								
I3	G5	None Detected								
I3	G3	None Detected								
I3	G1	None Detected								
I3	H2	None Detected								
I3	H4	None Detected								
I3	H6	None Detected								
I3	H8	None Detected								
I3	H10	None Detected								
I3	I9	None Detected								
I3	I7	None Detected								
I3	I5	None Detected								
I3	I3	None Detected								
I3	I1	None Detected								
I3	J2	None Detected								
I3	J4	None Detected								
I3	J6	None Detected								
I3	J9	None Detected								
I3	J10	None Detected								
I1	G3	None Detected								
I1	G5	None Detected								
I1	G7	None Detected								
I1	G8	None Detected								
I1	F8	None Detected								
I1	F4	None Detected								
I1	E3	None Detected								
I1	E5	None Detected								
I1	E7	None Detected								
I1	E9	None Detected								
I1	D8	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0009
Customer Sample:	CH-2011-MU3-G1

Analyzed By:	F Craig
Analysis Date:	11/10/2011 & 11/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
I1	D6	None Detected								
I1	D4	None Detected								
I1	D2	None Detected								
I1	C3	None Detected								
I1	C5	None Detected								
I1	C7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0010	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU3-G2	Grid Box :	0411-ELUT-01: L	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/15/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
L2	J2	None Detected								
L2	J4	None Detected								
L2	J6	None Detected								
L2	J8	None Detected								
L2	J10	None Detected								
L2	I9	None Detected								
L2	I7	None Detected								
L2	I5	None Detected								
L2	I3	None Detected								
L2	I1	None Detected								
L2	H2	None Detected								
L2	H4	None Detected								
L2	H6	None Detected								
L2	H8	None Detected								
L2	H10	None Detected								
L2	G9	None Detected								
L2	G7	None Detected								
L2	G5	None Detected								
L2	G3	None Detected								
L2	G1	None Detected								
L2	F2	None Detected								
L2	F4	None Detected								
L2	F6	None Detected								
L2	F8	None Detected								
L2	F10	None Detected								
L2	E9	None Detected								
L2	E7	None Detected								
L2	E5	None Detected								
L2	E3	None Detected								
L2	E1	None Detected								
L2	D2	None Detected								
L2	D4	None Detected								
L2	D6	None Detected								
L2	D8	None Detected								
L2	D10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0010
Customer Sample:	CH-2011-MU3-G2

Analyzed By:	F Craig
Analysis Date:	11/15/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
L2	C9	None Detected								
L2	C7	None Detected								
L2	C5	None Detected								
L2	C3	None Detected								
L2	C1	None Detected								
L2	B2	None Detected								
L2	B4	None Detected								
L2	B6	None Detected								
L2	B8	None Detected								
L2	B10	None Detected								
L2	A9	None Detected								
L2	A7	None Detected								
L2	A5	None Detected								
L2	A3	None Detected								
L2	A1	None Detected								
L3	I4	None Detected								
L3	I6	None Detected								
L3	I8	None Detected								
L3	G9	None Detected								
L3	G7	None Detected								
L3	G5	None Detected								
L3	G3	None Detected								
L3	G1	None Detected								
L3	F4	None Detected								
L3	F8	None Detected								
L3	F10	None Detected								
L3	E9	None Detected								
L3	E7	None Detected								
L3	E5	None Detected								
L3	E3	None Detected								
L3	E1	None Detected								
L3	D2	None Detected								
L3	D4	None Detected								
L3	D6	None Detected								
L3	D8	None Detected								
L3	D10	None Detected								
L3	C9	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0010
Customer Sample:	CH-2011-MU3-G2

Analyzed By:	F Craig
Analysis Date:	11/15/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
L3	C7	None Detected								
L3	C5	None Detected								
L3	C3	None Detected								
L3	C1	None Detected								
L3	B2	None Detected								
L3	B4	None Detected								
L3	B6	None Detected								
L3	B8	None Detected								
L3	B10	None Detected								
L3	A9	None Detected								
L3	A7	None Detected								
L3	A5	None Detected								
L3	A3	None Detected								
L3	A1	None Detected								
L1	I9	None Detected								
L1	I7	None Detected								
L1	I5	None Detected								
L1	I3	None Detected								
L1	I1	None Detected								
L1	H2	None Detected								
L1	H4	None Detected								
L1	H6	None Detected								
L1	H8	None Detected								
L1	H10	None Detected								
L1	G9	None Detected								
L1	G7	None Detected								
L1	G5	None Detected								
L1	G3	None Detected								
L1	G1	None Detected								
L1	F2	None Detected								
L1	F4	None Detected								
L1	F6	None Detected								
L1	F8	None Detected								
L1	F10	None Detected								
L1	E9	None Detected								
L1	E7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0010
Customer Sample:	CH-2011-MU3-G2

Analyzed By:	F Craig
Analysis Date:	11/15/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
L1	E5	None Detected								
L1	C7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0011	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU3-CN	Grid Box :	0401-ELUT-01: J	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/11/2011 & 11/12/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
J3	A9	None Detected								
J3	A5	None Detected								
J3	A3	None Detected								
J3	A1	None Detected								
J3	B2	None Detected								
J3	B4	None Detected								
J3	B6	None Detected								
J3	B8	None Detected								
J3	B10	None Detected								
J3	C9	None Detected								
J3	C7	None Detected								
J3	C5	None Detected								
J3	C3	None Detected								
J3	C1	None Detected								
J3	D2	None Detected								
J3	D4	None Detected								
J3	D6	None Detected								
J3	D8	None Detected								
J3	D10	None Detected								
J3	E9	None Detected								
J3	E7	None Detected								
J3	E5	None Detected								
J3	E3	None Detected								
J3	E1	None Detected								
J3	F2	None Detected								
J3	F4	None Detected								
J3	F6	None Detected								
J3	F8	None Detected								
J3	F10	None Detected								
J3	G9	None Detected								
J3	G7	None Detected								
J3	G5	None Detected								
J3	G3	None Detected								
J3	G1	None Detected								
J3	H2	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0011
Customer Sample:	CH-2011-MU3-CN

Analyzed By:	F Craig
Analysis Date:	11/11/2011 & 11/12/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
J3	H4	None Detected								
J3	H6	None Detected								
J3	H8	None Detected								
J3	H10	None Detected								
J3	I9	None Detected								
J3	I7	None Detected								
J3	I5	None Detected								
J3	I3	None Detected								
J3	I1	None Detected								
J3	J2	None Detected								
J3	J4	None Detected								
J3	J6	None Detected								
J3	J8	None Detected								
J3	J10	None Detected								
J4	A1	None Detected								
J4	A3	None Detected								
J4	A5	None Detected								
J4	A7	None Detected								
J4	A9	None Detected								
J4	B10	None Detected								
J4	B8	None Detected								
J4	B6	None Detected								
J4	B4	None Detected								
J4	B2	None Detected								
J4	C1	None Detected								
J4	C3	None Detected								
J4	C5	None Detected								
J4	C7	None Detected								
J4	C9	None Detected								
J4	D2	None Detected								
J4	D4	None Detected								
J4	D6	None Detected								
J4	D8	None Detected								
J4	D10	None Detected								
J4	E9	None Detected								
J4	E7	None Detected								
J4	E5	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0011
Customer Sample:	CH-2011-MU3-CN

Analyzed By:	F Craig
Analysis Date:	11/11/2011 & 11/12/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
J4	E3	None Detected								
J4	E1	None Detected								
J4	F2	None Detected								
J4	F4	None Detected								
J4	F6	None Detected								
J4	F8	None Detected								
J4	F10	None Detected								
J4	G9	None Detected								
J4	G7	None Detected								
J4	G5	None Detected								
J4	G3	None Detected								
J4	G1	None Detected								
J4	H2	None Detected								
J4	H4	None Detected								
J4	H6	None Detected								
J4	H8	None Detected								
J4	H10	None Detected								
J4	I9	None Detected								
J4	I7	None Detected								
J4	I5	None Detected								
J4	I3	None Detected								
J4	I1	None Detected								
J4	J2	None Detected								
J4	J4	None Detected								
J4	J6	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0012	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU3-CS	Grid Box :	0411-ELUT-01: K	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/12/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
K2	A9	None Detected								
K2	A7	None Detected								
K2	A5	None Detected								
K2	B6	None Detected								
K2	B8	None Detected								
K2	C7	None Detected								
K2	C5	None Detected								
K2	C3	None Detected								
K2	D2	None Detected								
K2	D4	None Detected								
K2	D6	None Detected								
K2	D8	None Detected								
K2	E9	None Detected								
K2	E7	None Detected								
K2	E5	None Detected								
K2	E3	None Detected								
K2	F2	None Detected								
K2	F4	None Detected								
K2	F6	None Detected								
K2	F8	None Detected								
K2	G9	None Detected								
K2	G7	None Detected								
K2	G5	None Detected								
K2	G1	None Detected								
K2	H2	None Detected								
K2	H8	None Detected								
K2	I9	None Detected								
K2	I5	None Detected								
K2	I1	None Detected								
K2	J2	None Detected								
K2	J4	None Detected								
K2	J6	None Detected								
K2	J10	None Detected								
K3	A9	None Detected								
K3	B10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0012
Customer Sample:	CH-2011-MU3-CS

Analyzed By:	F Craig
Analysis Date:	11/12/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
K3	B8	None Detected								
K3	B2	None Detected								
K3	C1	None Detected								
K3	D10	None Detected								
K3	D8	None Detected								
K3	D2	None Detected								
K3	E1	None Detected								
K3	E3	None Detected								
K3	E7	None Detected								
K3	E9	None Detected								
K3	F10	None Detected								
K3	F8	None Detected								
K3	F2	None Detected								
K3	G1	None Detected								
K3	G3	None Detected								
K3	G7	None Detected								
K3	G9	None Detected								
K3	H10	None Detected								
K3	H8	None Detected								
K3	H6	None Detected								
K3	H4	None Detected								
K3	H2	None Detected								
K3	I1	None Detected								
K3	I3	None Detected								
K3	I7	None Detected								
K3	I9	None Detected								
K3	J10	None Detected								
K3	J8	None Detected								
K3	J6	None Detected								
K3	J4	None Detected								
K3	J2	None Detected								
K4	I7	None Detected								
K4	I5	None Detected								
K4	I1	None Detected								
K4	H2	None Detected								
K4	H10	None Detected								
K4	G9	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0012
Customer Sample:	CH-2011-MU3-CS

Analyzed By:	F Craig
Analysis Date:	11/12/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
K4	G7	None Detected								
K4	F2	None Detected								
K4	F8	None Detected								
K4	F10	None Detected								
K4	E9	None Detected								
K4	E7	None Detected								
K4	E5	None Detected								
K4	E3	None Detected								
K4	D2	None Detected								
K4	D4	None Detected								
K4	D6	None Detected								
K4	D8	None Detected								
K4	D10	None Detected								
K4	C9	None Detected								
K4	C7	None Detected								
K4	C5	None Detected								
K4	B4	None Detected								
K4	B6	None Detected								
K4	B8	None Detected								
K4	B10	None Detected								
K4	A9	None Detected								
K4	A7	None Detected								
K4	A5	None Detected								
K1	D10	None Detected								
K1	D8	None Detected								
K1	D6	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041128659-0009QC	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU3-G1	Grid Box :	0411-ELUT-01: N	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	11/17/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
N3	J2	None Detected								
N3	J4	None Detected								
N3	J6	None Detected								
N3	J8	None Detected								
N3	I7	None Detected								
N3	I5	None Detected								
N3	I3	None Detected								
N3	I1	None Detected								
N3	H2	None Detected								
N3	H4	None Detected								
N3	H6	None Detected								
N3	H8	None Detected								
N3	G7	None Detected								
N3	G5	None Detected								
N3	G3	None Detected								
N3	G1	None Detected								
N3	F2	None Detected								
N3	F4	None Detected								
N3	F6	None Detected								
N3	F8	None Detected								
N3	E7	None Detected								
N3	E5	None Detected								
N3	E3	None Detected								
N3	E1	None Detected								
N3	D2	None Detected								
N3	D4	None Detected								
N3	D6	None Detected								
N3	D8	None Detected								
N3	C7	None Detected								
N3	C5	None Detected								
N3	C3	None Detected								
N3	C1	None Detected								
N3	B2	None Detected								
N3	B4	None Detected								
N3	B6	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0009QC
Customer Sample:	CH-2011-MU3-G1

Analyzed By:	F Craig
Analysis Date:	11/17/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
N3	B8	None Detected								
N3	A7	None Detected								
N3	A5	None Detected								
N3	A3	None Detected								
N3	A1	None Detected								
N4	J10	None Detected								
N4	J4	None Detected								
N4	I3	None Detected								
N4	I5	None Detected								
N4	I7	None Detected								
N4	I9	None Detected								
N4	H10	None Detected								
N4	H8	None Detected								
N4	H6	None Detected								
N4	H4	None Detected								
N4	H2	None Detected								
N4	G3	None Detected								
N4	G5	None Detected								
N4	G7	None Detected								
N4	G9	None Detected								
N4	F10	None Detected								
N4	F8	None Detected								
N4	F6	None Detected								
N4	F4	None Detected								
N4	F2	None Detected								
N4	E3	None Detected								
N4	E5	None Detected								
N4	E7	None Detected								
N4	E9	None Detected								
N4	D10	None Detected								
N4	D8	None Detected								
N4	D6	None Detected								
N4	D4	None Detected								
N4	D2	None Detected								
N4	C3	None Detected								
N4	C5	None Detected								
N4	C7	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0009QC
Customer Sample:	CH-2011-MU3-G1

Analyzed By:	F Craig
Analysis Date:	11/17/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
N4	C9	None Detected								
N4	B10	None Detected								
N4	B8	None Detected								
N4	B6	None Detected								
N4	B4	None Detected								
N4	B2	None Detected								
N4	A3	None Detected								
N4	A5	None Detected								
N4	A7	None Detected								
N4	A9	None Detected								
N5	A9	None Detected								
N5	A7	None Detected								
N5	A5	None Detected								
N5	B6	None Detected								
N5	B8	None Detected								
N5	B10	None Detected								
N5	C9	None Detected								
N5	C7	None Detected								
N5	D6	None Detected								
N5	D8	None Detected								
N5	D10	None Detected								
N5	E9	None Detected								
N5	E7	None Detected								
N5	F6	None Detected								
N5	F8	None Detected								
N5	F10	None Detected								
N5	G9	None Detected								
N5	G7	None Detected								
N5	H6	None Detected								
N5	H8	None Detected								
N5	H10	None Detected								
N5	I9	None Detected								
N5	I7	None Detected								
N5	J6	None Detected								
N5	J8	None Detected								
N5	J10	None Detected								

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EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041128659-0009QC
Customer Sample:	CH-2011-MU3-G1

Analyzed By:	F Craig
Analysis Date:	11/17/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
N2	B10	None Detected								
N2	B8	None Detected								
N2	B6	None Detected								

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041128659

041128659

Asbestos Lab Services Chain of Custody

EMSL Order Number(Lab Use Only):

Chicago, IL
2225 W HUBBARD ST
Chicago, IL 60612
PHONE: (773) 313-0999
FAX: (773) 313-0139

Company: FutureNet Group, Inc.
Street: 12801 Auburn
City/State/Zip: Detroit, MI 48223
Report To (Name): Jim Finetti
Telephone: 3135447117
Project Name/Number: 11655-004
Please Provide Results: Email
Purchase Order: 11655-004

EMSL-Bill to: ☑ Same ☐ Third Party Billing requires written authorization from third party

Fax: 3135447111
Email Address: James.Finetti@futurenetgroup.com
State Samples Taken: IL

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☒ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☐ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM - Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM CARB 435 - A (0.25% sensitivity)
☐ PLM CARB 435 - B (0.1% sensitivity)
☐ TEM CARB 435 - B (0.1% sensitivity)
☐ TEM CARB 435 - C (0.01% sensitivity)
☐ EPA Protocol (Semi-Quantitative)
☐ EPA Protocol (Quantitative)

Other:
☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name:

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CH-2011-MU1-G1	Sediment (Calumet Harbor)	2-8.02 jar	10/21 10:00
CH-2011-MU1-G2	"	"	10/21 11:00
CH-2011-MU1-~~G~~C J.F.	"	"	10/23 10:00
CH-2011-MU1-~~G~~C J.F.	"	"	10/23 11:15 Hold J.F.
CH-2011-MU1-G3	"	"	10/22 3:15
CH-2011-MU2-G2	"	"	10/21 3:30
CH-2011-MU2-~~G~~C J.F.	"	"	10/22 4:00
CH-2011-MU2-~~G~~C J.F.	"	"	10/22 1:15

Client Sample # (s):

Total # of Samples: 12 twelve (12)

Relinquished (Client): Dr. [illegible] Date: 10/24/2011 Time: 10:00 AM

Received (Lab): [illegible] Date: 10/27/11 Time: 9:20

Comments/Special Instructions: Asbestos Analysis by Elutriator Method - Calumet Harbor Project

Controlled Document - Asbestos Lab Services COC – Rev 3 – 11/09/2009

Hold this Sample – Do not Analyze – J.F.
Note – Changes in Sample IDs – G changed to C on 6 samples J.F.

041128659

041128659

Asbestos Lab Services Chain of Custody

EMSL Order Number(Lab Use Only):

Chicago, IL
2235 W HUBBARD ST
Chicago, IL 60612
PHONE: (773) 313-0099
FAX: (773) 313-0139

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CH-2011-MU3-G1	Sediment (Calumet Harbor)	2-8oz Jar	10/18 12:00
CH-2011-MU3-G2	"	"	10/18 3:00
CH-2011-MU3-~~G~~N	C.J.F. "	"	10/22 9:00
CH-2011-MU3-~~G~~S	C.J.F. "	"	10/22 11:15
~~CH-2011-MU3-G3 Sediment~~	~~"~~	~~"~~	~~"~~

Comments/Special Instructions: Asbestos Analysis by Elutriator Method - Calumet Harbor Project

Scrutched Document - Asbestos Lab Services COC - Rev B - 11/03/2009

Page 2 of 2 Pages

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-5974 Email: cinnasblab@EMSL.com

Attn: **Jim Finetti**
Futurenet Group, Inc
12801 Auburn Street

Detroit, MI 48223

Fax: (313) 544-7111 Phone: (313) 544-7117
Project: **11655-004; Calumet Harbor Project**

Customer ID: FUTG62
Customer PO: 11655-004
Received: 10/27/11 9:20 AM
EMSL Order: 041128659

EMSL Proj:
Analysis Date: 11/15/2011

Test Report: Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402

Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
CH-2011-MU1-G1 *041128659-0013*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU1-G2 *041128659-0014*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU1-CNU *041128659-0015*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU1-GS *041128659-0017*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU2-G2 *041128659-0018*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU2-CN *041128659-0019*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU2-CS *041128659-0020*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU3-G1 *041128659-0021*		0	n/a			0	**n/a**	Reported using TEM data only

Initial report from 11/23/2011 14:56:14

Analyst(s)
Frank Craig (11)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-5974 Email: cinnasblab@EMSL.com

Attn: **Jim Finetti**
Futurenet Group, Inc
12801 Auburn Street

Detroit, MI 48223

Fax: (313) 544-7111 Phone: (313) 544-7117
Project: **11655-004; Calumet Harbor Project**

Customer ID: FUTG62
Customer PO: 11655-004
Received: 10/27/11 9:20 AM
EMSL Order: 041128659

EMSL Proj:
Analysis Date: 11/15/2011

Test Report: Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402

Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
CH-2011-MU3-G2 *041128659-0022*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU3-CN *041128659-0023*		0	n/a			0	**n/a**	Reported using TEM data only
CH-2011-MU3-CS *041128659-0024*		0	n/a			0	**n/a**	Reported using TEM data only

NIOSH 7402 method only reports fibers >= 5µm in length and >= 0.25µm in width.
This method requires 2 field blank analyses per set. Since no blanks were analyzed, the results are not blank corrected.
Average number of asbestos fibers on field blanks: n/a
Average number of non-asbestos fibers on field blanks: n/a

Initial report from 11/23/2011 14:56:14

Analyst(s)
Frank Craig (11)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

THIS IS THE LAST PAGE OF THE REPORT.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attn:	*Jim Finetti*	**Customer ID:**	FUTG62
	Futurenet Group, Inc.	**Customer PO:**	11655-004
	12801 Auburn Street	**Received:**	12/5/11 9:00 AM
	Detroit, MI 48223	**EMSL Order:**	041131565
Phone:	313-544-7117	**Date Prepared:**	12/5/2011
Fax:	313-544-7111	**Analysis Date(s):**	12/11/2011
Project:	**Calumet Harbor Project / 11655-004**		
Date Sampled:	**10/21/2011**	**Report Date:**	**12/12/2011**

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

EMSL Sample Number	041131565-0001		Mass of Respirable Dust on Filter:	0.00015	g
Customer Sample Number:	CH-2011-MU2-G1		Area of collection filter:	385	mm²
Minimum Level of analysis (chrysotile):	CD		Grid openings Area:	0.0132	mm²
Minimum Level of analysis (amphibole):	ADX		Grid Openings Analyzed:	98	
Magnification used for fiber counting:	19,000	x	Min Str. Length/ Max Str. Diameter:	>5 / <0.5	microns
Aspect ratio for fiber definition:	3:1		Analyst(s):	F. Craig	

Dust Generator-Total Dried Sample Weights			Soil % Moisture	38.0	%
>3/8"	0.000	g	Air Flow Rate Through ME opening of Dust Generator	1438.00	ml/min
Not Used <3/8"	125.760	g	Air Flow Rate Through IST opening of Dust Generator	96.00	ml/min
Used in Tumbler <3/8"	40.470	g	Estimated Total Air Flow Through Elutriator	1534.00	ml/min

Analytical Sensitivity: 1.98E+06 Structure/g PM10

Test for Uniformity (Chi-Square result) N/A

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density Str/mm²	Conc. Str/g PM10	Poisson 95 % Confidence Interval Lower Limit Str/g PM10	Poisson 95 % Confidence Interval Upper Limit Str/g PM10
Asbestos Structures > 5um, ≤ 10um	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures > 5um, ≤ 10um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures > 5um, ≤ 10um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Long)	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Asbestos Structures >10 um (Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Asbestos Structures >10 um (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Asbestos Structures	**CD/ADX**	**0**	**0**	**ND**	**ND**	**NA**	**5.93E+06**
Protocol Asbestos Structures(Chrys)	CD	0	0	**ND**	**ND**	NA	5.93E+06
Protocol Asbestos Structures (Amph)	ADX	0	0	**ND**	**ND**	NA	5.93E+06
Total Protocol Non Asbestos Structures	**NAM**	**0**	**0**	**ND**	**ND**		

Note: The concentration of asbestos and the 95% Confidence Intervals are reported on the basis of the Poissonian distribution and the Total Structure count. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

Robyn Denton

Approved Signatory

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041131565 -0001
Client Sample ID:	CH-2011-MU2-G1

Date:	12/5/2011
System:	2
Operator:	EM

Sample Drying:	
Temperature (C):	78 C
Start Date:	12/5/2011
End Date:	12/7/2011

Sample Weight (g)		Total Dried Sample Weight (g)		
Pre Drying	267.98 g	>3/8"	0 g	
Post Drying	166.23 g	<3/8"	40.47 g	(In Tumbler)
% moisure	38.0	<3/8"	125.8 g	(Not Used)

	Start Date	Start Time	Stop Date	Stop Time
Conditioning	07-Dec-11	11:00	8-Dec-11	10:15
Tumbling	08-Dec-11	10:15	8-Dec-11	16:15

Tumbling Speed: 30 rpm

1438	96	mL/min	
ME	IST		

% Moisture from surrogate sample

Pre Dry _____ g % Moisture
Post Dry g

Reviewed:
Date:

Following results are needed for calculation of asbestos concentration in the total sample mass

Resp. Mass	mo (mg)=	88			Resp.%=	ME Filter Information
Emission rate	k=	0.9934			0.21745	

Filter ID #	Filter ME	Preweight (mg)	Post-Weight (mg)	Col. Time (minutes)	mf (mg)	Total Time (min)	ln(mo-mf)	t(min)	ln(mo-mf)	ln(mo)
1	ME	23.663	31.981	20	8.318	20	4.378	20	4.3780	4.4773
2	ME	23.135	32.873	15	18.056	35	4.248	35	4.2477	4.4773
3	ME	23.775	30.841	12	25.122	47	4.141	47	4.1412	4.4773
4	ME	23.509	30.606	12	32.219	59	4.021	59	4.0214	4.4773
5	ME	23.561	30.696	14	39.354	73	3.885	73	3.8846	4.4773
6	ME	23.483	29.703	16	45.574	89	3.748	89	3.7478	4.4773
7	ME	23.245	32.409	20	54.738	109	3.504	109	3.5044	4.4773
8	ME	23.675	32.594	23	63.657	132	3.192	132	3.1923	4.4773
9	ME	23.423	31.058	25	71.292	157	2.816	157	2.8159	4.4773
10	ME	23.412	29.018	27	76.898	184	2.407	184	2.4071	4.4773
11	ME	23.417	28.221	27	81.702	211	1.840	211	1.8403	4.4773
12	ME	23.413	25.096	30	83.385	241	1.529	241	1.5294	4.4773
13	ME	23.613	25.402	40	85.174	281	1.039	281	1.0389	4.4773
14	ME	23.616	24.769	40	86.327	321	0.515	321	0.5147	4.4773
	ME									
	ME									
	ME									
	ME									
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	ME									
	ME									
	ME									
	ME									

Remove Contents of cells that have no data

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041131565-0001
Client Sample ID:	CH-2011-MU2-G1

IST Filter Information

Filter ID #	Filter IST	Preweight (mg)	Post-Weight (mg)	ΔMF (mg)
1	IST	27.343	27.444	0.101
2	IST	27.698	27.829	0.131
3	IST	27.49	27.64	0.150
4	IST	27.322	27.53	0.208
5	IST	27.273	27.375	0.102
6	IST	27.432	27.535	0.103
	IST			0.000
	IST			0.000
	IST			0.000
	IST			0.000

Enter Filter numbers that are to be sent.

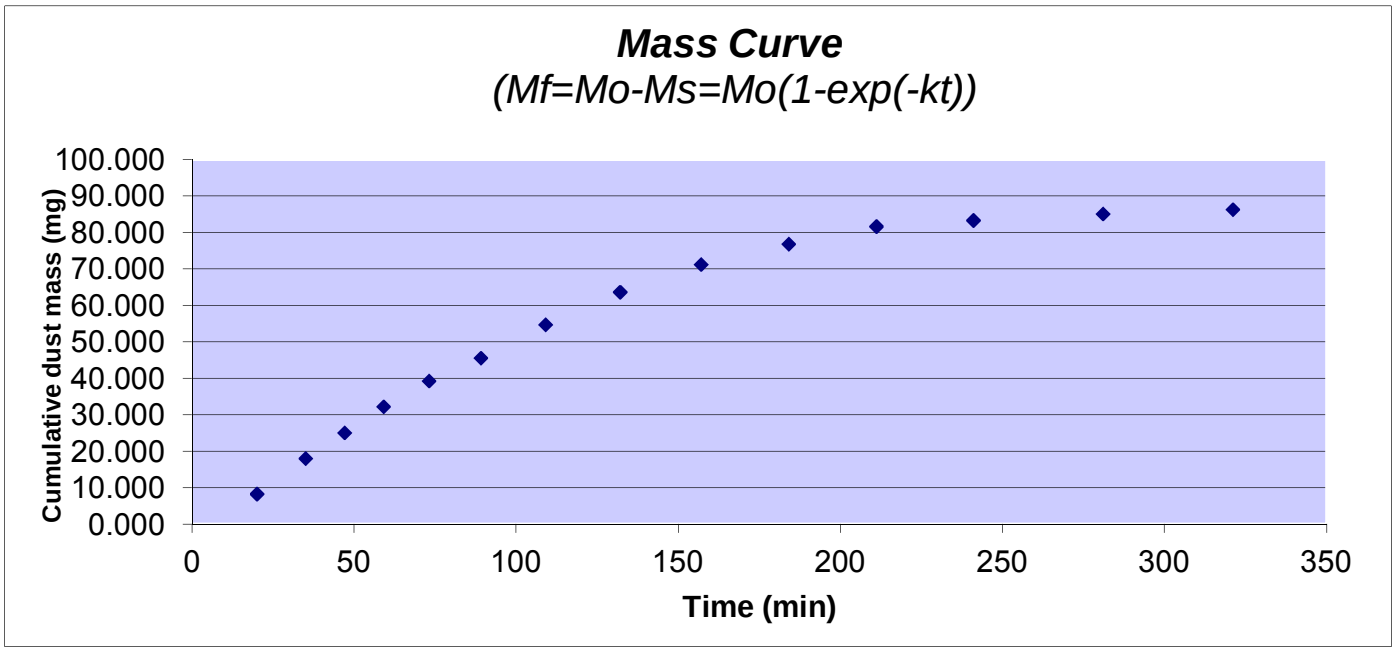
Filters sent to another lab for analysis
2
3

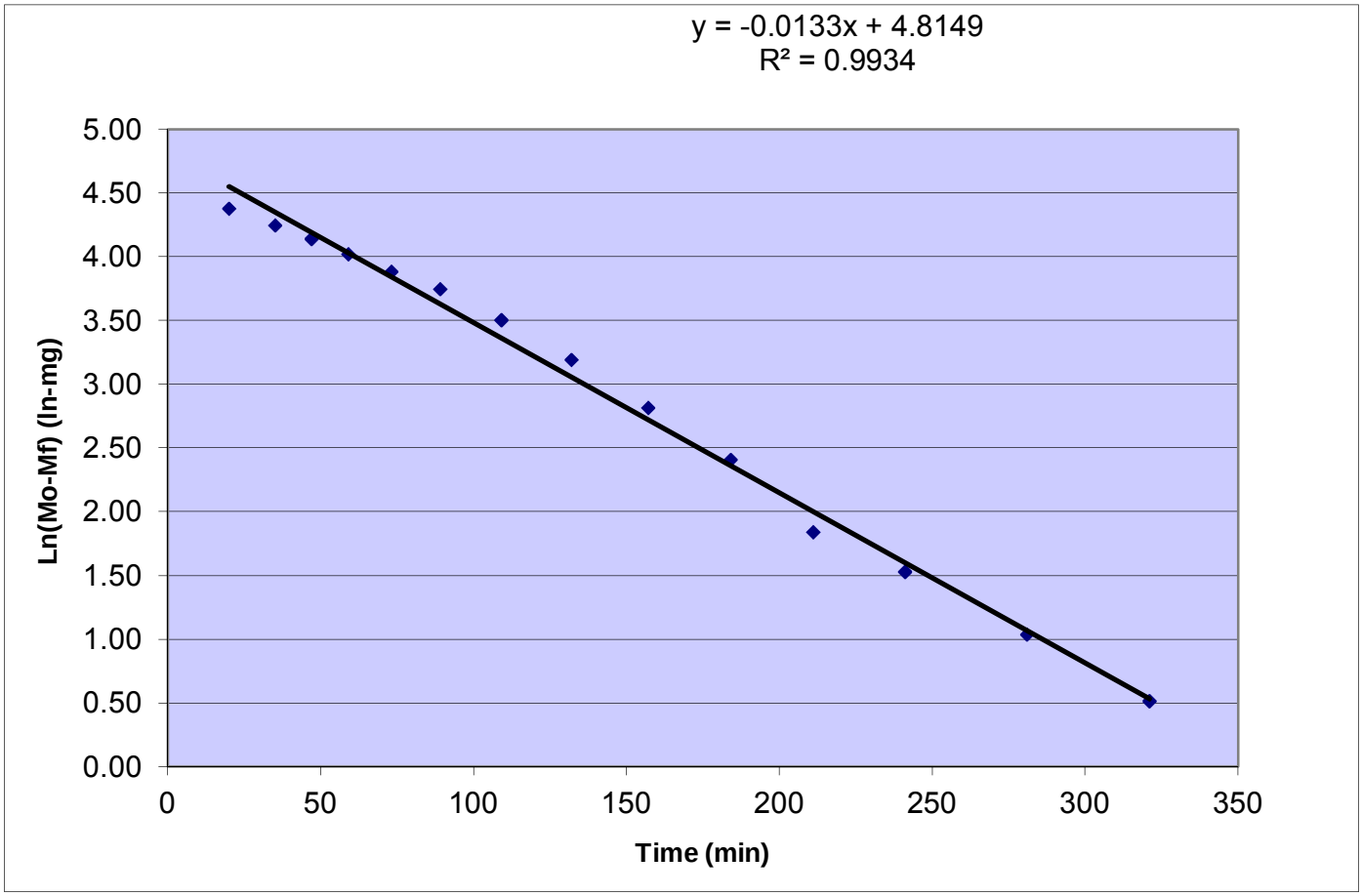
Filter Lot Used	Filter Type: Pore Size	
	MCE	0.2
		microns

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc
Elutriator Prep Worksheet

EMSL Ord./sample:	041131565-0001
Client Sample ID:	CH-2011-MU2-G1





200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

Client:	Jim Finetti, Futurenet Group, Inc.				
EMSL Sample ID:	041131565-0001	GO area (mm²):	0.0132	Scope:	04 01
Customer Sample:	CH-2011-MU2-G1	Grid Box :	0411-Elutriator-01: P	Mag.	19,000
		Pore Size (micron):	0.2	Analyst(s):	F. Craig
Project ID:	11655-004 / Calumet Harbor Project			Analysis Date:	12/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
P4	J2	None Detected								
P4	J4	None Detected								
P4	J6	None Detected								
P4	J9	None Detected								
P4	J10	None Detected								
P4	I9	None Detected								
P4	I7	None Detected								
P4	I5	None Detected								
P4	I3	None Detected								
P4	I1	None Detected								
P4	H2	None Detected								
P4	H4	None Detected								
P4	H6	None Detected								
P4	H8	None Detected								
P4	H10	None Detected								
P4	G9	None Detected								
P4	G7	None Detected								
P4	G5	None Detected								
P4	G3	None Detected								
P4	G1	None Detected								
P4	F2	None Detected								
P4	F4	None Detected								
P4	F6	None Detected								
P4	F8	None Detected								
P4	F10	None Detected								
P4	E9	None Detected								
P4	E7	None Detected								
P4	E5	None Detected								
P4	E3	None Detected								
P4	E1	None Detected								
P4	D2	None Detected								
P4	D4	None Detected								
P4	D6	None Detected								
P4	D8	None Detected								
P4	D10	None Detected								

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041131565-0001
Customer Sample:	CH-2011-MU2-G1

Analyzed By:	F. Craig
Analysis Date:	12/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
P4	C9	None Detected								
P4	C7	None Detected								
P4	C5	None Detected								
P4	C3	None Detected								
P4	C1	None Detected								
P4	B2	None Detected								
P4	B4	None Detected								
P4	B6	None Detected								
P4	B8	None Detected								
P4	B10	None Detected								
P4	A9	None Detected								
P4	A7	None Detected								
P4	A5	None Detected								
P4	A3	None Detected								
P4	A1	None Detected								
P5	I9	None Detected								
P5	I7	None Detected								
P5	I5	None Detected								
P5	I3	None Detected								
P5	I1	None Detected								
P5	H2	None Detected								
P5	H4	None Detected								
P5	H6	None Detected								
P5	H8	None Detected								
P5	H10	None Detected								
P5	G9	None Detected								
P5	G7	None Detected								
P5	G5	None Detected								
P5	G3	None Detected								
P5	G1	None Detected								
P5	F2	None Detected								
P5	F4	None Detected								
P5	F6	None Detected								
P5	F8	None Detected								
P5	F10	None Detected								
P5	E9	None Detected								
P5	E7	None Detected								

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EPA 540-R-97-028 -Superfund Method

Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (Revision 1)

Bench Sheet Data

EMSL Sample ID:	041131565-0001
Customer Sample:	CH-2011-MU2-G1

Analyzed By:	F. Craig
Analysis Date:	12/11/2011

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total	Length	Width				
P5	E5	None Detected								
P5	E3	None Detected								
P5	E1	None Detected								
P5	D2	None Detected								
P5	D4	None Detected								
P5	D6	None Detected								
P5	D8	None Detected								
P5	D10	None Detected								
P5	C9	None Detected								
P5	C7	None Detected								
P5	C5	None Detected								
P5	C3	None Detected								
P5	C1	None Detected								
P5	B2	None Detected								
P5	B4	None Detected								
P5	B6	None Detected								
P5	B8	None Detected								
P6	H1	None Detected								
P6	H3	None Detected								
P6	H5	None Detected								
P6	H7	None Detected								
P6	H9	None Detected								
P6	F10	None Detected								
P6	F8	None Detected								
P6	F6	None Detected								
P6	F4	None Detected								

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292 Email: WestmontAsbLab@emsl.com

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-5974 Email: cinnasblab@EMSL.com

Attn: **Jim Finetti**
Futurenet Group, Inc
12801 Auburn Street

Detroit, MI 48223

Fax: (313) 544-7111 Phone: (313) 544-7117
Project: **11655-004; Calumet Harbor Project**

Customer ID: FUTG62
Customer PO: 11655-004
Received: 12/05/11 9:00 AM
EMSL Order: 041131565

EMSL Proj:
Analysis Date: 12/11/2011

Test Report: Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402

Sample	*Volume (Liters)*	*Non Asbestos Fibers*	*PCM F/cc*	*Asbestos Type(s)*	*Asbestos Fibers*	*Asbestos % of total*	*7402 Adjusted (TEM) F/cc*	*Notes*
CH-2011-MU2-G1		0	n/a			0	**n/a**	Reported using TEM data only
041131565-0002								

NIOSH 7402 method only reports fibers >= 5µm in length and >= 0.25µm in width.
This method requires 2 field blank analyses per set. Since no blanks were analyzed, the results are not blank corrected.
Average number of asbestos fibers on field blanks: n/a
Average number of non-asbestos fibers on field blanks: n/a

Initial report from

Analyst(s)
Frank Craig (1)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

THIS IS THE LAST PAGE OF THE REPORT.

Appendix I

Test America Laboratory Grain Size Analysis Report

ANALYTICAL REPORT

Job Number: 180-5219-3

Job Description: Calument Harbor

For:
FutureNet Group, Inc
12801 Auburn Street
Detroit, MI 48223

Attention: Jim Finetti

Approved for release.
Carrie L Gamber
Project Manager II
12/6/2011 6:54 AM

Carrie L Gamber
Project Manager II
carrie.gamber@testamericainc.com
12/06/2011

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238
Tel (412) 963-7058 Fax (412) 963-2468 www.testamericainc.com

Job Narrative
180-5219-3

Note: These samples are rpeorted including the 230 sieve for Grain Size.

Receipt
All samples were received in good condition within temperature requirements.

Geotechnical
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-1	**CH-2011-MU1-GS**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.4			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		30.3			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.3			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.3			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		29.7			%	D422
Sieve Size #4 - Percent Finer		99.6			% Passing	D422
Silt		51.3			%	D422
Sieve Size #10 - Percent Finer		99.3			% Passing	D422
Clay		18.0			%	D422
Sieve Size #20 - Percent Finer		99.2			% Passing	D422
Sieve Size #40 - Percent Finer		99.0			% Passing	D422
Sieve Size #60 - Percent Finer		98.2			% Passing	D422
Sieve Size #80 - Percent Finer		96.7			% Passing	D422
Sieve Size #100 - Percent Finer		95.7			% Passing	D422
Sieve Size #200 - Percent Finer		77.5			% Passing	D422
Sieve Size #230 - Percent Finer		69.3			% Passing	D422
Hydrometer Reading 1 - Percent Finer		39.4			% Passing	D422
Hydrometer Reading 2 - Percent Finer		34.0			% Passing	D422
Hydrometer Reading 3 - Percent Finer		27.2			% Passing	D422
Hydrometer Reading 4 - Percent Finer		21.0			% Passing	D422
Hydrometer Reading 5 - Percent Finer		18.0			% Passing	D422
Hydrometer Reading 6 - Percent Finer		13.3			% Passing	D422
Hydrometer Reading 7 - Percent Finer		8.5			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-2	**CH-2011-MU2-GN**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		32.7			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.1			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		32.6			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		38.5			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		28.8			%	D422
Sieve Size #20 - Percent Finer		99.9			% Passing	D422
Sieve Size #40 - Percent Finer		99.9			% Passing	D422
Sieve Size #60 - Percent Finer		99.8			% Passing	D422
Sieve Size #80 - Percent Finer		99.5			% Passing	D422
Sieve Size #100 - Percent Finer		99.0			% Passing	D422
Sieve Size #200 - Percent Finer		74.8			% Passing	D422
Sieve Size #230 - Percent Finer		67.3			% Passing	D422
Hydrometer Reading 1 - Percent Finer		60.8			% Passing	D422
Hydrometer Reading 2 - Percent Finer		54.0			% Passing	D422
Hydrometer Reading 3 - Percent Finer		42.6			% Passing	D422
Hydrometer Reading 4 - Percent Finer		34.6			% Passing	D422
Hydrometer Reading 5 - Percent Finer		28.8			% Passing	D422
Hydrometer Reading 6 - Percent Finer		20.8			% Passing	D422
Hydrometer Reading 7 - Percent Finer		15.0			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-3	**CH-2011-MU2-GS**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		1.1			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		44.2			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.4			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.4			%	D422
Sieve Size 0.375 inch - Percent Finer		99.5			% Passing	D422
Fine Sand		43.4			%	D422
Sieve Size #4 - Percent Finer		98.9			% Passing	D422
Silt		39.5			%	D422
Sieve Size #10 - Percent Finer		98.5			% Passing	D422
Clay		15.2			%	D422
Sieve Size #20 - Percent Finer		98.3			% Passing	D422
Sieve Size #40 - Percent Finer		98.1			% Passing	D422
Sieve Size #60 - Percent Finer		97.4			% Passing	D422
Sieve Size #80 - Percent Finer		96.0			% Passing	D422
Sieve Size #100 - Percent Finer		94.7			% Passing	D422
Sieve Size #200 - Percent Finer		66.0			% Passing	D422
Sieve Size #230 - Percent Finer		54.7			% Passing	D422
Hydrometer Reading 1 - Percent Finer		31.6			% Passing	D422
Hydrometer Reading 2 - Percent Finer		27.9			% Passing	D422
Hydrometer Reading 3 - Percent Finer		22.7			% Passing	D422
Hydrometer Reading 4 - Percent Finer		18.2			% Passing	D422
Hydrometer Reading 5 - Percent Finer		15.2			% Passing	D422
Hydrometer Reading 6 - Percent Finer		11.4			% Passing	D422
Hydrometer Reading 7 - Percent Finer		7.6			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-4	**CH-2011-MU3-GN**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		21.4			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.2			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		21.2			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		51.8			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		26.8			%	D422
Sieve Size #20 - Percent Finer		99.9			% Passing	D422
Sieve Size #40 - Percent Finer		99.8			% Passing	D422
Sieve Size #60 - Percent Finer		99.6			% Passing	D422
Sieve Size #80 - Percent Finer		99.3			% Passing	D422
Sieve Size #100 - Percent Finer		99.0			% Passing	D422
Sieve Size #200 - Percent Finer		85.8			% Passing	D422
Sieve Size #230 - Percent Finer		78.6			% Passing	D422
Hydrometer Reading 1 - Percent Finer		61.2			% Passing	D422
Hydrometer Reading 2 - Percent Finer		52.9			% Passing	D422
Hydrometer Reading 3 - Percent Finer		41.4			% Passing	D422
Hydrometer Reading 4 - Percent Finer		33.1			% Passing	D422
Hydrometer Reading 5 - Percent Finer		26.8			% Passing	D422
Hydrometer Reading 6 - Percent Finer		19.4			% Passing	D422
Hydrometer Reading 7 - Percent Finer		14.2			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-5	**CH-2011-MU3-GS**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		7.1			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.1			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		7.0			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		76.7			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		16.2			%	D422
Sieve Size #20 - Percent Finer		99.9			% Passing	D422
Sieve Size #40 - Percent Finer		99.9			% Passing	D422
Sieve Size #60 - Percent Finer		99.8			% Passing	D422
Sieve Size #80 - Percent Finer		99.8			% Passing	D422
Sieve Size #100 - Percent Finer		99.7			% Passing	D422
Sieve Size #200 - Percent Finer		96.7			% Passing	D422
Sieve Size #230 - Percent Finer		92.9			% Passing	D422
Hydrometer Reading 1 - Percent Finer		50.1			% Passing	D422
Hydrometer Reading 2 - Percent Finer		38.8			% Passing	D422
Hydrometer Reading 3 - Percent Finer		24.4			% Passing	D422
Hydrometer Reading 4 - Percent Finer		19.3			% Passing	D422
Hydrometer Reading 5 - Percent Finer		16.2			% Passing	D422
Hydrometer Reading 6 - Percent Finer		12.0			% Passing	D422
Hydrometer Reading 7 - Percent Finer		7.8			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-7	**CH-2011-MU1-GNU**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		25.8			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.3			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		25.5			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		48.5			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		25.7			%	D422
Sieve Size #20 - Percent Finer		99.9			% Passing	D422
Sieve Size #40 - Percent Finer		99.7			% Passing	D422
Sieve Size #60 - Percent Finer		99.2			% Passing	D422
Sieve Size #80 - Percent Finer		98.1			% Passing	D422
Sieve Size #100 - Percent Finer		97.2			% Passing	D422
Sieve Size #200 - Percent Finer		81.3			% Passing	D422
Sieve Size #230 - Percent Finer		74.2			% Passing	D422
Hydrometer Reading 1 - Percent Finer		57.3			% Passing	D422
Hydrometer Reading 2 - Percent Finer		49.7			% Passing	D422
Hydrometer Reading 3 - Percent Finer		38.2			% Passing	D422
Hydrometer Reading 4 - Percent Finer		31.5			% Passing	D422
Hydrometer Reading 5 - Percent Finer		25.7			% Passing	D422
Hydrometer Reading 6 - Percent Finer		17.9			% Passing	D422
Hydrometer Reading 7 - Percent Finer		13.0			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5219-8	**CH-2011-MU1-GNL**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.2			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		35.3			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		1.1			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		1.7			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		32.5			%	D422
Sieve Size #4 - Percent Finer		99.8			% Passing	D422
Silt		38.2			%	D422
Sieve Size #10 - Percent Finer		98.7			% Passing	D422
Clay		26.3			%	D422
Sieve Size #20 - Percent Finer		97.8			% Passing	D422
Sieve Size #40 - Percent Finer		97.0			% Passing	D422
Sieve Size #60 - Percent Finer		95.3			% Passing	D422
Sieve Size #80 - Percent Finer		92.7			% Passing	D422
Sieve Size #100 - Percent Finer		91.3			% Passing	D422
Sieve Size #200 - Percent Finer		72.1			% Passing	D422
Sieve Size #230 - Percent Finer		64.5			% Passing	D422
Hydrometer Reading 1 - Percent Finer		49.2			% Passing	D422
Hydrometer Reading 2 - Percent Finer		43.7			% Passing	D422
Hydrometer Reading 3 - Percent Finer		36.4			% Passing	D422
Hydrometer Reading 4 - Percent Finer		30.9			% Passing	D422
Hydrometer Reading 5 - Percent Finer		26.3			% Passing	D422
Hydrometer Reading 6 - Percent Finer		19.8			% Passing	D422
Hydrometer Reading 7 - Percent Finer		14.3			% Passing	D422

METHOD SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Description	Lab Location	Method	Preparation Method
Matrix Sediment			
Grain Size	TAL BUR	ASTM D422	

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

ASTM = ASTM International

METHOD / ANALYST SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Method	Analyst	Analyst ID
ASTM D422	Peterson, Mark A	MAP

SAMPLE SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
180-5219-1	CH-2011-MU1-GS	Sediment	10/22/2011 0515	10/25/2011 1000
180-5219-2	CH-2011-MU2-GN	Sediment	10/22/2011 0400	10/25/2011 1000
180-5219-3	CH-2011-MU2-GS	Sediment	10/22/2011 0115	10/25/2011 1000
180-5219-4	CH-2011-MU3-GN	Sediment	10/22/2011 0900	10/25/2011 1000
180-5219-5	CH-2011-MU3-GS	Sediment	10/22/2011 1115	10/25/2011 1000
180-5219-7	CH-2011-MU1-GNU	Sediment	10/23/2011 1000	10/25/2011 1000
180-5219-8	CH-2011-MU1-GNL	Sediment	10/23/2011 1115	10/25/2011 1000

SAMPLE RESULTS

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU1-GS**

Lab Sample ID: 180-5219-1

Client Matrix: Sediment

Date Sampled: 10/22/2011 0515

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-1.txt
Dilution:	1.0			Initial Weight/Volume:	160.96 g
Analysis Date:	12/01/2011 2150			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	99.6			
Sieve Size #10 - Percent Finer	99.3			
Sieve Size #20 - Percent Finer	99.2			
Sieve Size #40 - Percent Finer	99.0			
Sieve Size #60 - Percent Finer	98.2			
Sieve Size #80 - Percent Finer	96.7			
Sieve Size #100 - Percent Finer	95.7			
Sieve Size #200 - Percent Finer	77.5			
Sieve Size #230 - Percent Finer	69.3			
Hydrometer Reading 1 - Percent Finer	39.4			
Hydrometer Reading 2 - Percent Finer	34.0			
Hydrometer Reading 3 - Percent Finer	27.2			
Hydrometer Reading 4 - Percent Finer	21.0			
Hydrometer Reading 5 - Percent Finer	18.0			
Hydrometer Reading 6 - Percent Finer	13.3			
Hydrometer Reading 7 - Percent Finer	8.5			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU1-GS**

Lab Sample ID: 180-5219-1

Client Matrix: Sediment

Date Sampled: 10/22/2011 0515

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-1.txt
Dilution:	1.0			Initial Weight/Volume:	160.96 g
Analysis Date:	12/01/2011 2150			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.4			
Sand		30.3			
Coarse Sand		0.3			
Medium Sand		0.3			
Fine Sand		29.7			
Silt		51.3			
Clay		18.0			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU2-GN**

Lab Sample ID: 180-5219-2

Client Matrix: Sediment

Date Sampled: 10/22/2011 0400

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-2.txt
Dilution:	1.0			Initial Weight/Volume:	141.44 g
Analysis Date:	12/01/2011 2152			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.9			
Sieve Size #40 - Percent Finer	99.9			
Sieve Size #60 - Percent Finer	99.8			
Sieve Size #80 - Percent Finer	99.5			
Sieve Size #100 - Percent Finer	99.0			
Sieve Size #200 - Percent Finer	74.8			
Sieve Size #230 - Percent Finer	67.3			
Hydrometer Reading 1 - Percent Finer	60.8			
Hydrometer Reading 2 - Percent Finer	54.0			
Hydrometer Reading 3 - Percent Finer	42.6			
Hydrometer Reading 4 - Percent Finer	34.6			
Hydrometer Reading 5 - Percent Finer	28.8			
Hydrometer Reading 6 - Percent Finer	20.8			
Hydrometer Reading 7 - Percent Finer	15.0			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU2-GN**

Lab Sample ID: 180-5219-2

Client Matrix: Sediment

Date Sampled: 10/22/2011 0400

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-2.txt
Dilution:	1.0			Initial Weight/Volume:	141.44 g
Analysis Date:	12/01/2011 2152			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		32.7			
Coarse Sand		0.0			
Medium Sand		0.1			
Fine Sand		32.6			
Silt		38.5			
Clay		28.8			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU2-GS**

Lab Sample ID: 180-5219-3

Client Matrix: Sediment

Date Sampled: 10/22/2011 0115

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-3.txt
Dilution:	1.0			Initial Weight/Volume:	160.1 g
Analysis Date:	12/01/2011 2153			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	99.5			
Sieve Size #4 - Percent Finer	98.9			
Sieve Size #10 - Percent Finer	98.5			
Sieve Size #20 - Percent Finer	98.3			
Sieve Size #40 - Percent Finer	98.1			
Sieve Size #60 - Percent Finer	97.4			
Sieve Size #80 - Percent Finer	96.0			
Sieve Size #100 - Percent Finer	94.7			
Sieve Size #200 - Percent Finer	66.0			
Sieve Size #230 - Percent Finer	54.7			
Hydrometer Reading 1 - Percent Finer	31.6			
Hydrometer Reading 2 - Percent Finer	27.9			
Hydrometer Reading 3 - Percent Finer	22.7			
Hydrometer Reading 4 - Percent Finer	18.2			
Hydrometer Reading 5 - Percent Finer	15.2			
Hydrometer Reading 6 - Percent Finer	11.4			
Hydrometer Reading 7 - Percent Finer	7.6			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU2-GS**

Lab Sample ID: 180-5219-3

Client Matrix: Sediment

Date Sampled: 10/22/2011 0115

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-3.txt
Dilution:	1.0			Initial Weight/Volume:	160.1 g
Analysis Date:	12/01/2011 2153			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		1.1			
Sand		44.2			
Coarse Sand		0.4			
Medium Sand		0.4			
Fine Sand		43.4			
Silt		39.5			
Clay		15.2			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU3-GN**

Lab Sample ID: 180-5219-4

Client Matrix: Sediment

Date Sampled: 10/22/2011 0900

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-4.txt
Dilution:	1.0			Initial Weight/Volume:	141.19 g
Analysis Date:	12/01/2011 2214			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.9			
Sieve Size #40 - Percent Finer	99.8			
Sieve Size #60 - Percent Finer	99.6			
Sieve Size #80 - Percent Finer	99.3			
Sieve Size #100 - Percent Finer	99.0			
Sieve Size #200 - Percent Finer	85.8			
Sieve Size #230 - Percent Finer	78.6			
Hydrometer Reading 1 - Percent Finer	61.2			
Hydrometer Reading 2 - Percent Finer	52.9			
Hydrometer Reading 3 - Percent Finer	41.4			
Hydrometer Reading 4 - Percent Finer	33.1			
Hydrometer Reading 5 - Percent Finer	26.8			
Hydrometer Reading 6 - Percent Finer	19.4			
Hydrometer Reading 7 - Percent Finer	14.2			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU3-GN**

Lab Sample ID: 180-5219-4

Client Matrix: Sediment

Date Sampled: 10/22/2011 0900

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-4.txt
Dilution:	1.0			Initial Weight/Volume:	141.19 g
Analysis Date:	12/01/2011 2214			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		21.4			
Coarse Sand		0.0			
Medium Sand		0.2			
Fine Sand		21.2			
Silt		51.8			
Clay		26.8			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU3-GS**

Lab Sample ID: 180-5219-5

Client Matrix: Sediment

Date Sampled: 10/22/2011 1115

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-5.txt
Dilution:	1.0			Initial Weight/Volume:	140.6 g
Analysis Date:	12/01/2011 2215			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.9			
Sieve Size #40 - Percent Finer	99.9			
Sieve Size #60 - Percent Finer	99.8			
Sieve Size #80 - Percent Finer	99.8			
Sieve Size #100 - Percent Finer	99.7			
Sieve Size #200 - Percent Finer	96.7			
Sieve Size #230 - Percent Finer	92.9			
Hydrometer Reading 1 - Percent Finer	50.1			
Hydrometer Reading 2 - Percent Finer	38.8			
Hydrometer Reading 3 - Percent Finer	24.4			
Hydrometer Reading 4 - Percent Finer	19.3			
Hydrometer Reading 5 - Percent Finer	16.2			
Hydrometer Reading 6 - Percent Finer	12.0			
Hydrometer Reading 7 - Percent Finer	7.8			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU3-GS**

Lab Sample ID: 180-5219-5

Client Matrix: Sediment

Date Sampled: 10/22/2011 1115

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-5.txt
Dilution:	1.0			Initial Weight/Volume:	140.6 g
Analysis Date:	12/01/2011 2215			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		7.1			
Coarse Sand		0.0			
Medium Sand		0.1			
Fine Sand		7.0			
Silt		76.7			
Clay		16.2			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU1-GNU**

Lab Sample ID: 180-5219-7

Client Matrix: Sediment

Date Sampled: 10/23/2011 1000

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-7.txt
Dilution:	1.0			Initial Weight/Volume:	146.75 g
Analysis Date:	12/01/2011 2217			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.9			
Sieve Size #40 - Percent Finer	99.7			
Sieve Size #60 - Percent Finer	99.2			
Sieve Size #80 - Percent Finer	98.1			
Sieve Size #100 - Percent Finer	97.2			
Sieve Size #200 - Percent Finer	81.3			
Sieve Size #230 - Percent Finer	74.2			
Hydrometer Reading 1 - Percent Finer	57.3			
Hydrometer Reading 2 - Percent Finer	49.7			
Hydrometer Reading 3 - Percent Finer	38.2			
Hydrometer Reading 4 - Percent Finer	31.5			
Hydrometer Reading 5 - Percent Finer	25.7			
Hydrometer Reading 6 - Percent Finer	17.9			
Hydrometer Reading 7 - Percent Finer	13.0			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU1-GNU**

Lab Sample ID: 180-5219-7

Client Matrix: Sediment

Date Sampled: 10/23/2011 1000

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-7.txt
Dilution:	1.0			Initial Weight/Volume:	146.75 g
Analysis Date:	12/01/2011 2217			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		25.8			
Coarse Sand		0.0			
Medium Sand		0.3			
Fine Sand		25.5			
Silt		48.5			
Clay		25.7			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU1-GNL**

Lab Sample ID: 180-5219-8

Client Matrix: Sediment

Date Sampled: 10/23/2011 1115

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-8.txt
Dilution:	1.0			Initial Weight/Volume:	121.4 g
Analysis Date:	12/01/2011 2219			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	99.8			
Sieve Size #10 - Percent Finer	98.7			
Sieve Size #20 - Percent Finer	97.8			
Sieve Size #40 - Percent Finer	97.0			
Sieve Size #60 - Percent Finer	95.3			
Sieve Size #80 - Percent Finer	92.7			
Sieve Size #100 - Percent Finer	91.3			
Sieve Size #200 - Percent Finer	72.1			
Sieve Size #230 - Percent Finer	64.5			
Hydrometer Reading 1 - Percent Finer	49.2			
Hydrometer Reading 2 - Percent Finer	43.7			
Hydrometer Reading 3 - Percent Finer	36.4			
Hydrometer Reading 4 - Percent Finer	30.9			
Hydrometer Reading 5 - Percent Finer	26.3			
Hydrometer Reading 6 - Percent Finer	19.8			
Hydrometer Reading 7 - Percent Finer	14.3			

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Client Sample ID: **CH-2011-MU1-GNL**

Lab Sample ID: 180-5219-8

Client Matrix: Sediment

Date Sampled: 10/23/2011 1115

Date Received: 10/25/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-19096	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5219-E-8.txt
Dilution:	1.0			Initial Weight/Volume:	121.4 g
Analysis Date:	12/01/2011 2219			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.2			
Sand		35.3			
Coarse Sand		1.1			
Medium Sand		1.7			
Fine Sand		32.5			
Silt		38.2			
Clay		26.3			

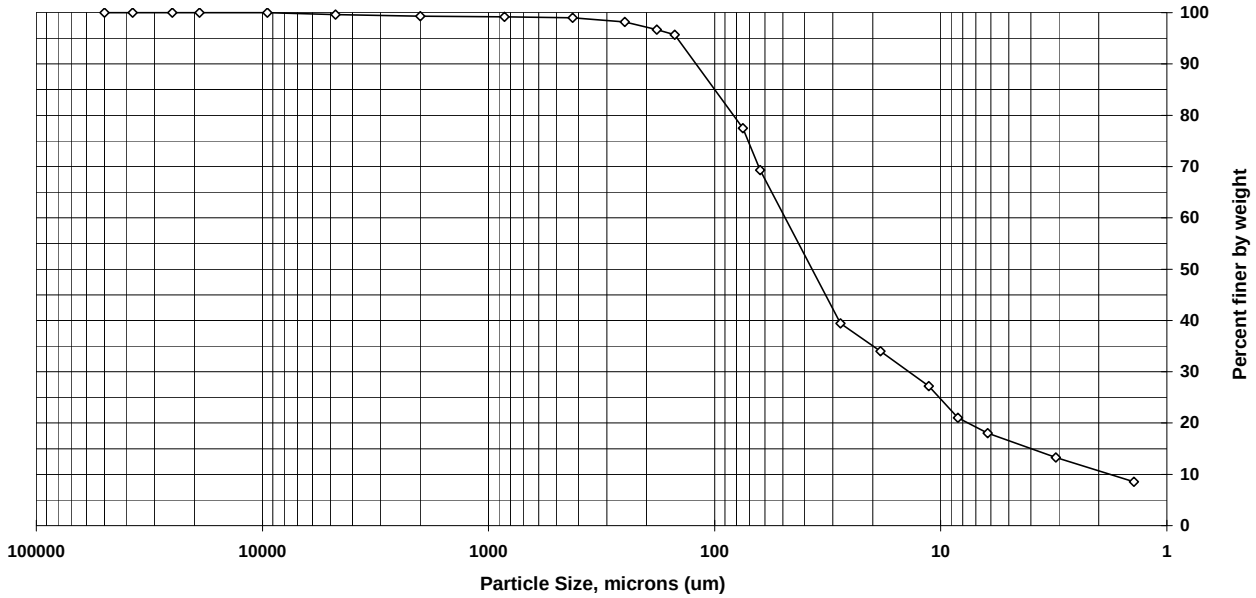
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU1-GS	**Percent Solids:**	65.5%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-1	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: shell

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.6	0.4
#10	2000	99.3	0.3
#20	850	99.2	0.1
#40	425	99.0	0.2
#60	250	98.2	0.8
#80	180	96.7	1.5
#100	150	95.7	1.0
#200	75	77.5	18.2
#230	63	69.3	8.2
Hyd1	27.8	39.4	29.9
Hyd2	18.5	34.0	5.4
Hyd3	11.3	27.2	6.8
Hyd4	8.4	21.0	6.2
Hyd5	6.2	18.0	3.0
Hyd6	3.1	13.3	4.7
Hyd7	1.4	8.5	4.8

Soil Classification	Percent of sample
Gravel	0.4
Sand	30.3
Coarse Sand	0.3
Medium Sand	0.3
Fine Sand	29.7
Silt	51.3
Clay	18.0

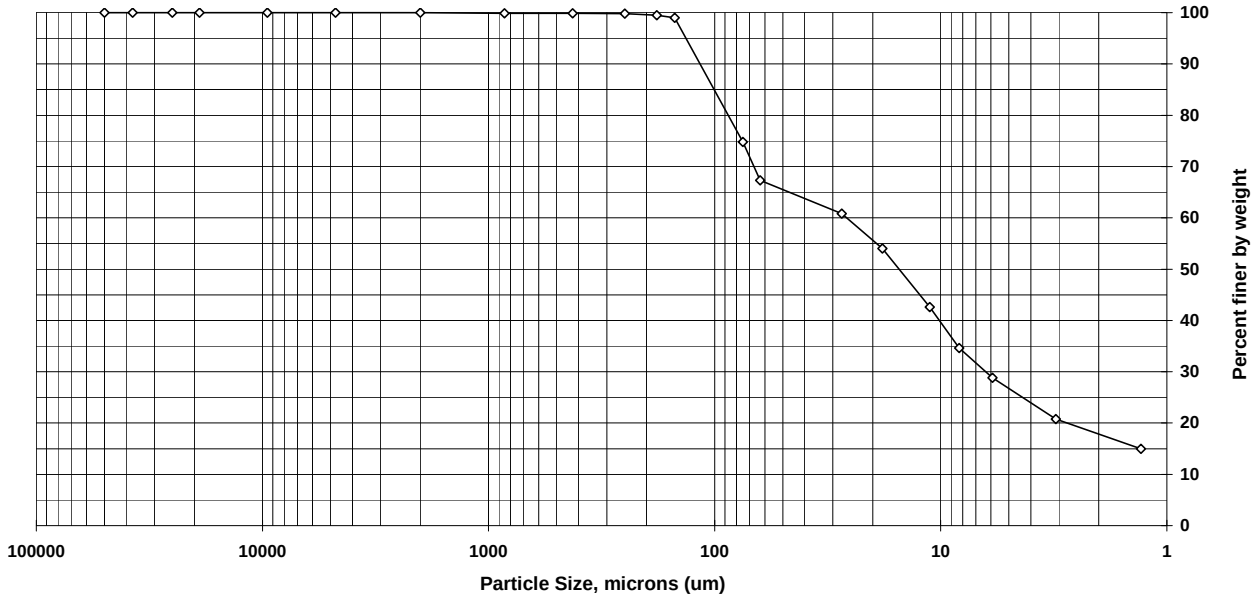
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU2-GN	**Percent Solids:**	50.0%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-2	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.9	0.0
#60	250	99.8	0.1
#80	180	99.5	0.3
#100	150	99.0	0.5
#200	75	74.8	24.2
#230	63	67.3	7.5
Hyd1	27.4	60.8	6.5
Hyd2	18.1	54.0	6.8
Hyd3	11.2	42.6	11.4
Hyd4	8.3	34.6	8.0
Hyd5	5.9	28.8	5.8
Hyd6	3.1	20.8	8.0
Hyd7	1.3	15.0	5.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	32.7
Coarse Sand	0.0
Medium Sand	0.1
Fine Sand	32.6
Silt	38.5
Clay	28.8

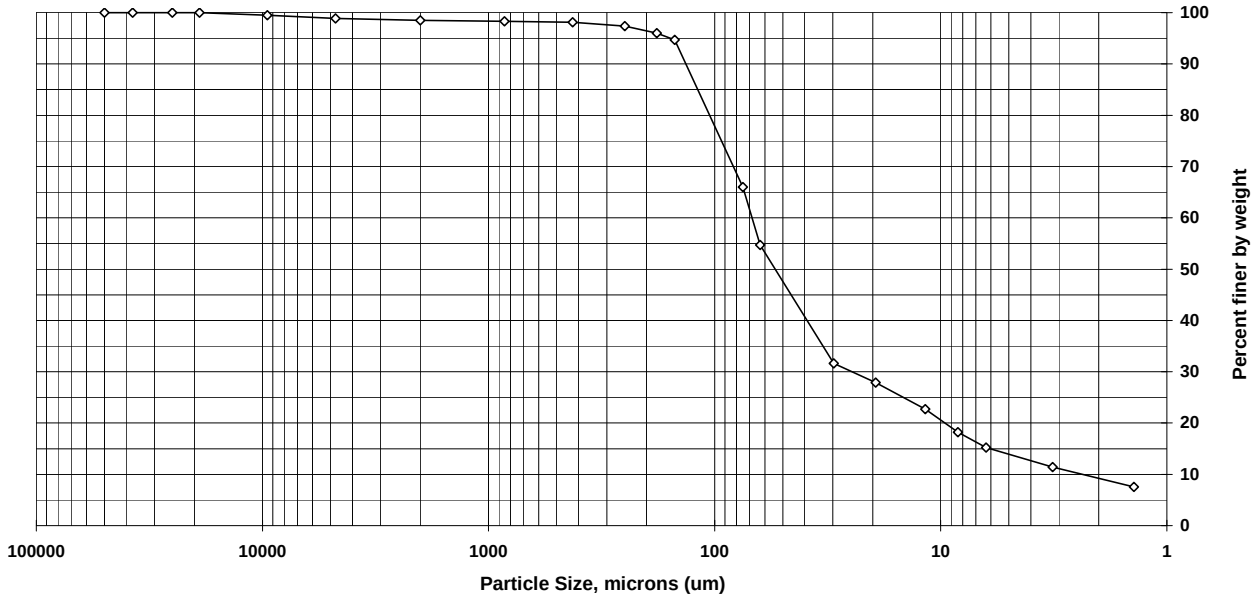
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU2-GS	**Percent Solids:**	67.3%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-3	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: shell

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.5	0.5
#4	4750	98.9	0.6
#10	2000	98.5	0.4
#20	850	98.3	0.2
#40	425	98.1	0.2
#60	250	97.4	0.7
#80	180	96.0	1.4
#100	150	94.7	1.3
#200	75	66.0	28.7
#230	63	54.7	11.3
Hyd1	29.7	31.6	23.1
Hyd2	19.4	27.9	3.7
Hyd3	11.7	22.7	5.2
Hyd4	8.4	18.2	4.5
Hyd5	6.3	15.2	3.0
Hyd6	3.2	11.4	3.8
Hyd7	1.4	7.6	3.8

Soil Classification	Percent of sample
Gravel	1.1
Sand	44.2
Coarse Sand	0.4
Medium Sand	0.4
Fine Sand	43.4
Silt	39.5
Clay	15.2

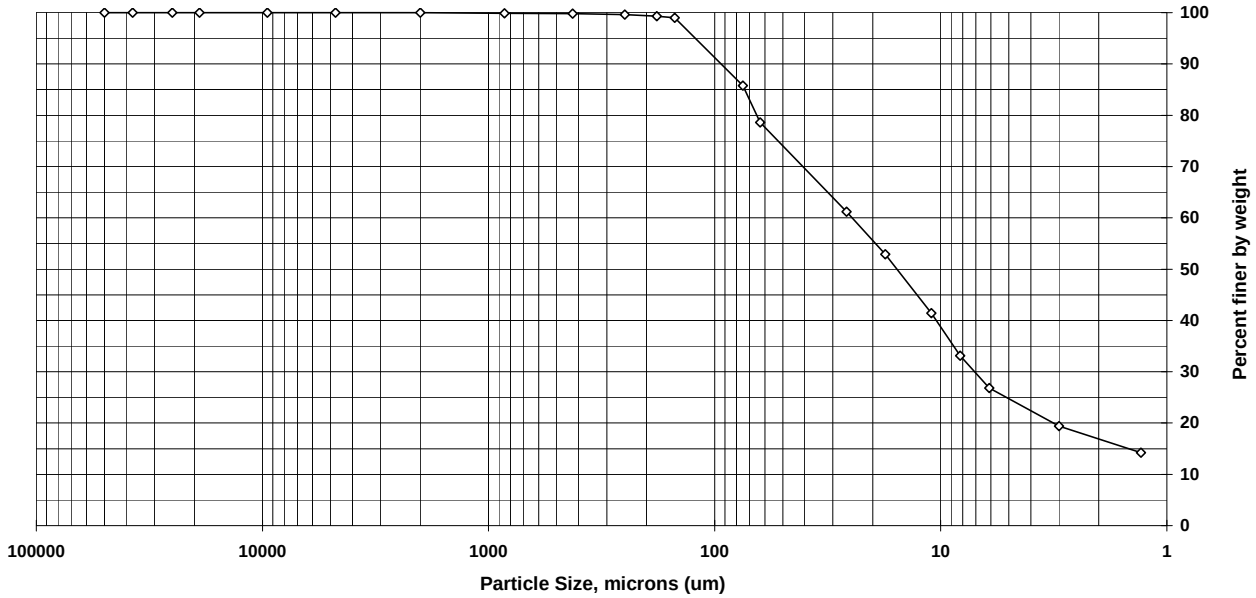
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU3-GN	**Percent Solids:**	54.6%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-4	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.6	0.2
#80	180	99.3	0.3
#100	150	99.0	0.3
#200	75	85.8	13.2
#230	63	78.6	7.2
Hyd1	26.1	61.2	17.4
Hyd2	17.6	52.9	8.3
Hyd3	11	41.4	11.5
Hyd4	8.2	33.1	8.3
Hyd5	6.1	26.8	6.3
Hyd6	3	19.4	7.4
Hyd7	1.3	14.2	5.2

Soil Classification	Percent of sample
Gravel	0.0
Sand	21.4
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	21.2
Silt	51.8
Clay	26.8

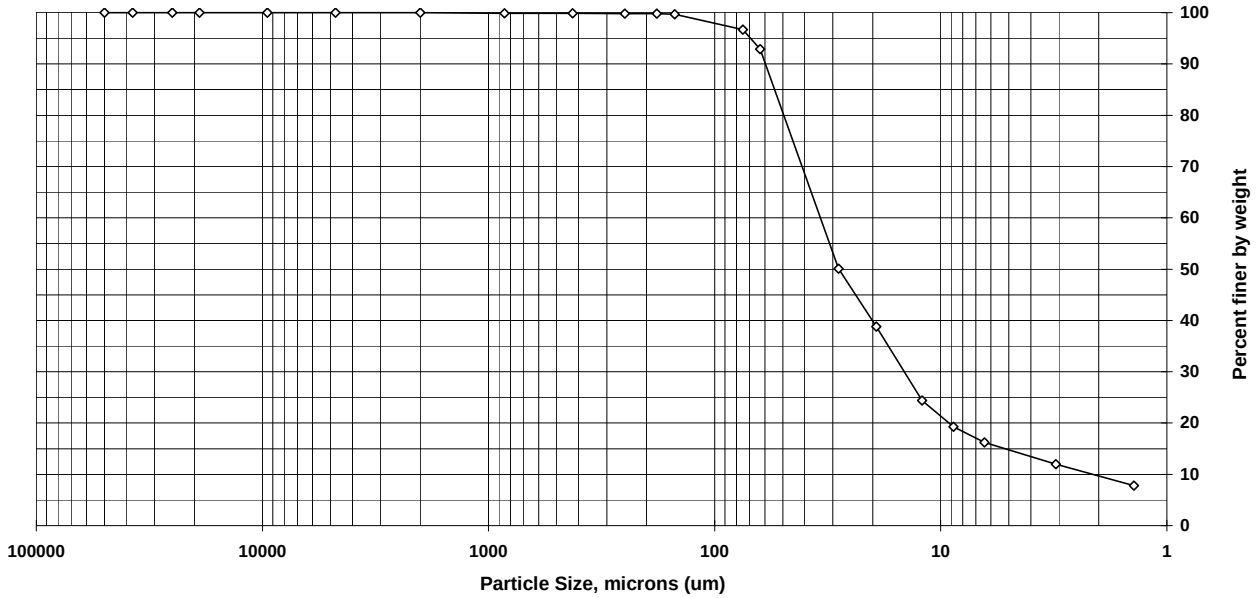
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU3-GS	**Percent Solids:**	55.7%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-5	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.9	0.0
#60	250	99.8	0.1
#80	180	99.8	0.0
#100	150	99.7	0.1
#200	75	96.7	3.0
#230	63	92.9	3.8
Hyd1	28.3	50.1	42.8
Hyd2	19.3	38.8	11.3
Hyd3	12.1	24.4	14.4
Hyd4	8.8	19.3	5.1
Hyd5	6.4	16.2	3.1
Hyd6	3.1	12.0	4.2
Hyd7	1.4	7.8	4.2

Soil Classification	Percent of sample
Gravel	0.0
Sand	7.1
Coarse Sand	0.0
Medium Sand	0.1
Fine Sand	7.0
Silt	76.7
Clay	16.2

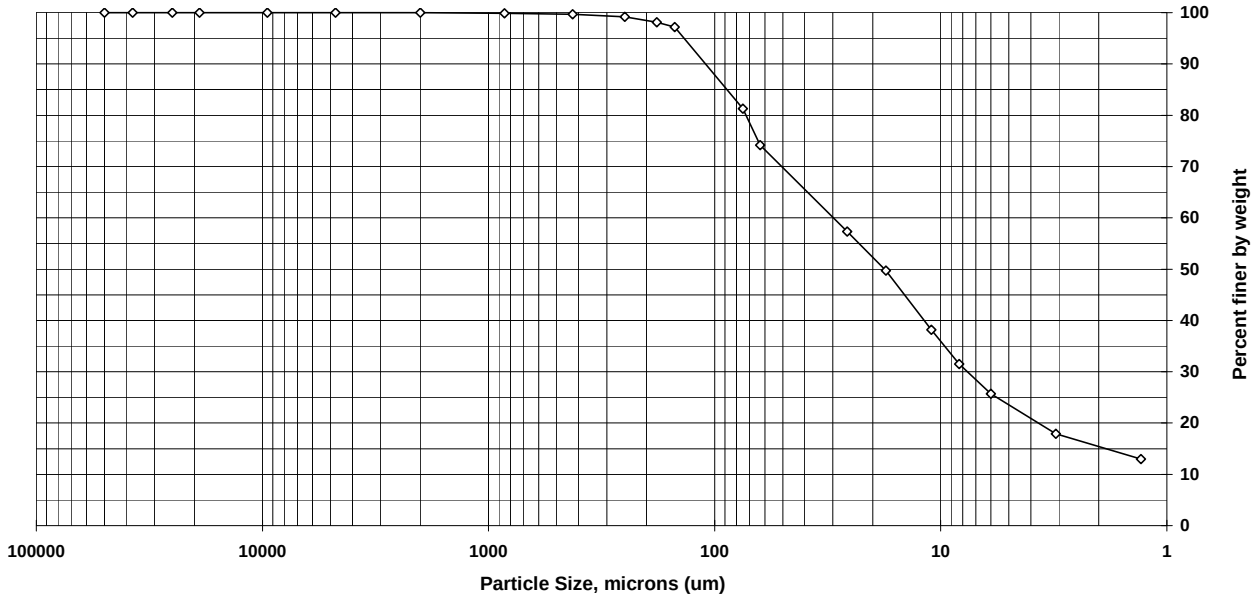
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU1-GNU	**Percent Solids:**	57.1%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-7	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.7	0.2
#60	250	99.2	0.5
#80	180	98.1	1.1
#100	150	97.2	0.9
#200	75	81.3	15.9
#230	63	74.2	7.1
Hyd1	25.9	57.3	16.9
Hyd2	17.5	49.7	7.6
Hyd3	11	38.2	11.5
Hyd4	8.3	31.5	6.7
Hyd5	6	25.7	5.8
Hyd6	3.1	17.9	7.8
Hyd7	1.3	13.0	4.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	25.8
Coarse Sand	0.0
Medium Sand	0.3
Fine Sand	25.5
Silt	48.5
Clay	25.7

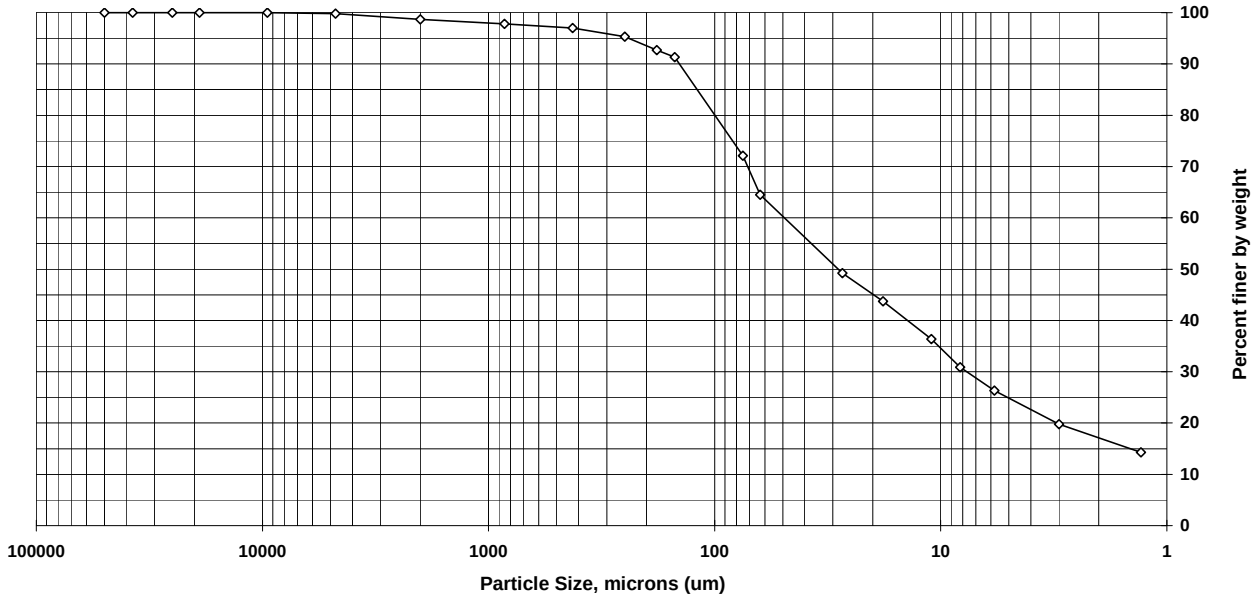
Particle Size of Soils by ASTM D422

				Date Received:	10/25/11
Sample ID:	CH-2011-MU1-GNL	**Percent Solids:**	72.3%	**Start Date:**	12/01/11
Lab ID:	180-5219-E-8	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.8	0.2
#10	2000	98.7	1.1
#20	850	97.8	0.9
#40	425	97.0	0.8
#60	250	95.3	1.7
#80	180	92.7	2.6
#100	150	91.3	1.4
#200	75	72.1	19.2
#230	63	64.5	7.6
Hyd1	27.2	49.2	15.3
Hyd2	18	43.7	5.5
Hyd3	11	36.4	7.3
Hyd4	8.2	30.9	5.5
Hyd5	5.8	26.3	4.6
Hyd6	3	19.8	6.5
Hyd7	1.3	14.3	5.5

Soil Classification	Percent of sample
Gravel	0.2
Sand	35.3
Coarse Sand	1.1
Medium Sand	1.7
Fine Sand	32.5
Silt	38.2
Clay	26.3

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU1-GS	Start Date	12/1/2011 21:50
Lab Sample ID	180-5219-E-1	End Date	12/5/2011 12:36

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	28.82	g
Dry Sample + Tin	19.23	g
% Moisture	34.48	%

Non-soil material:	shell
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		160.96	160.96
Sample Weight (Oven Dried)			105

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.75
Sample <#10			104
% Passing #10			64.6

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750	488.14	488.61	0.47	g	99.6	Gravel	
#10	2000	462.85	463.13	0.28	g	99.3	Sand	Coarse
#20	850	383.58	383.68	0.10	g	99.2	Sand	Medium
#40	425	353.49	353.74	0.25	g	99.0	Sand	Medium
#60	250	341.49	342.37	0.88	g	98.2	Sand	Fine
#80	180	330.38	331.94	1.56	g	96.7	Sand	Fine
#100	150	325.45	326.54	1.09	g	95.7	Sand	Fine
#200	75	312.36	331.42	19.06	g	77.5	Sand	Fine
#230	63	341.16	349.81	8.65	g	69.3	Sand	Fine
				0.00	g	69.3		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	105

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0290	21.5	27.8	39.4	Silt	
5	5	1.0255	21.5	18.5	34	Silt	
15	15	1.0210	21.5	11.3	27.2	Silt	
30	30	1.0170	21.5	8.4	21	Silt	
60	57	1.0150	21.5	6.2	18	Silt	
250	247	1.0120	21.0	3.1	13.3	Clay	
1440	1394	1.0090	20.5	1.4	8.54	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU2-GN	Start Date	12/1/2011 21:52
Lab Sample ID	180-5219-E-2	End Date	12/5/2011 12:49

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	27.46	g
Dry Sample + Tin	14.24	g
% Moisture	49.98	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		141.44	141.44
Sample Weight (Oven Dried)			70.7

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			70.7
% Passing #10			50

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.62	0.04	g	99.9	Sand	Medium
#40	425	353.49	353.52	0.03	g	99.9	Sand	Medium
#60	250	341.49	341.56	0.07	g	99.8	Sand	Fine
#80	180	330.38	330.62	0.24	g	99.5	Sand	Fine
#100	150	325.45	325.82	0.37	g	99.0	Sand	Fine
#200	75	312.36	329.47	17.11	g	74.8	Sand	Fine
#230	63	341.16	346.46	5.30	g	67.3	Sand	Fine
				0.00	g	67.3		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	70.7

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0300	21.5	27.4	60.8	Silt	
5	5	1.0270	21.5	18.1	54	Silt	
15	15	1.0220	21.5	11.2	42.6	Silt	
30	30	1.0185	21.5	8.3	34.6	Silt	
60	63	1.0160	21.0	5.9	28.8	Silt	
250	241	1.0125	21.0	3.1	20.8	Clay	
1440	1388	1.0100	20.5	1.3	15	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU2-GS	Start Date	12/1/2011 21:53
Lab Sample ID	180-5219-E-3	End Date	12/5/2011 13:05

Dry Weight Determination

Tin Weight	1.02	g
Wet Sample + Tin	32.05	g
Dry Sample + Tin	21.89	g
% Moisture	32.74	%

Non-soil material:	shell
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		160.10	160.1
Sample Weight (Oven Dried)			108

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			1.6
Sample <#10			106
% Passing #10			66.2

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500	447.43	447.98	0.55	g	99.5	Gravel	
#4	4750	488.14	488.81	0.67	g	98.9	Gravel	
#10	2000	462.85	463.23	0.38	g	98.5	Sand	Coarse
#20	850	383.58	383.77	0.19	g	98.3	Sand	Medium
#40	425	353.49	353.67	0.18	g	98.1	Sand	Medium
#60	250	341.49	342.25	0.76	g	97.4	Sand	Fine
#80	180	330.38	331.94	1.56	g	96.0	Sand	Fine
#100	150	325.45	326.84	1.39	g	94.7	Sand	Fine
#200	75	312.36	343.36	31.00	g	66.0	Sand	Fine
#230	63	341.16	353.39	12.23	g	54.7	Sand	Fine
				0.00	g	54.7		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	108

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0245	21.5	29.7	31.6	Silt	
5	5	1.0220	21.5	19.4	27.9	Silt	
15	15	1.0185	21.5	11.7	22.7	Silt	
30	31	1.0155	21.5	8.4	18.2	Silt	
60	57	1.0135	21.5	6.3	15.2	Silt	
250	235	1.0110	21.0	3.2	11.4	Clay	
1440	1382	1.0085	20.5	1.4	7.56	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU3-GN	Start Date	12/1/2011 22:14
Lab Sample ID	180-5219-E-4	End Date	12/5/2011 13:19

Dry Weight Determination

Tin Weight	1.03	g
Wet Sample + Tin	24.07	g
Dry Sample + Tin	13.62	g
% Moisture	45.36	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		141.19	141.19
Sample Weight (Oven Dried)			77.2

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			77.2
% Passing #10			54.7

Hydrometer Data

Serial Number	741402
Calib. Date (mm/dd/yyyy)	12/21/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-8.33333E-05
Hydrometer Cal Intercept	1.004916667

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.65	0.07	g	99.9	Sand	Medium
#40	425	353.49	353.54	0.05	g	99.8	Sand	Medium
#60	250	341.49	341.63	0.14	g	99.6	Sand	Fine
#80	180	330.38	330.64	0.26	g	99.3	Sand	Fine
#100	150	325.45	325.72	0.27	g	99.0	Sand	Fine
#200	75	312.36	322.56	10.20	g	85.8	Sand	Fine
#230	63	341.16	346.74	5.58	g	78.6	Sand	Fine
				0.00	g	78.6		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	77.2

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0325	22.0	26.1	61.2	Silt	
5	5	1.0285	22.0	17.6	52.9	Silt	
15	15	1.0230	22.0	11	41.4	Silt	
30	30	1.0190	22.0	8.2	33.1	Silt	
60	59	1.0160	21.5	6.1	26.8	Silt	
250	256	1.0125	21.0	3	19.4	Clay	
1440	1440	1.0100	21.0	1.3	14.2	Clay	

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Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU3-GS	Start Date	12/1/2011 22:15
Lab Sample ID	180-5219-E-5	End Date	12/5/2011 13:34

Dry Weight Determination

Tin Weight	1.04	g
Wet Sample + Tin	25.42	g
Dry Sample + Tin	14.62	g
% Moisture	44.30	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		140.60	140.6
Sample Weight (Oven Dried)			78.3

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			78.3
% Passing #10			55.7

Hydrometer Data

Serial Number	741402
Calib. Date (mm/dd/yyyy)	12/21/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-8.33333E-05
Hydrometer Cal Intercept	1.004916667

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.63	0.05	g	99.9	Sand	Medium
#40	425	353.49	353.50	0.01	g	99.9	Sand	Medium
#60	250	341.49	341.55	0.06	g	99.8	Sand	Fine
#80	180	330.38	330.41	0.03	g	99.8	Sand	Fine
#100	150	325.45	325.55	0.10	g	99.7	Sand	Fine
#200	75	312.36	314.67	2.31	g	96.7	Sand	Fine
#230	63	341.16	344.17	3.01	g	92.9	Sand	Fine
				0.00	g	92.9		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	78.3

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0275	22.0	28.3	50.1	Silt	
5	5	1.0220	22.0	19.3	38.8	Silt	
15	15	1.0150	22.0	12.1	24.4	Silt	
30	30	1.0125	22.0	8.8	19.3	Silt	
60	58	1.0110	21.5	6.4	16.2	Silt	
250	256	1.0090	21.0	3.1	12	Clay	
1440	1440	1.0070	20.5	1.4	7.78	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU1-GNU	Start Date	12/1/2011 22:17
Lab Sample ID	180-5219-E-7	End Date	12/5/2011 13:48

Dry Weight Determination

Tin Weight	1.02	g
Wet Sample + Tin	33.40	g
Dry Sample + Tin	19.52	g
% Moisture	42.87	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		146.75	146.75
Sample Weight (Oven Dried)			83.8

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			83.8
% Passing #10			57.1

Hydrometer Data

Serial Number	741402
Calib. Date (mm/dd/yyyy)	12/21/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-8.33333E-05
Hydrometer Cal Intercept	1.004916667

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.68	0.10	g	99.9	Sand	Medium
#40	425	353.49	353.68	0.19	g	99.7	Sand	Medium
#60	250	341.49	341.95	0.46	g	99.2	Sand	Fine
#80	180	330.38	331.29	0.91	g	98.1	Sand	Fine
#100	150	325.45	326.19	0.74	g	97.2	Sand	Fine
#200	75	312.36	325.69	13.33	g	81.3	Sand	Fine
#230	63	341.16	347.10	5.94	g	74.2	Sand	Fine
				0.00	g	74.2		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	83.8

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0330	22.0	25.9	57.3	Silt	
5	5	1.0290	22.0	17.5	49.7	Silt	
15	15	1.0230	22.0	11	38.2	Silt	
30	29	1.0195	22.0	8.3	31.5	Silt	
60	58	1.0165	22.0	6	25.7	Silt	
250	250	1.0125	21.0	3.1	17.9	Clay	
1440	1434	1.0100	20.5	1.3	13	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/25/2011 10:00
Client Sample ID	CH-2011-MU1-GNL	Start Date	12/1/2011 22:19
Lab Sample ID	180-5219-E-8	End Date	12/5/2011 14:01

Dry Weight Determination

Tin Weight	1.02	g
Wet Sample + Tin	19.52	g
Dry Sample + Tin	14.40	g
% Moisture	27.68	%

Non-soil material:	shell
Shape (> #10):	subangular
Hardness (> #10):	hard
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		121.40	121.4
Sample Weight (Oven Dried)			87.8

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			1.11
Sample <#10			86.7
% Passing #10			71.4

Hydrometer Data

Serial Number	741402
Calib. Date (mm/dd/yyyy)	12/21/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-8.33333E-05
Hydrometer Cal Intercept	1.004916667

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750	488.14	488.31	0.17	g	99.8	Gravel	
#10	2000	462.85	463.79	0.94	g	98.7	Sand	Coarse
#20	850	383.58	384.34	0.76	g	97.8	Sand	Medium
#40	425	353.49	354.15	0.66	g	97.0	Sand	Medium
#60	250	341.49	342.97	1.48	g	95.3	Sand	Fine
#80	180	330.38	332.62	2.24	g	92.7	Sand	Fine
#100	150	325.45	326.68	1.23	g	91.3	Sand	Fine
#200	75	312.36	329.18	16.82	g	72.1	Sand	Fine
#230	63	341.16	347.83	6.67	g	64.5	Sand	Fine
				0.00	g	64.5		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	87.8

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0300	22.0	27.2	49.2	Silt	
5	5	1.0270	22.0	18	43.7	Silt	
15	15	1.0230	22.0	11	36.4	Silt	
30	29	1.0200	22.0	8.2	30.9	Silt	
60	63	1.0175	21.5	5.8	26.3	Silt	
250	250	1.0140	21.0	3	19.8	Clay	
1440	1434	1.0110	20.5	1.3	14.3	Clay	

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

QUALITY CONTROL RESULTS

Client: FutureNet Group, Inc

Job Number: 180-5219-3

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Geotechnical					
Analysis Batch:200-19096					
180-5219-1	CH-2011-MU1-GS	T	Sediment	D422	
180-5219-2	CH-2011-MU2-GN	T	Sediment	D422	
180-5219-3	CH-2011-MU2-GS	T	Sediment	D422	
180-5219-4	CH-2011-MU3-GN	T	Sediment	D422	
180-5219-5	CH-2011-MU3-GS	T	Sediment	D422	
180-5219-7	CH-2011-MU1-GNU	T	Sediment	D422	
180-5219-8	CH-2011-MU1-GNL	T	Sediment	D422	

Report Basis

T = Total

02 #2

180-5219

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: FNG	Client Project Manager: Dr. Ali Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn St.	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email: ali@fatwenetgroup.com		
Phone: (313) 544-7117			
Project Name: Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-004	Shipping/Tracking No:		
PO#			

COC No: 1 of 1 COCs

For lab use only: Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No.:

Analysis Turnaround Time (in BUS days)
TAT if different from below
☒ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/Grab G	Analyses: VOCs	Sample Specific Notes / Special Instructions:
CH-2011-MU1-GS	10/22	5:15			X												X	
CH-2011-MU2-GN	"	4:00			X													
CH-2011-MU2-GS	"	1:15			X													
CH-2011-MU3-GN	"	9:00			X													
CH-2011-MU3-GS	"	11:15			X													
CH-2011-MU3-GS(DUP)	"	11:15			X													
CH-2011-MU1-GNU	10/23	10:00			X													
CH-2011-MU1-GNL	10/23	11:15			X													

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:
Check the SOW for required analysis and reporting limit

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/24/1256		TAL	10-24-11/1250
			Received by:		
	TestAmerica	10/25/11 1600		DAK	10/26/11
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

ORIGIN ID: JOTA (708) 534-5200
BOTTLE PREP
TESTAMERICA LABS
2417 BOND ST

UNIVERSITY PARK, IL 60466
UNITED STATES US

SHIP DATE: 25OCT11
ACTWGT: 84.0 LB MAN
CAD: 0033264/CAFE2509

BILL RECIPIENT

TO SAMPLE RECEIPT
TEST AMERICA
301 ALPHA DR.
STE. 3
PITTSBURG PA 15238

DEPT: PM

FedEx Express

WED - 26 OCT A2
FIRST OVERNIGHT

2 of 2
MPS# 0263 6607 6570 2824
Mstr# 6607 6570 2813 0201

15238
PA-US PIT

N1 AGCA

Part # 156140-434 RIT2 02/11

180-5219

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: Future Net Group, Inc	Client Project Manager: Dr. Ali Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn St.	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email: alia@futurenetgroup.com		
Phone: (313)-544-7117			
Project Name: Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-004	Shipping/Tracking No:		
PO#			

COC No: 1 of 1 COCs

For lab use only: Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No:

Analysis Turnaround Time (In BUS days): TAT if different from below _____ ☒ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite-C/Grab-G	VOCs	Bulk Chemistry	Grain Size	SPLP	Filtrate						Sample Specific Notes / Special Instructions:
CH-2011-MU4-GS	10/22	5:15		X	X										N	C	X	X	X	X	X						VOCs samples
CH-2011-MU2-GN	"	4:00																									delivered to
CH-2011-MU2-GS	"	4:15																									Chicago
CH-2011-MU3-GN	"	9:00																									Lab
CH-2011-MU3-GS	"	11:15																									
CH-2011-MU3-GS (Dup)	"	11:15																									
CH-2011-MU1-GNU	10/23	10:00																									
CH-2011-MU1-GNL	10/23	11:15																									

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
Check the SOW for complete analytical list required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/24 9:00AM		TDAH	10/25/11 1000
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Login Number: 5219

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Gamber, Tom

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5219-3

Login Number: 5219
List Number: 1
Creator: Holt, Jamie

List Source: TestAmerica Burlington
List Creation: 10/29/11 04:55 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3, 3.6ºC, IR GUN ID 96, CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 180-5172-3

Job Description: Calument Harbor

For:
FutureNet Group, Inc
12801 Auburn Street
Detroit, MI 48223

Attention: Jim Finetti

Approved for release.
Carrie L Gamber
Project Manager II
12/6/2011 6:51 AM

Carrie L Gamber
Project Manager II
carrie.gamber@testamericainc.com
12/06/2011

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238
Tel (412) 963-7058 Fax (412) 963-2468 www.testamericainc.com

Note: These samples are reported including the 230 sieve for Grain Size.

Receipt
All samples were received in good condition within temperature requirements.

Geotechnical
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5172-1	**CH-2011-MU1-G1**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		15.5			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		1.0			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		14.5			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		54.0			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		30.5			%	D422
Sieve Size #20 - Percent Finer		99.4			% Passing	D422
Sieve Size #40 - Percent Finer		99.0			% Passing	D422
Sieve Size #60 - Percent Finer		98.4			% Passing	D422
Sieve Size #80 - Percent Finer		97.8			% Passing	D422
Sieve Size #100 - Percent Finer		97.3			% Passing	D422
Sieve Size #200 - Percent Finer		88.7			% Passing	D422
Sieve Size #230 - Percent Finer		84.5			% Passing	D422
Hydrometer Reading 1 - Percent Finer		69.0			% Passing	D422
Hydrometer Reading 2 - Percent Finer		58.2			% Passing	D422
Hydrometer Reading 3 - Percent Finer		42.5			% Passing	D422
Hydrometer Reading 4 - Percent Finer		35.3			% Passing	D422
Hydrometer Reading 5 - Percent Finer		30.5			% Passing	D422
Hydrometer Reading 6 - Percent Finer		21.9			% Passing	D422
Hydrometer Reading 7 - Percent Finer		15.8			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5172-2	**CH-2011-MU1-G2**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		22.2			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.2			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.7			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		21.3			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		49.6			%	D422
Sieve Size #10 - Percent Finer		99.8			% Passing	D422
Clay		28.2			%	D422
Sieve Size #20 - Percent Finer		99.5			% Passing	D422
Sieve Size #40 - Percent Finer		99.1			% Passing	D422
Sieve Size #60 - Percent Finer		98.3			% Passing	D422
Sieve Size #80 - Percent Finer		97.3			% Passing	D422
Sieve Size #100 - Percent Finer		96.5			% Passing	D422
Sieve Size #200 - Percent Finer		84.0			% Passing	D422
Sieve Size #230 - Percent Finer		77.8			% Passing	D422
Hydrometer Reading 1 - Percent Finer		60.1			% Passing	D422
Hydrometer Reading 2 - Percent Finer		52.9			% Passing	D422
Hydrometer Reading 3 - Percent Finer		40.5			% Passing	D422
Hydrometer Reading 4 - Percent Finer		32.3			% Passing	D422
Hydrometer Reading 5 - Percent Finer		28.2			% Passing	D422
Hydrometer Reading 6 - Percent Finer		20.8			% Passing	D422
Hydrometer Reading 7 - Percent Finer		14.5			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5172-3	**CH-2011-MU1-G3**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		22.5			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.3			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.4			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		21.8			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		49.4			%	D422
Sieve Size #10 - Percent Finer		99.7			% Passing	D422
Clay		28.1			%	D422
Sieve Size #20 - Percent Finer		99.5			% Passing	D422
Sieve Size #40 - Percent Finer		99.3			% Passing	D422
Sieve Size #60 - Percent Finer		98.8			% Passing	D422
Sieve Size #80 - Percent Finer		98.2			% Passing	D422
Sieve Size #100 - Percent Finer		97.7			% Passing	D422
Sieve Size #200 - Percent Finer		83.5			% Passing	D422
Sieve Size #230 - Percent Finer		77.5			% Passing	D422
Hydrometer Reading 1 - Percent Finer		60.6			% Passing	D422
Hydrometer Reading 2 - Percent Finer		52.9			% Passing	D422
Hydrometer Reading 3 - Percent Finer		40.5			% Passing	D422
Hydrometer Reading 4 - Percent Finer		32.9			% Passing	D422
Hydrometer Reading 5 - Percent Finer		28.1			% Passing	D422
Hydrometer Reading 6 - Percent Finer		20.3			% Passing	D422
Hydrometer Reading 7 - Percent Finer		14.5			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5172-5	**CH-2011-MU2-G1**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		17.9			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		1.0			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		16.9			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		59.5			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		22.6			%	D422
Sieve Size #20 - Percent Finer		99.6			% Passing	D422
Sieve Size #40 - Percent Finer		99.0			% Passing	D422
Sieve Size #60 - Percent Finer		97.1			% Passing	D422
Sieve Size #80 - Percent Finer		94.9			% Passing	D422
Sieve Size #100 - Percent Finer		94.1			% Passing	D422
Sieve Size #200 - Percent Finer		86.9			% Passing	D422
Sieve Size #230 - Percent Finer		82.1			% Passing	D422
Hydrometer Reading 1 - Percent Finer		55.8			% Passing	D422
Hydrometer Reading 2 - Percent Finer		47.5			% Passing	D422
Hydrometer Reading 3 - Percent Finer		34.6			% Passing	D422
Hydrometer Reading 4 - Percent Finer		27.2			% Passing	D422
Hydrometer Reading 5 - Percent Finer		22.6			% Passing	D422
Hydrometer Reading 6 - Percent Finer		16.0			% Passing	D422
Hydrometer Reading 7 - Percent Finer		12.9			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5172-6	**CH-2011-MU2-G2**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		49.1			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.2			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		48.9			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		37.8			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		13.1			%	D422
Sieve Size #20 - Percent Finer		99.9			% Passing	D422
Sieve Size #40 - Percent Finer		99.8			% Passing	D422
Sieve Size #60 - Percent Finer		99.5			% Passing	D422
Sieve Size #80 - Percent Finer		98.8			% Passing	D422
Sieve Size #100 - Percent Finer		97.8			% Passing	D422
Sieve Size #200 - Percent Finer		64.5			% Passing	D422
Sieve Size #230 - Percent Finer		50.9			% Passing	D422
Hydrometer Reading 1 - Percent Finer		31.2			% Passing	D422
Hydrometer Reading 2 - Percent Finer		26.9			% Passing	D422
Hydrometer Reading 3 - Percent Finer		20.9			% Passing	D422
Hydrometer Reading 4 - Percent Finer		15.8			% Passing	D422
Hydrometer Reading 5 - Percent Finer		13.1			% Passing	D422
Hydrometer Reading 6 - Percent Finer		8.8			% Passing	D422
Hydrometer Reading 7 - Percent Finer		7.7			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5172-7	**CH-2011-MU2-G3**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		1.3			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		51.4			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.4			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.4			%	D422
Sieve Size 0.375 inch - Percent Finer		99.8			% Passing	D422
Fine Sand		50.6			%	D422
Sieve Size #4 - Percent Finer		98.7			% Passing	D422
Silt		29.7			%	D422
Sieve Size #10 - Percent Finer		98.3			% Passing	D422
Clay		17.6			%	D422
Sieve Size #20 - Percent Finer		98.0			% Passing	D422
Sieve Size #40 - Percent Finer		97.9			% Passing	D422
Sieve Size #60 - Percent Finer		97.6			% Passing	D422
Sieve Size #80 - Percent Finer		97.0			% Passing	D422
Sieve Size #100 - Percent Finer		96.0			% Passing	D422
Sieve Size #200 - Percent Finer		58.5			% Passing	D422
Sieve Size #230 - Percent Finer		47.3			% Passing	D422
Hydrometer Reading 1 - Percent Finer		32.6			% Passing	D422
Hydrometer Reading 2 - Percent Finer		28.9			% Passing	D422
Hydrometer Reading 3 - Percent Finer		25.1			% Passing	D422
Hydrometer Reading 4 - Percent Finer		20.6			% Passing	D422
Hydrometer Reading 5 - Percent Finer		17.6			% Passing	D422
Hydrometer Reading 6 - Percent Finer		13.8			% Passing	D422
Hydrometer Reading 7 - Percent Finer		9.1			% Passing	D422

METHOD SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Description	Lab Location	Method	Preparation Method
Matrix Sediment			
Grain Size	TAL BUR	ASTM D422	

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

ASTM = ASTM International

METHOD / ANALYST SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Method	Analyst	Analyst ID
ASTM D422	Peterson, Mark A	MAP

SAMPLE SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
180-5172-1	CH-2011-MU1-G1	Sediment	10/21/2011 1000	10/22/2011 0945
180-5172-2	CH-2011-MU1-G2	Sediment	10/21/2011 1100	10/22/2011 0945
180-5172-3	CH-2011-MU1-G3	Sediment	10/21/2011 1130	10/22/2011 0945
180-5172-5	CH-2011-MU2-G1	Sediment	10/21/2011 1315	10/22/2011 0945
180-5172-6	CH-2011-MU2-G2	Sediment	10/21/2011 1530	10/22/2011 0945
180-5172-7	CH-2011-MU2-G3	Sediment	10/21/2011 1710	10/22/2011 0945

SAMPLE RESULTS

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU1-G1**

Lab Sample ID: 180-5172-1

Client Matrix: Sediment

Date Sampled: 10/21/2011 1000

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-1.txt
Dilution:	1.0			Initial Weight/Volume:	129.92 g
Analysis Date:	12/01/2011 2134			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.4			
Sieve Size #40 - Percent Finer	99.0			
Sieve Size #60 - Percent Finer	98.4			
Sieve Size #80 - Percent Finer	97.8			
Sieve Size #100 - Percent Finer	97.3			
Sieve Size #200 - Percent Finer	88.7			
Sieve Size #230 - Percent Finer	84.5			
Hydrometer Reading 1 - Percent Finer	69.0			
Hydrometer Reading 2 - Percent Finer	58.2			
Hydrometer Reading 3 - Percent Finer	42.5			
Hydrometer Reading 4 - Percent Finer	35.3			
Hydrometer Reading 5 - Percent Finer	30.5			
Hydrometer Reading 6 - Percent Finer	21.9			
Hydrometer Reading 7 - Percent Finer	15.8			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU1-G1**

Lab Sample ID: 180-5172-1

Client Matrix: Sediment

Date Sampled: 10/21/2011 1000

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-1.txt
Dilution:	1.0			Initial Weight/Volume:	129.92 g
Analysis Date:	12/01/2011 2134			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		15.5			
Coarse Sand		0.0			
Medium Sand		1.0			
Fine Sand		14.5			
Silt		54.0			
Clay		30.5			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU1-G2**

Lab Sample ID: 180-5172-2

Client Matrix: Sediment

Date Sampled: 10/21/2011 1100

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-2.txt
Dilution:	1.0			Initial Weight/Volume:	147.48 g
Analysis Date:	12/01/2011 2138			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	99.8			
Sieve Size #20 - Percent Finer	99.5			
Sieve Size #40 - Percent Finer	99.1			
Sieve Size #60 - Percent Finer	98.3			
Sieve Size #80 - Percent Finer	97.3			
Sieve Size #100 - Percent Finer	96.5			
Sieve Size #200 - Percent Finer	84.0			
Sieve Size #230 - Percent Finer	77.8			
Hydrometer Reading 1 - Percent Finer	60.1			
Hydrometer Reading 2 - Percent Finer	52.9			
Hydrometer Reading 3 - Percent Finer	40.5			
Hydrometer Reading 4 - Percent Finer	32.3			
Hydrometer Reading 5 - Percent Finer	28.2			
Hydrometer Reading 6 - Percent Finer	20.8			
Hydrometer Reading 7 - Percent Finer	14.5			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU1-G2**

Lab Sample ID: 180-5172-2

Client Matrix: Sediment

Date Sampled: 10/21/2011 1100

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-2.txt
Dilution:	1.0			Initial Weight/Volume:	147.48 g
Analysis Date:	12/01/2011 2138			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		22.2			
Coarse Sand		0.2			
Medium Sand		0.7			
Fine Sand		21.3			
Silt		49.6			
Clay		28.2			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU1-G3**

Lab Sample ID: 180-5172-3

Client Matrix: Sediment

Date Sampled: 10/21/2011 1130

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-F-3.txt
Dilution:	1.0			Initial Weight/Volume:	151.22 g
Analysis Date:	12/01/2011 2141			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		99.7			
Sieve Size #20 - Percent Finer		99.5			
Sieve Size #40 - Percent Finer		99.3			
Sieve Size #60 - Percent Finer		98.8			
Sieve Size #80 - Percent Finer		98.2			
Sieve Size #100 - Percent Finer		97.7			
Sieve Size #200 - Percent Finer		83.5			
Sieve Size #230 - Percent Finer		77.5			
Hydrometer Reading 1 - Percent Finer		60.6			
Hydrometer Reading 2 - Percent Finer		52.9			
Hydrometer Reading 3 - Percent Finer		40.5			
Hydrometer Reading 4 - Percent Finer		32.9			
Hydrometer Reading 5 - Percent Finer		28.1			
Hydrometer Reading 6 - Percent Finer		20.3			
Hydrometer Reading 7 - Percent Finer		14.5			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU1-G3**

Lab Sample ID: 180-5172-3

Client Matrix: Sediment

Date Sampled: 10/21/2011 1130

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-F-3.txt
Dilution:	1.0			Initial Weight/Volume:	151.22 g
Analysis Date:	12/01/2011 2141			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		22.5			
Coarse Sand		0.3			
Medium Sand		0.4			
Fine Sand		21.8			
Silt		49.4			
Clay		28.1			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU2-G1**

Lab Sample ID: 180-5172-5

Client Matrix: Sediment

Date Sampled: 10/21/2011 1315

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-F-5.txt
Dilution:	1.0			Initial Weight/Volume:	155.28 g
Analysis Date:	12/01/2011 2144			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.6			
Sieve Size #40 - Percent Finer	99.0			
Sieve Size #60 - Percent Finer	97.1			
Sieve Size #80 - Percent Finer	94.9			
Sieve Size #100 - Percent Finer	94.1			
Sieve Size #200 - Percent Finer	86.9			
Sieve Size #230 - Percent Finer	82.1			
Hydrometer Reading 1 - Percent Finer	55.8			
Hydrometer Reading 2 - Percent Finer	47.5			
Hydrometer Reading 3 - Percent Finer	34.6			
Hydrometer Reading 4 - Percent Finer	27.2			
Hydrometer Reading 5 - Percent Finer	22.6			
Hydrometer Reading 6 - Percent Finer	16.0			
Hydrometer Reading 7 - Percent Finer	12.9			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU2-G1**

Lab Sample ID: 180-5172-5

Client Matrix: Sediment

Date Sampled: 10/21/2011 1315

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-F-5.txt
Dilution:	1.0			Initial Weight/Volume:	155.28 g
Analysis Date:	12/01/2011 2144			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		17.9			
Coarse Sand		0.0			
Medium Sand		1.0			
Fine Sand		16.9			
Silt		59.5			
Clay		22.6			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU2-G2**

Lab Sample ID: 180-5172-6

Client Matrix: Sediment

Date Sampled: 10/21/2011 1530

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-6.txt
Dilution:	1.0			Initial Weight/Volume:	146.89 g
Analysis Date:	12/01/2011 2146			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	99.9			
Sieve Size #40 - Percent Finer	99.8			
Sieve Size #60 - Percent Finer	99.5			
Sieve Size #80 - Percent Finer	98.8			
Sieve Size #100 - Percent Finer	97.8			
Sieve Size #200 - Percent Finer	64.5			
Sieve Size #230 - Percent Finer	50.9			
Hydrometer Reading 1 - Percent Finer	31.2			
Hydrometer Reading 2 - Percent Finer	26.9			
Hydrometer Reading 3 - Percent Finer	20.9			
Hydrometer Reading 4 - Percent Finer	15.8			
Hydrometer Reading 5 - Percent Finer	13.1			
Hydrometer Reading 6 - Percent Finer	8.8			
Hydrometer Reading 7 - Percent Finer	7.7			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU2-G2**

Lab Sample ID: 180-5172-6

Client Matrix: Sediment

Date Sampled: 10/21/2011 1530

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-6.txt
Dilution:	1.0			Initial Weight/Volume:	146.89 g
Analysis Date:	12/01/2011 2146			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		49.1			
Coarse Sand		0.0			
Medium Sand		0.2			
Fine Sand		48.9			
Silt		37.8			
Clay		13.1			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU2-G3**

Lab Sample ID: 180-5172-7

Client Matrix: Sediment

Date Sampled: 10/21/2011 1710

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-7.txt
Dilution:	1.0			Initial Weight/Volume:	164.25 g
Analysis Date:	12/01/2011 2148			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	99.8			
Sieve Size #4 - Percent Finer	98.7			
Sieve Size #10 - Percent Finer	98.3			
Sieve Size #20 - Percent Finer	98.0			
Sieve Size #40 - Percent Finer	97.9			
Sieve Size #60 - Percent Finer	97.6			
Sieve Size #80 - Percent Finer	97.0			
Sieve Size #100 - Percent Finer	96.0			
Sieve Size #200 - Percent Finer	58.5			
Sieve Size #230 - Percent Finer	47.3			
Hydrometer Reading 1 - Percent Finer	32.6			
Hydrometer Reading 2 - Percent Finer	28.9			
Hydrometer Reading 3 - Percent Finer	25.1			
Hydrometer Reading 4 - Percent Finer	20.6			
Hydrometer Reading 5 - Percent Finer	17.6			
Hydrometer Reading 6 - Percent Finer	13.8			
Hydrometer Reading 7 - Percent Finer	9.1			

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Client Sample ID: **CH-2011-MU2-G3**

Lab Sample ID: 180-5172-7

Client Matrix: Sediment

Date Sampled: 10/21/2011 1710

Date Received: 10/22/2011 0945

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-29069	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5172-E-7.txt
Dilution:	1.0			Initial Weight/Volume:	164.25 g
Analysis Date:	12/01/2011 2148			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		1.3			
Sand		51.4			
Coarse Sand		0.4			
Medium Sand		0.4			
Fine Sand		50.6			
Silt		29.7			
Clay		17.6			

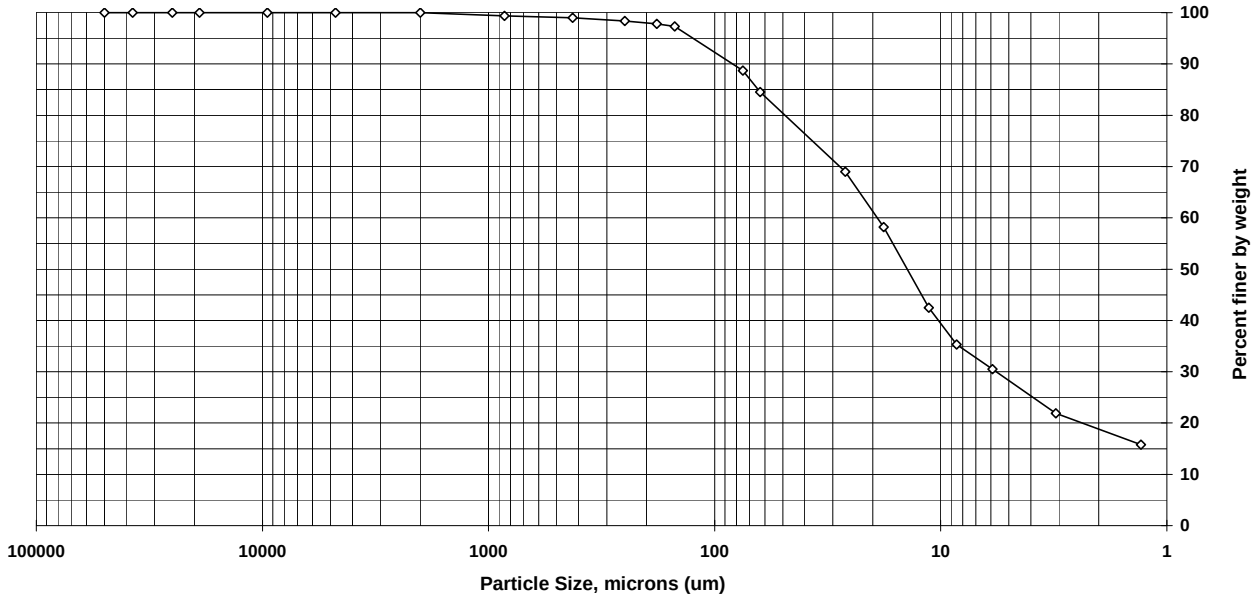
Particle Size of Soils by ASTM D422

				Date Received:	10/22/11
Sample ID:	CH-2011-MU1-G1	**Percent Solids:**	51.6%	**Start Date:**	12/01/11
Lab ID:	180-5172-E-1	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.4	0.6
#40	425	99.0	0.4
#60	250	98.4	0.6
#80	180	97.8	0.6
#100	150	97.3	0.5
#200	75	88.7	8.6
#230	63	84.5	4.2
Hyd1	26.4	69.0	15.5
Hyd2	17.9	58.2	10.8
Hyd3	11.3	42.5	15.7
Hyd4	8.5	35.3	7.2
Hyd5	5.9	30.5	4.8
Hyd6	3.1	21.9	8.6
Hyd7	1.3	15.8	6.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	15.5
Coarse Sand	0.0
Medium Sand	1.0
Fine Sand	14.5
Silt	54.0
Clay	30.5

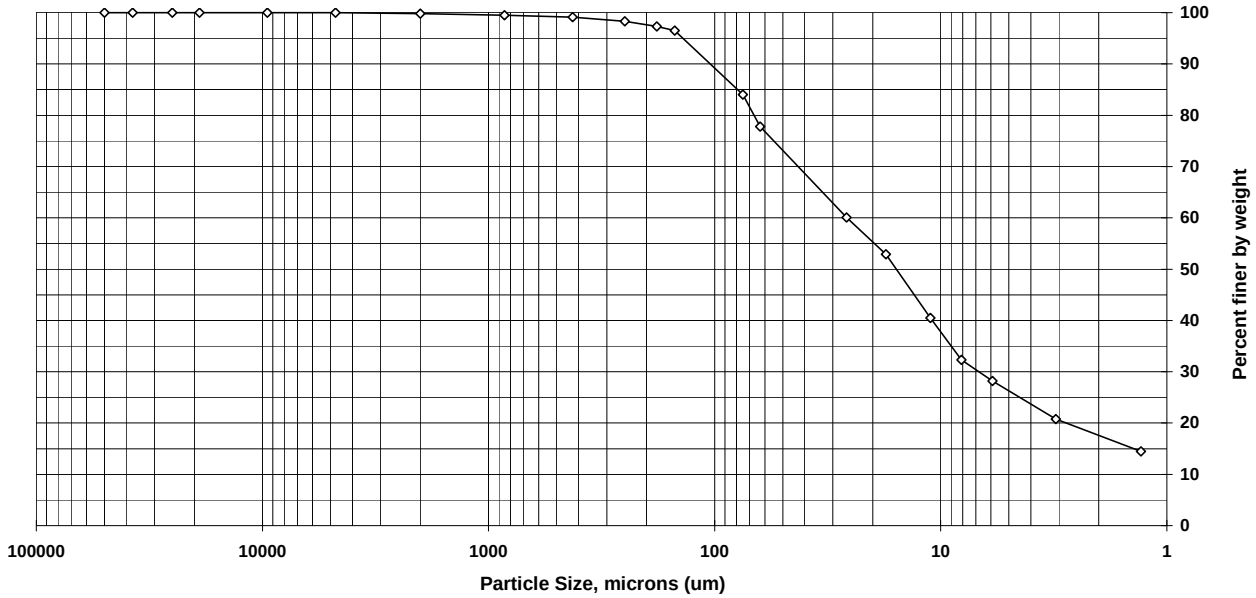
Particle Size of Soils by ASTM D422

				Date Received:	10/22/11
Sample ID:	CH-2011-MU1-G2	**Percent Solids:**	53.2%	**Start Date:**	12/01/11
Lab ID:	180-5172-E-2	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): angular

Non-soil material: shells

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.5	0.3
#40	425	99.1	0.4
#60	250	98.3	0.8
#80	180	97.3	1.0
#100	150	96.5	0.8
#200	75	84.0	12.5
#230	63	77.8	6.2
Hyd1	26.1	60.1	17.7
Hyd2	17.5	52.9	7.2
Hyd3	11.1	40.5	12.4
Hyd4	8.1	32.3	8.2
Hyd5	5.9	28.2	4.1
Hyd6	3.1	20.8	7.4
Hyd7	1.3	14.5	6.3

Soil Classification	Percent of sample
Gravel	0.0
Sand	22.2
Coarse Sand	0.2
Medium Sand	0.7
Fine Sand	21.3
Silt	49.6
Clay	28.2

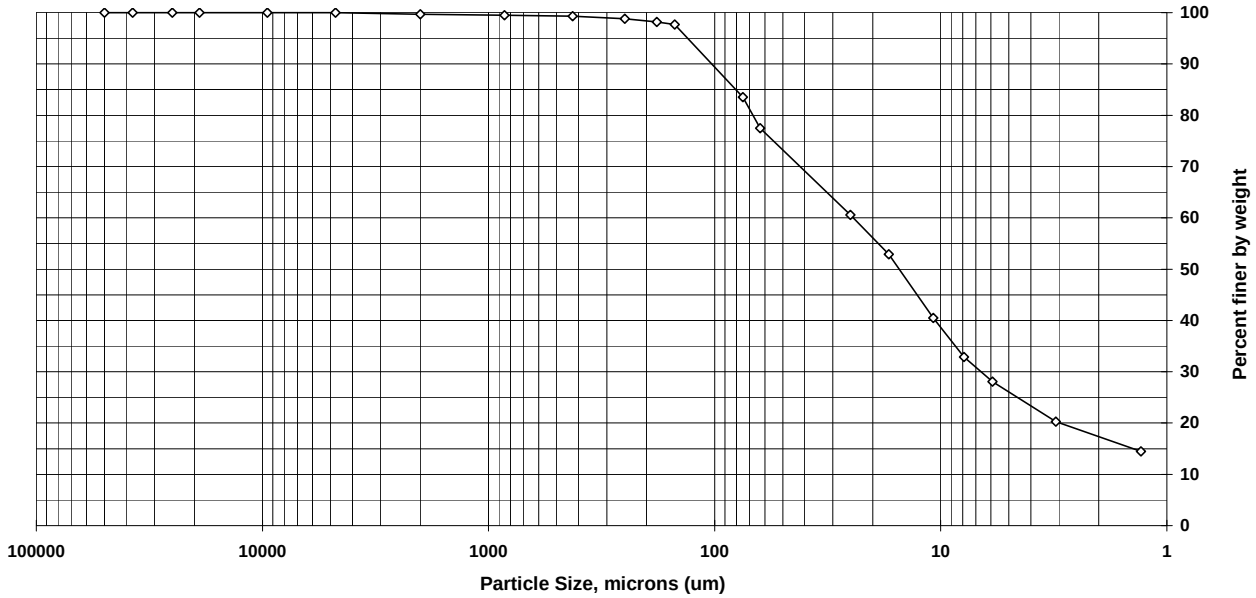
Particle Size of Soils by ASTM D422

				Date Received:	10/22/11
Sample ID:	CH-2011-MU1-G3	**Percent Solids:**	55.7%	**Start Date:**	12/01/11
Lab ID:	180-5172-F-3	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): angular

Non-soil material: na

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.7	0.3
#20	850	99.5	0.2
#40	425	99.3	0.2
#60	250	98.8	0.5
#80	180	98.2	0.6
#100	150	97.7	0.5
#200	75	83.5	14.2
#230	63	77.5	6.0
Hyd1	25.1	60.6	16.9
Hyd2	17	52.9	7.7
Hyd3	10.8	40.5	12.4
Hyd4	7.9	32.9	7.6
Hyd5	5.9	28.1	4.8
Hyd6	3.1	20.3	7.8
Hyd7	1.3	14.5	5.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	22.5
Coarse Sand	0.3
Medium Sand	0.4
Fine Sand	21.8
Silt	49.4
Clay	28.1

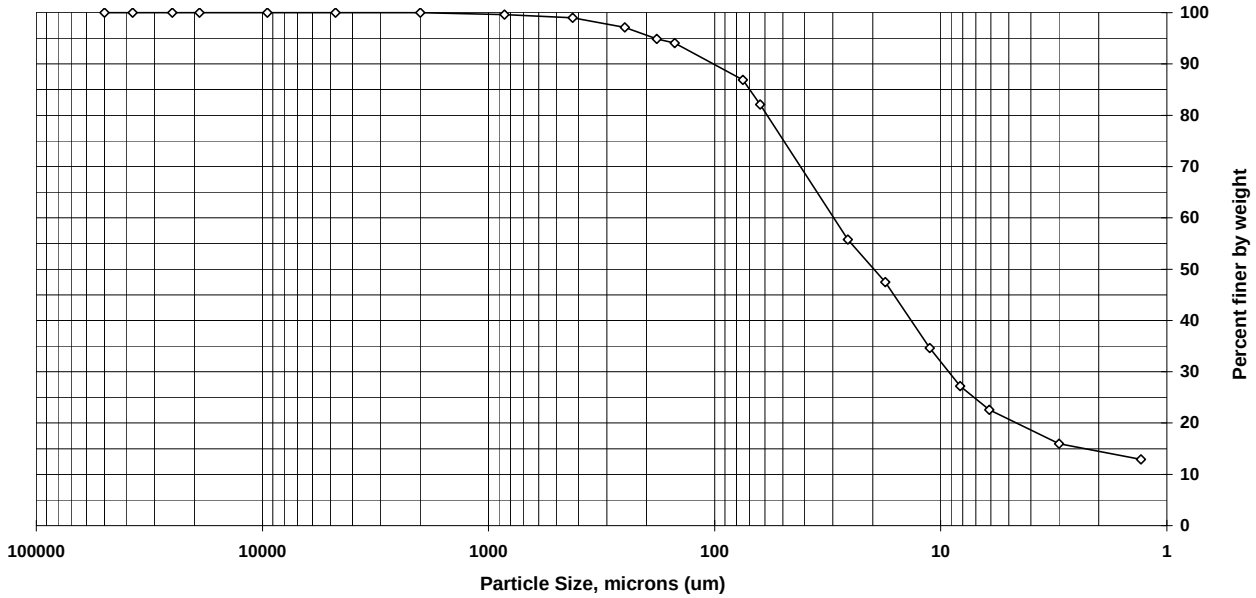
Particle Size of Soils by ASTM D422

				Date Received:	10/22/11
Sample ID:	CH-2011-MU2-G1	**Percent Solids:**	56.0%	**Start Date:**	12/01/11
Lab ID:	180-5172-F-5	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.6	0.4
#40	425	99.0	0.6
#60	250	97.1	1.9
#80	180	94.9	2.2
#100	150	94.1	0.8
#200	75	86.9	7.2
#230	63	82.1	4.8
Hyd1	25.8	55.8	26.3
Hyd2	17.6	47.5	8.3
Hyd3	11.2	34.6	12.9
Hyd4	8.2	27.2	7.4
Hyd5	6.1	22.6	4.6
Hyd6	3	16.0	6.6
Hyd7	1.3	12.9	3.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	17.9
Coarse Sand	0.0
Medium Sand	1.0
Fine Sand	16.9
Silt	59.5
Clay	22.6

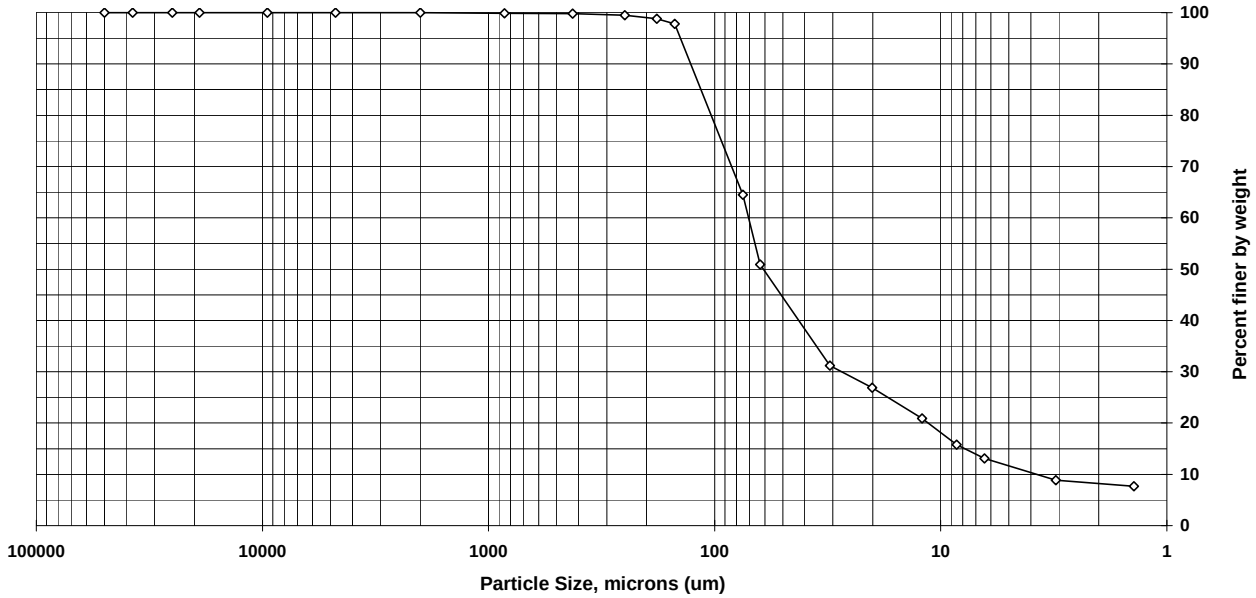
Particle Size of Soils by ASTM D422

				Date Received:	10/22/11
Sample ID:	CH-2011-MU2-G2	**Percent Solids:**	64.0%	**Start Date:**	12/01/11
Lab ID:	180-5172-E-6	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.5	0.3
#80	180	98.8	0.7
#100	150	97.8	1.0
#200	75	64.5	33.3
#230	63	50.9	13.6
Hyd1	30.9	31.2	19.7
Hyd2	20.1	26.9	4.3
Hyd3	12.1	20.9	6.0
Hyd4	8.5	15.8	5.1
Hyd5	6.4	13.1	2.7
Hyd6	3.1	8.8	4.3
Hyd7	1.4	7.7	1.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	49.1
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	48.9
Silt	37.8
Clay	13.1

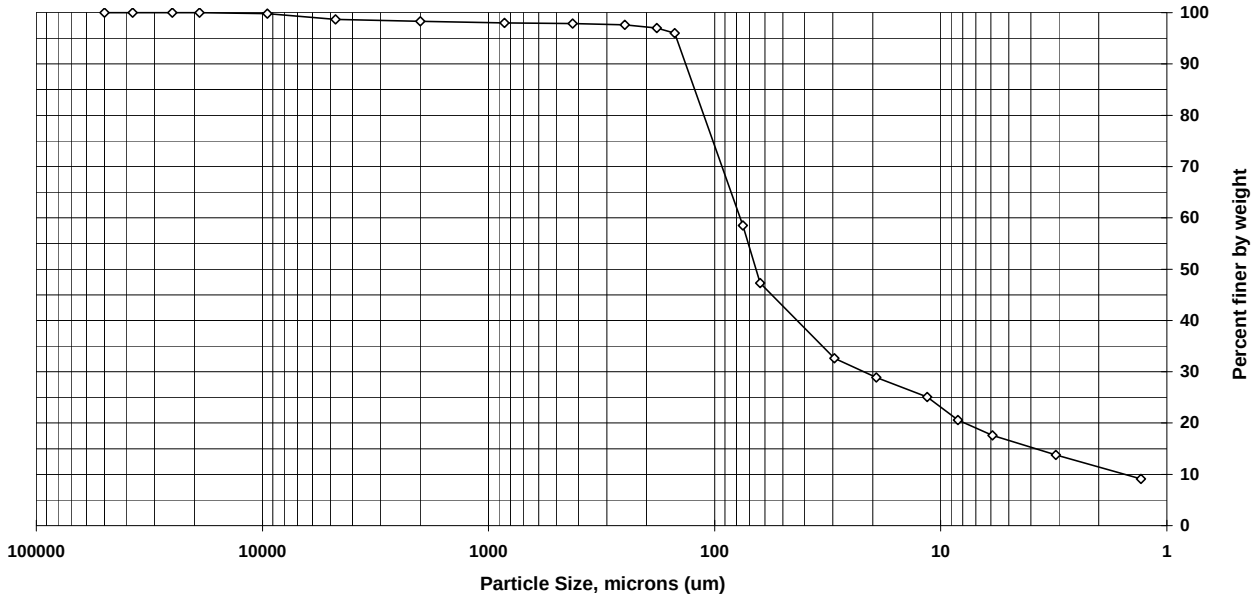
Particle Size of Soils by ASTM D422

				Date Received:	10/22/11
Sample ID:	CH-2011-MU2-G3	**Percent Solids:**	65.3%	**Start Date:**	12/01/11
Lab ID:	180-5172-E-7	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: shells

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.8	0.2
#4	4750	98.7	1.1
#10	2000	98.3	0.4
#20	850	98.0	0.3
#40	425	97.9	0.1
#60	250	97.6	0.3
#80	180	97.0	0.6
#100	150	96.0	1.0
#200	75	58.5	37.5
#230	63	47.3	11.2
Hyd1	29.5	32.6	14.7
Hyd2	19.3	28.9	3.7
Hyd3	11.5	25.1	3.8
Hyd4	8.4	20.6	4.5
Hyd5	5.9	17.6	3.0
Hyd6	3.1	13.8	3.8
Hyd7	1.3	9.1	4.7

Soil Classification	Percent of sample
Gravel	1.3
Sand	51.4
Coarse Sand	0.4
Medium Sand	0.4
Fine Sand	50.6
Silt	29.7
Clay	17.6

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/22/2011 09:45
Client Sample ID	CH-2011-MU1-G1	Start Date	12/1/2011 21:34
Lab Sample ID	180-5172-E-1	End Date	12/5/2011 08:42

Dry Weight Determination

Tin Weight	1.02	g
Wet Sample + Tin	31.25	g
Dry Sample + Tin	16.63	g
% Moisture	48.36	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		129.92	129.92
Sample Weight (Oven Dried)			67.1

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			67.1
% Passing #10			51.6

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.95	0.37	g	99.4	Sand	Medium
#40	425	353.49	353.77	0.28	g	99.0	Sand	Medium
#60	250	341.49	341.91	0.42	g	98.4	Sand	Fine
#80	180	330.38	330.81	0.43	g	97.8	Sand	Fine
#100	150	325.45	325.81	0.36	g	97.3	Sand	Fine
#200	75	312.36	318.10	5.74	g	88.7	Sand	Fine
#230	63	341.16	344.01	2.85	g	84.5	Sand	Fine
				0.00	g	84.5		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	67.1

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0320	22.0	26.4	69	Silt	
5	5	1.0275	22.0	17.9	58.2	Silt	
15	15	1.0210	21.5	11.3	42.5	Silt	
30	29	1.0180	21.5	8.5	35.3	Silt	
60	63	1.0160	21.5	5.9	30.5	Silt	
250	250	1.0125	21.0	3.1	21.9	Clay	
1440	1434	1.0100	20.5	1.3	15.8	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/22/2011 09:45
Client Sample ID	CH-2011-MU1-G2	Start Date	12/1/2011 21:38
Lab Sample ID	180-5172-E-2	End Date	12/5/2011 08:58

Dry Weight Determination

Tin Weight	1.02	g
Wet Sample + Tin	31.08	g
Dry Sample + Tin	17.00	g
% Moisture	46.84	%

Non-soil material:	shells
Shape (> #10):	angular
Hardness (> #10):	hard
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		147.48	147.48
Sample Weight (Oven Dried)			78.4

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.15
Sample <#10			78.3
% Passing #10			53.1

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.86	463.01	0.15	g	99.8	Sand	Coarse
#20	850	383.58	383.79	0.21	g	99.5	Sand	Medium
#40	425	353.49	353.77	0.28	g	99.1	Sand	Medium
#60	250	341.49	342.14	0.65	g	98.3	Sand	Fine
#80	180	330.38	331.16	0.78	g	97.3	Sand	Fine
#100	150	325.45	326.07	0.62	g	96.5	Sand	Fine
#200	75	312.36	322.16	9.80	g	84.0	Sand	Fine
#230	63	341.16	346.05	4.89	g	77.8	Sand	Fine
				0.00	g	77.8		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	78.4

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0325	22.0	26.1	60.1	Silt	
5	5	1.0290	22.0	17.5	52.9	Silt	
15	15	1.0230	21.5	11.1	40.5	Silt	
30	31	1.0190	21.5	8.1	32.3	Silt	
60	60	1.0170	21.5	5.9	28.2	Silt	
250	240	1.0135	21.0	3.1	20.8	Clay	
1440	1424	1.0105	20.5	1.3	14.5	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/22/2011 09:45
Client Sample ID	CH-2011-MU1-G3	Start Date	12/1/2011 21:41
Lab Sample ID	180-5172-F-3	End Date	12/5/2011 11:41

Dry Weight Determination

Tin Weight	1.00	g
Wet Sample + Tin	33.53	g
Dry Sample + Tin	19.12	g
% Moisture	44.30	%

Non-soil material:	na
Shape (> #10):	angular
Hardness (> #10):	hard
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		151.22	151.22
Sample Weight (Oven Dried)			84.2

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.29
Sample <#10			83.9
% Passing #10			55.5

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.90	463.19	0.29	g	99.7	Sand	Coarse
#20	850	383.58	383.74	0.16	g	99.5	Sand	Medium
#40	425	353.49	353.67	0.18	g	99.3	Sand	Medium
#60	250	341.49	341.93	0.44	g	98.8	Sand	Fine
#80	180	330.38	330.87	0.49	g	98.2	Sand	Fine
#100	150	325.45	325.88	0.43	g	97.7	Sand	Fine
#200	75	312.36	324.33	11.97	g	83.5	Sand	Fine
#230	63	341.16	346.17	5.01	g	77.5	Sand	Fine
				0.00	g	77.5		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	84.2

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0350	21.5	25.1	60.6	Silt	
5	5	1.0310	21.5	17	52.9	Silt	
15	15	1.0245	21.5	10.8	40.5	Silt	
30	31	1.0205	21.5	7.9	32.9	Silt	
60	59	1.0180	21.5	5.9	28.1	Silt	
250	234	1.0140	21.0	3.1	20.3	Clay	
1440	1418	1.0110	20.5	1.3	14.5	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/22/2011 09:45
Client Sample ID	CH-2011-MU2-G1	Start Date	12/1/2011 21:44
Lab Sample ID	180-5172-F-5	End Date	12/5/2011 11:57

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	27.76	g
Dry Sample + Tin	16.00	g
% Moisture	43.96	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		155.28	155.28
Sample Weight (Oven Dried)			87

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			87
% Passing #10			56

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.92	0.34	g	99.6	Sand	Medium
#40	425	353.49	354.02	0.53	g	99.0	Sand	Medium
#60	250	341.49	343.18	1.69	g	97.1	Sand	Fine
#80	180	330.38	332.32	1.94	g	94.9	Sand	Fine
#100	150	325.45	326.15	0.70	g	94.1	Sand	Fine
#200	75	312.36	318.62	6.26	g	86.9	Sand	Fine
#230	63	341.16	345.31	4.15	g	82.1	Sand	Fine
				0.00	g	82.1		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	87

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0335	21.5	25.8	55.8	Silt	
5	5	1.0290	21.5	17.6	47.5	Silt	
15	15	1.0220	21.5	11.2	34.6	Silt	
30	31	1.0180	21.5	8.2	27.2	Silt	
60	59	1.0155	21.5	6.1	22.6	Silt	
250	265	1.0120	21.0	3	16	Clay	
1440	1412	1.0105	20.0	1.3	12.9	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/22/2011 09:45
Client Sample ID	CH-2011-MU2-G2	Start Date	12/1/2011 21:46
Lab Sample ID	180-5172-E-6	End Date	12/5/2011 12:10

Dry Weight Determination

Tin Weight	1.06	g
Wet Sample + Tin	24.84	g
Dry Sample + Tin	16.28	g
% Moisture	36.00	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		146.89	146.89
Sample Weight (Oven Dried)			94

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			94
% Passing #10			64

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.65	0.07	g	99.9	Sand	Medium
#40	425	353.49	353.57	0.08	g	99.8	Sand	Medium
#60	250	341.49	341.78	0.29	g	99.5	Sand	Fine
#80	180	330.38	331.00	0.62	g	98.8	Sand	Fine
#100	150	325.45	326.35	0.90	g	97.8	Sand	Fine
#200	75	312.36	343.62	31.26	g	64.5	Sand	Fine
#230	63	341.16	353.93	12.77	g	50.9	Sand	Fine
				0.00	g	50.9		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	94

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0215	21.5	30.9	31.2	Silt	
5	5	1.0190	21.5	20.1	26.9	Silt	
15	15	1.0155	21.5	12.1	20.9	Silt	
30	32	1.0125	21.5	8.5	15.8	Silt	
60	60	1.0110	21.0	6.4	13.1	Silt	
250	259	1.0085	21.0	3.1	8.83	Clay	
1440	1406	1.0080	20.0	1.4	7.69	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/22/2011 09:45
Client Sample ID	CH-2011-MU2-G3	Start Date	12/1/2011 21:48
Lab Sample ID	180-5172-E-7	End Date	12/5/2011 12:23

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	28.33	g
Dry Sample + Tin	18.86	g
% Moisture	34.66	%

Non-soil material:	shells
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		164.25	164.25
Sample Weight (Oven Dried)			107

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			1.76
Sample <#10			105
% Passing #10			63.9

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500	447.45	447.62	0.17	g	99.8	Gravel	
#4	4750	488.19	489.34	1.15	g	98.7	Gravel	
#10	2000	462.88	463.32	0.44	g	98.3	Sand	Coarse
#20	850	383.58	383.91	0.33	g	98.0	Sand	Medium
#40	425	353.49	353.61	0.12	g	97.9	Sand	Medium
#60	250	341.49	341.79	0.30	g	97.6	Sand	Fine
#80	180	330.38	331.05	0.67	g	97.0	Sand	Fine
#100	150	325.45	326.49	1.04	g	96.0	Sand	Fine
#200	75	312.36	352.45	40.09	g	58.5	Sand	Fine
#230	63	341.16	353.14	11.98	g	47.3	Sand	Fine
				0.00	g	47.3		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	107

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0250	21.5	29.5	32.6	Silt	
5	5	1.0225	21.5	19.3	28.9	Silt	
15	15	1.0200	21.5	11.5	25.1	Silt	
30	30	1.0170	21.5	8.4	20.6	Silt	
60	63	1.0150	21.5	5.9	17.6	Silt	
250	253	1.0125	21.0	3.1	13.8	Clay	
1440	1400	1.0095	20.5	1.3	9.13	Clay	

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

QUALITY CONTROL RESULTS

Client: FutureNet Group, Inc

Job Number: 180-5172-3

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Geotechnical					
Analysis Batch:200-29069					
180-5172-1	CH-2011-MU1-G1	T	Sediment	D422	
180-5172-2	CH-2011-MU1-G2	T	Sediment	D422	
180-5172-3	CH-2011-MU1-G3	T	Sediment	D422	
180-5172-5	CH-2011-MU2-G1	T	Sediment	D422	
180-5172-6	CH-2011-MU2-G2	T	Sediment	D422	
180-5172-7	CH-2011-MU2-G3	T	Sediment	D422	

Report Basis

T = Total

.05 #1 .06 #2
.10 #1 .12 #1
.07 #1 .05 #2
.03 #2

Rec'd Broken
2 Jars - 11.30
Gallon Seal Jars

ORIGIN ID: JOTA (313) 544-7117
FUTURENET GROUP, INC.
12801 AUBURN ST
DETROIT, MI 482233413
UNITED STATES US

SHIP DATE: 21OCT11
ACTWGT: 90.4 LB
CAD: /OFFC1242
DIMS: 15x16 IN
BILL

Part # 156297-4 Rev. 1/04

TO SAMPLE RECIEVING
TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 860-1408 REF:
INV:
PO: DEPT:

639
F1

FedEx Express

J112011080501 26

3 of 7

SATURDAY ### A2
PRIORITY OVERNIGHT

MPS# 0681 7955 4131 4453
Mstr# 8741 9090 2366 0200

XO AGCA

15238
PA-US PIT

10175

ENVIRONMENTAL TESTING

FedEx Express US Airbill

FedEx Tracking Number 8741 9090 2366

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 10/21/2011 Sender's FedEx Account Number 427870103

Sender's Name Hi AL SAFFAR Phone 313 544-7117

Company FutureNet Group, Inc.

Address 12801 Auburn Dept./Floor/Suite/Room

City Detroit State MI ZIP 48223

2 Your Internal Billing Reference 11655-004

3 To

Recipient's Name Sample Receiving Phone 412 963-7058

Company Test America

Address 301 Alpha Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address RIDC Park

Use this line for the HOLD location address or for continuation of your shipping address.

City Pittsburg State PA ZIP 15238

01 ☐ HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4a Express Package Service * To most locations. *Packages up to 150 lbs.*

01 ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

06 ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.*

03 ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. *Packages over 150 lbs.*

70 ☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.

80 ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

83 ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 07 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☒ **SATURDAY DELIVERY**

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☒ Sender — Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

Total Packages 1 Total Weight 0.45 lbs. Credit Card Auth.

*Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

606

0,5 #2 | 180-5172

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: Future Net Group, Inc	Client Project Manager: Dr. Ali Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn Street	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email:		
Phone: (313) 544-7117			
Project Name: HG Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-004	Shipping/Tracking No:		
PO #			

COC No: 1 of 1 COCs

Analysis Turnaround Time (in BUS days)
TAT if different from below _____
☒ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

For lab use only
Walk-in client ☐
Lab pickup ☐
Lab sampling ☐
Job/SDG No.:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	Analyses: Bulk Volatiles	VOC	SPLP	Grain Size	E. butlerae						Sample Specific Notes / Special Instructions:
CH-2011-MU1-G1	10/21	10:00			X										N		X	X	X	X							
CH-2011-MU1-G2	"	11:00			X															X							
CH-2011-MU1-G3	"	11:30			X														X	X							
CH-2011-MU1-Comp	"	11:30		X	X													X	X		X						
CH-2011-MU2-G1	"	1:15			X														X	X							
CH-2011-MU2-G2	"	3:30			X															X							
CH-2011-MU2-G3	"	5:10			X															X							
CH-2011-MU2-Comp	"	5:10		X														X	X		X						

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
See the SOW for complete analysis required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/21 7:00 PM	Deline Watson	TA-Pitt	10-22-11 9:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

0.5 #2

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: Future Net Group, Inc	Client Project Manager: Dr. Ali Al-Saffar	Site Contact:	Lab Contact:
Address: 12801 Auburn Street	Telephone: (313) 544-7117	Telephone:	Telephone:
City/State/Zip: Detroit, MI 48223	Email:		
Phone: (313) 544-7117			
Project Name: Hot Calumet Harbor	Method of Shipment/Carrier:		
Project Number: 11655-004	Shipping/Tracking No:		
PO #			

COC No: 9

1 of 1 COCs

Analysis Turnaround Time (in BUS days)

TAT if different from below _____

☒ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

For lab use only
Walk-in client ☐
Lab pickup ☐
Lab sampling ☐
Job/SDG No.:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/Grab G	Analyses: Bulk Chemistry	VOC	SPLP	Grain Size	Eluriate	Sample Specific Notes / Special Instructions:
CH-2011-MU1-G1	10/21	10:00			X										N		X	X	X	X		
CH-2011-MU1-G2	"	11:00			X															X		
CH-2011-MU1-G3	"	11:30			X														X	X		
CH-2011-MU1-Comp	"	11:30		X	X													X	X		X	
CH-2011-MU2-G1	"	1:15			X														X	X		
CH-2011-MU2-G2	"	3:30			X															X		
CH-2011-MU2-G3	"	5:10			X															X		
CH-2011-MU2-Comp	"	5:10		X	X													X	X		X	

Page 43 of 45

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
See the SOW for complete analysis required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/21 7:00PM	Deblue Watson	TA Dirt	10-22-11 9:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-0018 (1008)

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Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Login Number: 5172

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	RECEIVED BROKEN 2-1GALLON JUGS FOR CH-2011-MU1-COMP 05:30
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5172-3

Login Number: 5172
List Number: 1
Creator: Holt, Jamie

List Source: TestAmerica Burlington
List Creation: 10/25/11 04:34 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7ºC, IR GUN ID 98, CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 180-5048-3

Job Description: Calument Harbor

For:
FutureNet Group, Inc
12801 Auburn Street
Detroit, MI 48223

Attention: Jim Finetti

Approved for release.
Carrie L Gamber
Project Manager II
12/6/2011 6:50 AM

Carrie L Gamber
Project Manager II
carrie.gamber@testamericainc.com
12/06/2011

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TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238
Tel (412) 963-7058 Fax (412) 963-2468 www.testamericainc.com

Job Narrative
180-5048-3

NOTE: These samples are reported including the 230 sieve for Grain Size.

Receipt
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): CH-2011-MU3-G2 (180-5048-2), CH-2011-MU3-G3 (180-5048-3). The container labels list collection times of 300 and 400. The COC lists collection times of 1500 and 1600.

The other sample was received in good condition within temperature requirements.

General Chemistry
No analytical or quality issues were noted.

Geotechnical
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5048-1	**CH-2011-MU3-G1**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		22.4			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.4			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		1.0			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		21.0			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		52.7			%	D422
Sieve Size #10 - Percent Finer		99.6			% Passing	D422
Clay		24.9			%	D422
Sieve Size #20 - Percent Finer		99.2			% Passing	D422
Sieve Size #40 - Percent Finer		98.6			% Passing	D422
Sieve Size #60 - Percent Finer		97.8			% Passing	D422
Sieve Size #80 - Percent Finer		96.9			% Passing	D422
Sieve Size #100 - Percent Finer		96.1			% Passing	D422
Sieve Size #200 - Percent Finer		84.0			% Passing	D422
Sieve Size #230 - Percent Finer		77.6			% Passing	D422
Hydrometer Reading 1 - Percent Finer		59.2			% Passing	D422
Hydrometer Reading 2 - Percent Finer		49.2			% Passing	D422
Hydrometer Reading 3 - Percent Finer		38.2			% Passing	D422
Hydrometer Reading 4 - Percent Finer		30.4			% Passing	D422
Hydrometer Reading 5 - Percent Finer		24.9			% Passing	D422
Hydrometer Reading 6 - Percent Finer		19.2			% Passing	D422
Hydrometer Reading 7 - Percent Finer		14.6			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5048-2	**CH-2011-MU3-G2**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		6.2			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.2			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		6.0			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		75.7			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		18.1			%	D422
Sieve Size #20 - Percent Finer		100.0			% Passing	D422
Sieve Size #40 - Percent Finer		99.8			% Passing	D422
Sieve Size #60 - Percent Finer		99.6			% Passing	D422
Sieve Size #80 - Percent Finer		99.5			% Passing	D422
Sieve Size #100 - Percent Finer		99.4			% Passing	D422
Sieve Size #200 - Percent Finer		96.9			% Passing	D422
Sieve Size #230 - Percent Finer		93.8			% Passing	D422
Hydrometer Reading 1 - Percent Finer		58.2			% Passing	D422
Hydrometer Reading 2 - Percent Finer		43.5			% Passing	D422
Hydrometer Reading 3 - Percent Finer		31.5			% Passing	D422
Hydrometer Reading 4 - Percent Finer		23.4			% Passing	D422
Hydrometer Reading 5 - Percent Finer		18.1			% Passing	D422
Hydrometer Reading 6 - Percent Finer		12.5			% Passing	D422
Hydrometer Reading 7 - Percent Finer		9.4			% Passing	D422

EXECUTIVE SUMMARY - Detections

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-5048-3	**CH-2011-MU3-G3**					
Sieve Size 2 inch - Percent Finer		100.0			% Passing	D422
Gravel		0.0			%	D422
Sieve Size 1.5 inch - Percent Finer		100.0			% Passing	D422
Sand		4.0			%	D422
Sieve Size 1 inch - Percent Finer		100.0			% Passing	D422
Coarse Sand		0.0			%	D422
Sieve Size 0.75 inch - Percent Finer		100.0			% Passing	D422
Medium Sand		0.2			%	D422
Sieve Size 0.375 inch - Percent Finer		100.0			% Passing	D422
Fine Sand		3.8			%	D422
Sieve Size #4 - Percent Finer		100.0			% Passing	D422
Silt		74.2			%	D422
Sieve Size #10 - Percent Finer		100.0			% Passing	D422
Clay		21.8			%	D422
Sieve Size #20 - Percent Finer		99.9			% Passing	D422
Sieve Size #40 - Percent Finer		99.8			% Passing	D422
Sieve Size #60 - Percent Finer		99.7			% Passing	D422
Sieve Size #80 - Percent Finer		99.6			% Passing	D422
Sieve Size #100 - Percent Finer		99.5			% Passing	D422
Sieve Size #200 - Percent Finer		97.7			% Passing	D422
Sieve Size #230 - Percent Finer		96.0			% Passing	D422
Hydrometer Reading 1 - Percent Finer		59.9			% Passing	D422
Hydrometer Reading 2 - Percent Finer		48.8			% Passing	D422
Hydrometer Reading 3 - Percent Finer		34.1			% Passing	D422
Hydrometer Reading 4 - Percent Finer		26.2			% Passing	D422
Hydrometer Reading 5 - Percent Finer		21.8			% Passing	D422
Hydrometer Reading 6 - Percent Finer		14.9			% Passing	D422
Hydrometer Reading 7 - Percent Finer		11.2			% Passing	D422

METHOD SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Description	Lab Location	Method	Preparation Method
Matrix Sediment			
Grain Size	TAL BUR	ASTM D422	

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

ASTM = ASTM International

METHOD / ANALYST SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Method	Analyst	Analyst ID
ASTM D422	Peterson, Mark A	MAP

SAMPLE SUMMARY

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
180-5048-1	CH-2011-MU3-G1	Sediment	10/18/2011 1200	10/19/2011 1000
180-5048-2	CH-2011-MU3-G2	Sediment	10/18/2011 1500	10/19/2011 1000
180-5048-3	CH-2011-MU3-G3	Sediment	10/18/2011 1600	10/19/2011 1000

SAMPLE RESULTS

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Client Sample ID: **CH-2011-MU3-G1**

Lab Sample ID: 180-5048-1

Client Matrix: Sediment

Date Sampled: 10/18/2011 1200

Date Received: 10/19/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-18010	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5048-A-1.txt
Dilution:	1.0			Initial Weight/Volume:	130.16 g
Analysis Date:	12/01/2011 2128			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	99.6			
Sieve Size #20 - Percent Finer	99.2			
Sieve Size #40 - Percent Finer	98.6			
Sieve Size #60 - Percent Finer	97.8			
Sieve Size #80 - Percent Finer	96.9			
Sieve Size #100 - Percent Finer	96.1			
Sieve Size #200 - Percent Finer	84.0			
Sieve Size #230 - Percent Finer	77.6			
Hydrometer Reading 1 - Percent Finer	59.2			
Hydrometer Reading 2 - Percent Finer	49.2			
Hydrometer Reading 3 - Percent Finer	38.2			
Hydrometer Reading 4 - Percent Finer	30.4			
Hydrometer Reading 5 - Percent Finer	24.9			
Hydrometer Reading 6 - Percent Finer	19.2			
Hydrometer Reading 7 - Percent Finer	14.6			

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Client Sample ID: **CH-2011-MU3-G1**

Lab Sample ID: 180-5048-1

Client Matrix: Sediment

Date Sampled: 10/18/2011 1200

Date Received: 10/19/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-18010	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5048-A-1.txt
Dilution:	1.0			Initial Weight/Volume:	130.16 g
Analysis Date:	12/01/2011 2128			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		22.4			
Coarse Sand		0.4			
Medium Sand		1.0			
Fine Sand		21.0			
Silt		52.7			
Clay		24.9			

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Client Sample ID: **CH-2011-MU3-G2**

Lab Sample ID: 180-5048-2

Client Matrix: Sediment

Date Sampled: 10/18/2011 1500

Date Received: 10/19/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-18010	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5048-A-2.txt
Dilution:	1.0			Initial Weight/Volume:	109.17 g
Analysis Date:	12/01/2011 2131			Final Weight/Volume:	
Prep Date:	N/A				

Analyte DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0			
Sieve Size 1 inch - Percent Finer	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0			
Sieve Size #4 - Percent Finer	100.0			
Sieve Size #10 - Percent Finer	100.0			
Sieve Size #20 - Percent Finer	100.0			
Sieve Size #40 - Percent Finer	99.8			
Sieve Size #60 - Percent Finer	99.6			
Sieve Size #80 - Percent Finer	99.5			
Sieve Size #100 - Percent Finer	99.4			
Sieve Size #200 - Percent Finer	96.9			
Sieve Size #230 - Percent Finer	93.8			
Hydrometer Reading 1 - Percent Finer	58.2			
Hydrometer Reading 2 - Percent Finer	43.5			
Hydrometer Reading 3 - Percent Finer	31.5			
Hydrometer Reading 4 - Percent Finer	23.4			
Hydrometer Reading 5 - Percent Finer	18.1			
Hydrometer Reading 6 - Percent Finer	12.5			
Hydrometer Reading 7 - Percent Finer	9.4			

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Client Sample ID: **CH-2011-MU3-G2**

Lab Sample ID: 180-5048-2

Client Matrix: Sediment

Date Sampled: 10/18/2011 1500

Date Received: 10/19/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-18010	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5048-A-2.txt
Dilution:	1.0			Initial Weight/Volume:	109.17 g
Analysis Date:	12/01/2011 2131			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		6.2			
Coarse Sand		0.0			
Medium Sand		0.2			
Fine Sand		6.0			
Silt		75.7			
Clay		18.1			

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Client Sample ID: **CH-2011-MU3-G3**

Lab Sample ID: 180-5048-3

Client Matrix: Sediment

Date Sampled: 10/18/2011 1600

Date Received: 10/19/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-18010	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5048-A-3.txt
Dilution:	1.0			Initial Weight/Volume:	132.7 g
Analysis Date:	12/01/2011 2133			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	MDL	RL
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		100.0			
Sieve Size #20 - Percent Finer		99.9			
Sieve Size #40 - Percent Finer		99.8			
Sieve Size #60 - Percent Finer		99.7			
Sieve Size #80 - Percent Finer		99.6			
Sieve Size #100 - Percent Finer		99.5			
Sieve Size #200 - Percent Finer		97.7			
Sieve Size #230 - Percent Finer		96.0			
Hydrometer Reading 1 - Percent Finer		59.9			
Hydrometer Reading 2 - Percent Finer		48.8			
Hydrometer Reading 3 - Percent Finer		34.1			
Hydrometer Reading 4 - Percent Finer		26.2			
Hydrometer Reading 5 - Percent Finer		21.8			
Hydrometer Reading 6 - Percent Finer		14.9			
Hydrometer Reading 7 - Percent Finer		11.2			

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Client Sample ID: **CH-2011-MU3-G3**

Lab Sample ID: 180-5048-3

Client Matrix: Sediment

Date Sampled: 10/18/2011 1600

Date Received: 10/19/2011 1000

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-18010	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	180-5048-A-3.txt
Dilution:	1.0			Initial Weight/Volume:	132.7 g
Analysis Date:	12/01/2011 2133			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	MDL	RL
Gravel		0.0			
Sand		4.0			
Coarse Sand		0.0			
Medium Sand		0.2			
Fine Sand		3.8			
Silt		74.2			
Clay		21.8			

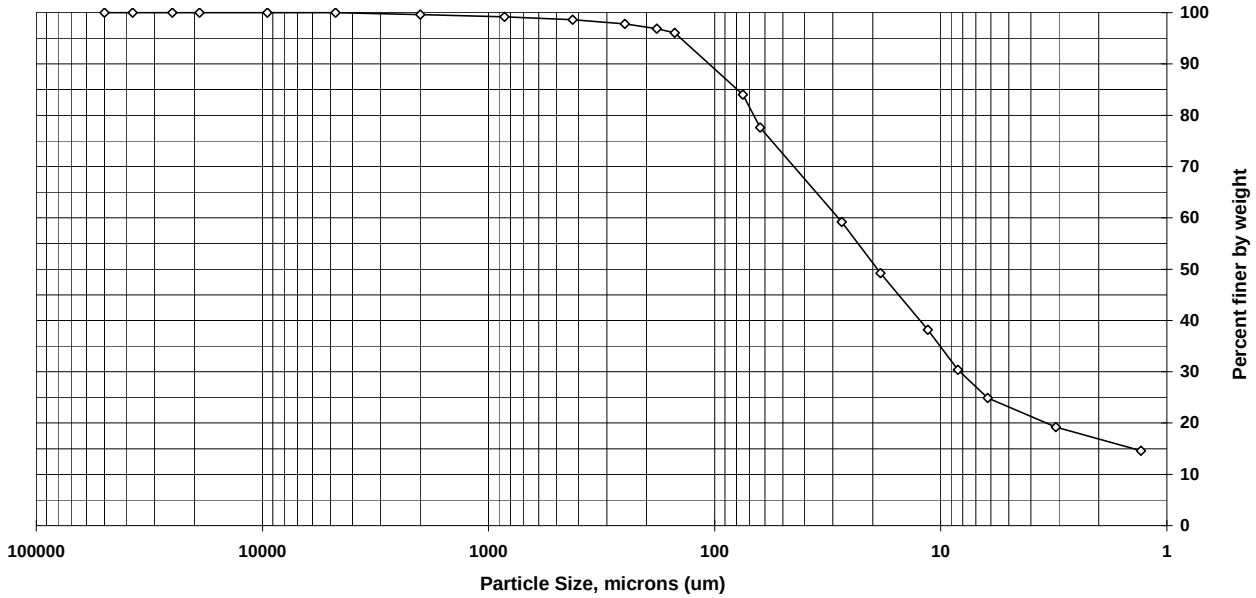
Particle Size of Soils by ASTM D422

				Date Received:	10/19/11
Sample ID:	CH-2011-MU3-G1	**Percent Solids:**	55.8%	**Start Date:**	12/01/11
Lab ID:	180-5048-A-1	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: shells

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.6	0.4
#20	850	99.2	0.4
#40	425	98.6	0.6
#60	250	97.8	0.8
#80	180	96.9	0.9
#100	150	96.1	0.8
#200	75	84.0	12.1
#230	63	77.6	6.4
Hyd1	27.4	59.2	18.4
Hyd2	18.5	49.2	10.0
Hyd3	11.4	38.2	11.0
Hyd4	8.4	30.4	7.8
Hyd5	6.2	24.9	5.5
Hyd6	3.1	19.2	5.7
Hyd7	1.3	14.6	4.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	22.4
Coarse Sand	0.4
Medium Sand	1.0
Fine Sand	21.0
Silt	52.7
Clay	24.9

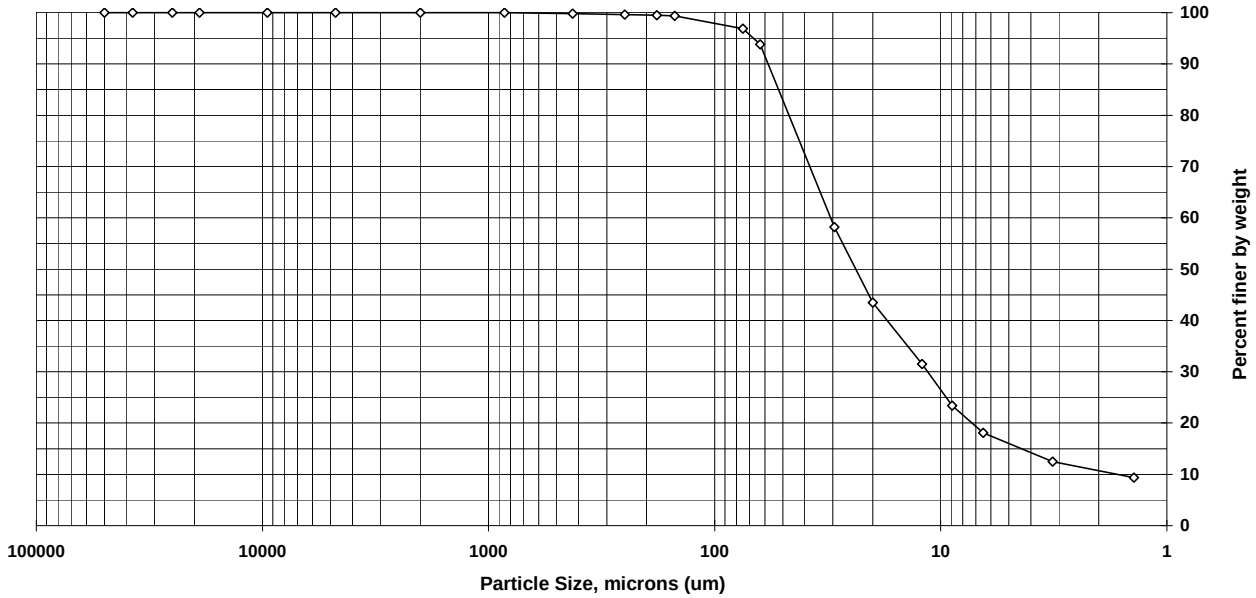
Particle Size of Soils by ASTM D422

				Date Received:	10/19/11
Sample ID:	CH-2011-MU3-G2	**Percent Solids:**	54.9%	**Start Date:**	12/01/11
Lab ID:	180-5048-A-2	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.8	0.2
#60	250	99.6	0.2
#80	180	99.5	0.1
#100	150	99.4	0.1
#200	75	96.9	2.5
#230	63	93.8	3.1
Hyd1	29.5	58.2	35.6
Hyd2	20	43.5	14.7
Hyd3	12.1	31.5	12.0
Hyd4	8.9	23.4	8.1
Hyd5	6.5	18.1	5.3
Hyd6	3.2	12.5	5.6
Hyd7	1.4	9.4	3.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.2
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	6.0
Silt	75.7
Clay	18.1

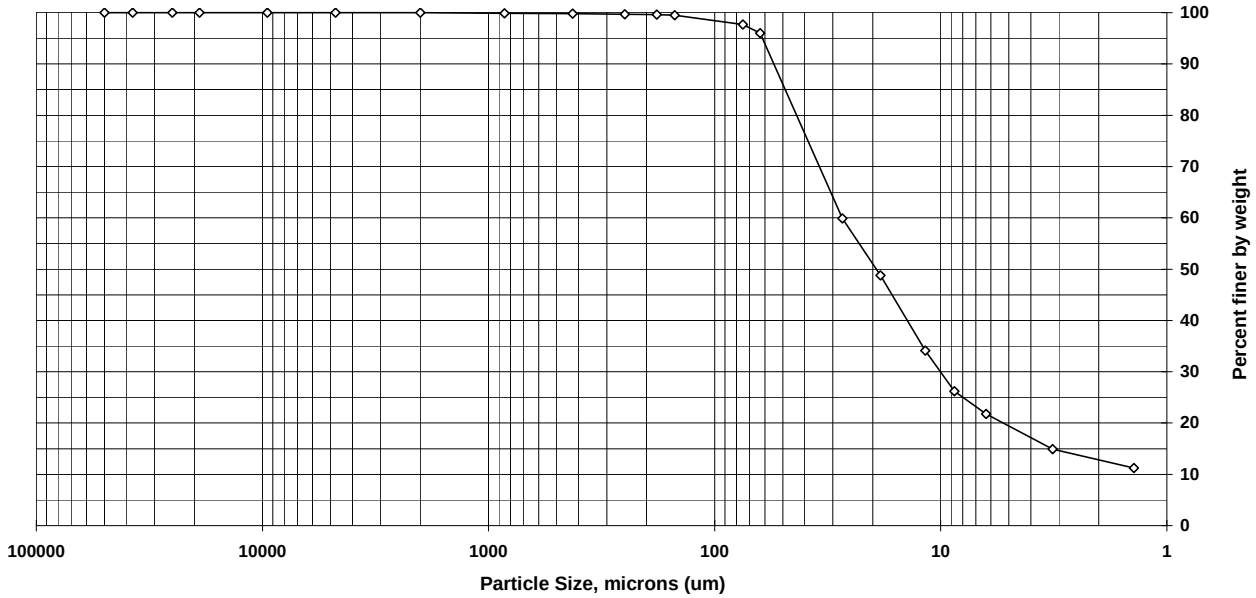
Particle Size of Soils by ASTM D422

				Date Received:	10/19/11
Sample ID:	CH-2011-MU3-G3	**Percent Solids:**	54.2%	**Start Date:**	12/01/11
Lab ID:	180-5048-A-3	**Specific Gravity:**	2.650	**End Date:**	12/05/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.7	0.1
#80	180	99.6	0.1
#100	150	99.5	0.1
#200	75	97.7	1.8
#230	63	96.0	1.7
Hyd1	27.2	59.9	36.1
Hyd2	18.5	48.8	11.1
Hyd3	11.7	34.1	14.7
Hyd4	8.7	26.2	7.9
Hyd5	6.3	21.8	4.4
Hyd6	3.2	14.9	6.9
Hyd7	1.4	11.2	3.7

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.0
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	3.8
Silt	74.2
Clay	21.8

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/19/2011 10:00
Client Sample ID	CH-2011-MU3-G1	Start Date	12/1/2011 21:28
Lab Sample ID	180-5048-A-1	End Date	12/5/2011 08:06

Dry Weight Determination

Tin Weight	1.04	g
Wet Sample + Tin	24.73	g
Dry Sample + Tin	14.26	g
% Moisture	44.20	%

Non-soil material:	shells
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		130.16	130.16
Sample Weight (Oven Dried)			72.6

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.28
Sample <#10			72.3
% Passing #10			55.5

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.91	463.19	0.28	g	99.6	Sand	Coarse
#20	850	383.58	383.87	0.29	g	99.2	Sand	Medium
#40	425	353.49	353.90	0.41	g	98.6	Sand	Medium
#60	250	341.49	342.05	0.56	g	97.8	Sand	Fine
#80	180	330.38	331.04	0.66	g	96.9	Sand	Fine
#100	150	325.45	326.03	0.58	g	96.1	Sand	Fine
#200	75	312.36	321.12	8.76	g	84.0	Sand	Fine
#230	63	341.16	345.84	4.68	g	77.6	Sand	Fine
				0.00	g	77.6		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	72.6

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0300	21.5	27.4	59.2	Silt	
5	5	1.0255	21.5	18.5	49.2	Silt	
15	15	1.0205	21.5	11.4	38.2	Silt	
30	30	1.0170	21.5	8.4	30.4	Silt	
60	59	1.0145	21.5	6.2	24.9	Silt	
250	256	1.0120	21.0	3.1	19.2	Clay	
1440	1440	1.0100	20.5	1.3	14.6	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/19/2011 10:00
Client Sample ID	CH-2011-MU3-G2	Start Date	12/1/2011 21:31
Lab Sample ID	180-5048-A-2	End Date	12/5/2011 08:16

Dry Weight Determination

Tin Weight	1.05	g
Wet Sample + Tin	27.01	g
Dry Sample + Tin	15.31	g
% Moisture	45.07	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		109.17	109.17
Sample Weight (Oven Dried)			60

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			60
% Passing #10			55

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.58	0.00	g	100.0	Sand	Medium
#40	425	353.49	353.60	0.11	g	99.8	Sand	Medium
#60	250	341.49	341.61	0.12	g	99.6	Sand	Fine
#80	180	330.38	330.44	0.06	g	99.5	Sand	Fine
#100	150	325.45	325.53	0.08	g	99.4	Sand	Fine
#200	75	312.36	313.86	1.50	g	96.9	Sand	Fine
#230	63	341.16	343.05	1.89	g	93.8	Sand	Fine
				0.00	g	93.8		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	60

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0250	21.5	29.5	58.2	Silt	
5	5	1.0195	21.5	20	43.5	Silt	
15	15	1.0150	21.5	12.1	31.5	Silt	
30	30	1.0120	21.5	8.9	23.4	Silt	
60	58	1.0100	21.5	6.5	18.1	Silt	
250	256	1.0080	21.0	3.2	12.5	Clay	
1440	1440	1.0070	20.0	1.4	9.37	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client		Date Received	10/19/2011 10:00
Client Sample ID	CH-2011-MU3-G3	Start Date	12/1/2011 21:33
Lab Sample ID	180-5048-A-3	End Date	12/5/2011 08:29

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	21.67	g
Dry Sample + Tin	12.21	g
% Moisture	45.79	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na
Default Soil Gravity	2.6500

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)		132.70	132.7
Sample Weight (Oven Dried)			71.9

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			71.9
% Passing #10			54.2

Hydrometer Data

Serial Number	540534
Calib. Date (mm/dd/yyyy)	05/06/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0040
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006833333

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	383.58	383.65	0.07	g	99.9	Sand	Medium
#40	425	353.49	353.57	0.08	g	99.8	Sand	Medium
#60	250	341.49	341.53	0.04	g	99.7	Sand	Fine
#80	180	330.38	330.43	0.05	g	99.6	Sand	Fine
#100	150	325.45	325.52	0.07	g	99.5	Sand	Fine
#200	75	312.36	313.63	1.27	g	97.7	Sand	Fine
#230	63	341.16	342.36	1.20	g	96.0	Sand	Fine
				0.00	g	96.0		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	71.9

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0300	22.0	27.2	59.9	Silt	
5	5	1.0250	22.0	18.5	48.8	Silt	
15	15	1.0185	21.5	11.7	34.1	Silt	
30	29	1.0150	21.5	8.7	26.2	Silt	
60	58	1.0130	21.5	6.3	21.8	Silt	
250	250	1.0100	21.0	3.2	14.9	Clay	
1440	1434	1.0085	20.0	1.4	11.2	Clay	

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

QUALITY CONTROL RESULTS

Client: FutureNet Group, Inc

Job Number: 180-5048-3

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Geotechnical					
Analysis Batch:200-18010					
180-5048-1	CH-2011-MU3-G1	T	Sediment	D422	
180-5048-2	CH-2011-MU3-G2	T	Sediment	D422	
180-5048-3	CH-2011-MU3-G3	T	Sediment	D422	

Report Basis

T = Total

ORIGIN ID: JOTA (313) 544-7117
FUTURENET GROUP, INC.
12801 AUBURN ST
DETROIT, MI 482233413
UNITED STATES US

SHIP DATE: 18OCT11
ACTWGT: 46.3 LB
CAD: /DFFC1242
DIMS: 24x14x14 IN
BILL SENDER

TO SAMPLE RECIEVING
TEST AMERICA
301 ALPHA DRIVE

PITTSBURG PA 15238
(412) 963-7058 REF:
INV: DEPT:
PO:

FedEx Express

2 of 3
MPS# 7957 5955 5857
0681
Mstr# 8741 9090 2355
020D

WED - 19 OCT A2
PRIORITY OVERNIGHT
DSR
15238
PIT
PA-US

NA AGCA

Part # 156297-435-SHX2 07/11 SDS
18/10 SDS
JT1201110050125

ORIGIN ID: JOTA (313) 544-7117
FUTURENET GROUP, INC.

12801 AUBURN ST

DETROIT, MI 482233413
UNITED STATES US

SHIP DATE: 18OCT11
ACTWGT: 86.5 LB
CAD: /OFFC1242
DIMS: 24x14x14 IN

BILL SENDER

TO SAMPLE RECIEVING
TEST AMERICA
301 ALPHA DRIVE

PITTSBURG PA 15238
(412) 963-7058

REF:
INV:
PO:
DEPT:

FedEx
Express

J1120110806G0125

WED - 19 OCT A2
PRIORITY OVERNIGHT
DSR
15238
PIT
PA-US

3 of 3
MPS# 7957 5955 5868
0681
Mstr# 8741 9090 2355
0200

NA AGCA

FedEx Express US Airbill

FedEx Tracking Number 8741 9090 2355

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 10/18/2011 Sender's FedEx Account Number 427870103

Sender's Name ALI AL SATTAR Phone 313 544 9417

Company Future Net Group, Inc.

Address 12801 Auburn Dept./Floor/Suite/Room

City Detroit, State MI ZIP 48223

2 Your Internal Billing Reference[1] 11655-004

3 To

Recipient's Name Sample Recieving Phone 412 963-7058

Company Test Amerika

Address 301 Alpha Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address RIDC PARK

Use this line for the HOLD location address or for continuation of your shipping address.

City Pittsburg State PA ZIP 15238

01 ☐ HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8741 9090 2355

4a Express Package Service • To most locations. *Packages up to 150 lbs.*

01 ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

06 ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.*

03 ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service •• To most locations. *Packages over 150 lbs.*

70 ☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 1Day Freight Booking No.

80 ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

83 ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging • Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☒ Sender — Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 3 Total Weight 50 lbs. [redacted] Credit Card Auth.

[1]Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

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4.00
0.50
2.90
1.30 # 2

180-5048

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Future Net Group	Client Project Manager: Ali Al-Saffar	Site Contact:	Lab Contact:	COC No:
Address: 12801 Auburn St.	Telephone: (313) 544-7117	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: Detroit, MI 48223	Email: alia@futurenetgroup.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: (313) 544-7117		TAT if different from below ____		Walk-in client ☐
Project Name: Calumet Harbor	Method of Shipment/Carrier:	☒ 3 weeks		Lab pickup ☐
Project Number: 11655-004	Shipping/Tracking No:	☐ 2 weeks		Lab sampling ☐
PO#		☐ 1 week		Job/SDG No:
		☐ 2 days		
		☐ 1 day		

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	Bulk chemistry	VOC	Grain Size	SPLP	Elutriate						Sample Specific Notes / Special Instructions:
CH-2011-MU3-G1	10/18	12:00			X										N	C	X	X	X								
CH-2011-MU3-G2	10/18	2:00			X										N	C	X	X	X								
CH-2011-MU3-G3	10/18	4:00			X										N	C	X	X	X								
CH-2011-MU3-comp	10/18	4:00		X	X										N	C				X	X						

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:
see SOW for analysis required

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dr. Ali Al-Saffar	FNG	10/18 7:00 pm		TDGA	10/19/11 1000
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Login Number: 5048

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Gamber, Tom

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FutureNet Group, Inc

Job Number: 180-5048-3

Login Number: 5048
List Number: 1
Creator: Holt, Jamie

List Source: TestAmerica Burlington
List Creation: 10/21/11 03:52 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9ºC, IR GUN ID 96, CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix J

QC/QA Narrative Summary / ITR Certificate

APPENDIX J

QUALITY ASSURANCE / QUALITY CONTROL CERTIFICATION

Every practical effort was made to meet the quality control requirements of the analytical method, and the detection level specifications of the project. Any problems encountered during the handling and / or analyses of the samples are addressed in the Statement of Data Qualifications (**Section 4**).

A case narrative is presented as part of the entire laboratory report. The detailed laboratory Quality Control Results are documented on pages:

- Test America Laboratory Analytical Report
  - Report ID# 180-5219-1(Revision 2): Page 3 and 75 through 145.
  - Report ID# 180-5048-1(Revision 3): Page 3 and 26 through 74.
  - Report ID# 180-5172-1(Revision 3): Page 3 and 4 and 48 through 104.
  - Report ID# 180-5048-3: Page 23 and 24.
  - Report ID# 180-5172-3: Page 38 and 39.
  - Report ID# 180-5219-3: Page 34 and 44.

- ECCS Mobile Laboratory Analytical Reports
  - Report ID# A114210 (Revision 1): Page 2 and 15 through 30.

Ali Al-Saffar, Ph.D., P.G.
Project Manager

5/22/2012
Date

James Finetti, P.G.
Senior Project Manager

5/22/2012
Date

APPENDIX J
COMPLETION OF INDEPENDENT TECHNICAL REVIEW

Ms. Mariah Hope and Mr. Henry Shah completed an independent technical review of the Sediment Sampling and Analysis Report for Calumet Harbor, Illinois.

Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing USACE policy.

5-22-12

Mariah Hope, P.E.
Project Manager

Date

5/23/12

Henry Shah
Executive Vice President

Date

APPENDIX J

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows:

- No major technical concerns were found.
- As noted above, all concerns resulting from an independent technical review of the project have been considered.

5/23/12

Henry Shah
Executive Vice President

Date

Calumet Harbor Dredged Material
Human Health Risk-Based Screening for Upland Beneficial Use Determination

Summary

Chemical testing of sediments from the Calumet Harbor was performed in order to assess the potential suitability of the dredged material for upland beneficial use (USACE 2011). The initial evaluation of this suitability for upland beneficial use involves comparison of sediment and aqueous phase synthetic precipitation leaching procedure (SPLP) concentrations to risk-based concentrations developed by the US and Illinois Environmental Protection Agencies (USEPA and IEPA, respectively). This is a standard approach for this type of evaluation (US ERDC 2007, 2012, and GLC 2004). These risk based concentrations were developed to be protective of human health under different scenarios where people would be exposed to potentially contaminated soils including residential and industrial properties and construction sites, or could be drinking potentially contaminated groundwater (USEPA 2012 and IEPA 2007).

On May 16, 2013, a discussion was held between the US Army Corps of Engineers (USACE) and Illinois EPA regarding the evaluation procedure needed to obtain Illinois EPA (IEPA) approval to use dredged material from Calumet Harbor in upland beneficial use settings, such as on recreational parkland (athletic fields), brownfields, roadbeds, and/or for structural fill or landfill cover. It was decided that if USACE would like blanket approval to use the dredged material in these types of upland setting where there is no ecological exposure component, the concentrations of constituents in the sediment must be compared to the lower of the lowest IEPA TACO Tier I soil remediation objective value (IEPA 2007) or the USEPA regional residential soil screening level (RSL) (USEPA 2012). The TACO Tier I evaluation includes a consideration of potential groundwater impacts from soil constituents. For metals, the results of the synthetic precipitation leaching procedure (SPLP) analyses were compared to the IEPA Class I Groundwater objectives as well as USEPA Maximum Contaminant Levels for drinking water. In addition, concentrations of metals in Calumet Harbor sediments were compared to the IEPA background soil concentrations presented in the TACO tables, as well as to concentrations of metals measured in streambed sediments by the US Geological Survey (USGS 2008), in order to assist in the determination of whether or not metal concentrations are significantly elevated in the Harbor sediments. Sediment concentrations of polyaromatic hydrocarbons, common organic contaminants from the incomplete combustion of fossil fuels, were also compared to Illinois soil background concentrations.

The results of this screening indicate that concentrations of most constituents measured in sediment and SPLP aqueous phases are below these risk and regulatory-based screening levels for protection of human health from exposure to soil and potential leaching of soil constituents to groundwater. A few of the sediment or aqueous phase SPLP results exceed the screening levels, and these are discussed below.

In conclusion, none of the constituents detected in Calumet Harbor sediments were as constituents of potential concern for upland beneficial use placement of dredged material from Calumet Harbor.

The screening results are presented and discussed below.

List of Tables

Table 1. Summary of Sediment Results and Risk Based Screening Level Exceedances
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Table 5a. Arsenic SPLP Results Statistical Evaluation from ProUCL
Table 5b. Mercury Sediment Results Statistical Evaluation from ProUCL
Table 5c. Benzo(b)fluoranthene Sediment Results Statistical Evaluation from ProUCL
Table 5d. Aroclor 1254 Sediment Results Statistical Evaluation from ProUCL
Table 5e. Total PCB Sediment Results Statistical Evaluation from ProUCL
Table 5f. Iron SPLP Results Statistical Evaluation from ProUCL
Table 5g. Lead SPLP Results Statistical Evaluation from ProUCL
Table 5h. Manganese SPLP Results Statistical Evaluation from ProUCL
Table 6a. Cook County Streambed Sediment Concentrations of Metals Measured by the USGS
Table 6b. Illinois County-Wide Average Streambed Sediment Concentrations of Metals (USGS)

Summary of exceedances of screening levels

As seen in Table 1, the following constituents fail the risk-based screening based on their sediment concentrations.

- 2 metals: arsenic and mercury
- 5 polyaromatic hydrocarbons (PAHs): benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene.
- 3 polychlorinated biphenyls (PCBs) fractions: Aroclors 1232, 1254, and total PCBs.

As seen in Table 2, the following constituents fail the risk-based screening levels based on their potential to partition to the aqueous phase (based on the synthetic precipitation leaching procedure SPLP).

- 4 metals: arsenic, iron, lead and manganese

Discussion of exceedances of screening levels and relevance for beneficial use determination

Arsenic sediment concentrations

All of the concentrations of arsenic measured in the Calumet Harbor sediment samples exceed the USEPA's risk based screening level of 0.39 mg/kg (Table 1). This USEPA regional screening level is a theoretically calculated value and does not take into account the naturally occurring concentrations of arsenic found in all soils and sediments. The Illinois TACO soil cleanup objectives for residential setting refers to the background concentrations of arsenic found in Illinois soil samples. This comparison was made in Table 3. The maximum sediment concentration of arsenic (10 mg/kg) is below both the metropolitan and non-metropolitan soil background concentrations (13 and 11.3 mg/kg, respectively) established by Illinois in the TACO.

Arsenic SPLP concentrations

Arsenic was detected in 9 of 13 aqueous phase SPLP samples analyzed from sediment samples (Table 2). The SPLP aqueous phase arsenic concentration from one of the discrete sediment samples (MU1-GNL) exceeds the USEPA's MCL of arsenic in drinking water. However, none of the SPLP aqueous phase concentrations from the 3 composite sediment samples exceed the MCL for arsenic (Table 4). In addition, the 95th upper confidence limit on the mean (UCL95) of the SPLP arsenic concentrations from these 9 samples was 0.008 mg/L (Table 5a), which is below the MCL. None of the arsenic SPLP aqueous phase concentrations is greater than the TACO Class I groundwater objective.

Therefore, arsenic is not considered a constituent of potential concern for upland beneficial use placement of dredged material from Calumet Harbor, from either direct contact with sediment or potential leaching to groundwater.

Mercury sediment concentrations

The concentrations of mercury in Calumet Harbor sediments range from 0.045 to 0.16 mg/kg. The 5 greatest sediment concentrations of mercury exceed the TACO construction worker inhalation objective of 0.1 mg/kg. None of the other screening levels for mercury are exceeded.

In explaining the mercury soil inhalation exposure objective, the Illinois included footnote "s" in Table B of Appendix B of the TACO which states that, "Value for Ingestion based on Reference Dose for Mercuric chloride (CAS No. 7487-94-7); value for Inhalation based on Reference Concentration for elemental Mercury (CAS No. 7439-97-6). Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern."

Although mercury speciation analysis was not performed on the sediment samples, the mercury measured in sediments is not likely elemental mercury, but rather mercuric or mercurous forms of mercury. This is because elemental mercury is highly volatile and would be expected to partition to the water and ultimately the air from the sediments if it were released in this form to sediments. According to the ATSDR Toxicological Profile for mercury (ATSDR 1999, Section 5.3, Environmental Fate),

> Section 5.3.2.2, Water: "[In surface water], at a pH of 4–9 and a normal sulfide concentration, mercury will form mercuric sulfide. This compound is relatively insoluble in aqueous solution (11×10^{-17} ppb), and therefore it will precipitate out and remove mercury ions from the water."
>
> Section 5.3.1, Transport and Partitioning: "In soils and surface waters, mercury can exist in the mercuric (Hg^{+2}) and mercurous (Hg^{+1}) states as a number of complex ions with varying water solubilities. Mercuric mercury, present as complexes and chelates with ligands, is probably the predominant form of mercury present in surface waters. The transport and partitioning of mercury in surface waters and soils is influenced by the particular form of the compound. More than 97% of the dissolved gaseous mercury found in water consists of elemental mercury (Vandal et al 1991). Volatile forms (e.g., metallic mercury

> and dimethylmercury) are expected to evaporate to the atmosphere, whereas solid forms partition to particulates in the soil or water column and are transported downward in the water column to the sediments (Hurley et al 1991). Vaporization of mercury from soils may be controlled by temperature, with emissions from contaminated soils being greater in warmer weather when soil microbial reduction of Hg^{+2} to the more volatile elemental mercury is greatest (Lindberg et al 1991). Vapor-phase mercury volatilized from surface waters has been measured (Schroeder and Fanaki 1988); however, the dominant process controlling the distribution of mercury compounds in the environment appears to be the sorption of nonvolatile forms to soil and sediment particulates, with little resuspension from the sediments back into the water column (Byran and Langston 1992).… Inorganic mercury sorbed to particulate material is not readily desorbed. Thus, freshwater and marine sediments are important repositories for inorganic forms of the element, and leaching is a relatively insignificant transport process in soils… Mobilization of sorbed mercury from particulates can occur through chemical or biological reduction to elemental mercury and bioconversion to volatile organic forms (Andersson 1979; Callahan et al 1979; USEPA 1984)."

Furthermore, although the concentrations of mercury in these sediment samples slightly exceed Illinois metropolitan and non-metropolitan background soil concentrations of mercury (Table 3), they do not exceed concentrations of mercury measured in streambed sediments throughout Cook County, as presented in Table 6a (USGS 2008). Outside of Cook County, average streambed sediment concentrations of mercury vary from 0.01 to 0.32 mg/kg (Table 6b). The 16 sediment sampling results were evaluated using the USEPA's ProUCL computer program (USEPA 2010). The data appears to be distributed normally, and so the program recommended use of the Student T's test for computing the 95UCL (Table 5b). This value was calculated as 0.102 mg/kg, which is within the range of county-wide average concentration of mercury in Illinois streambed sediments outside of Cook County. This UCL95 concentration of mercury is also essentially comparable to the TACO construction worker inhalation objective.

For all of these reasons, mercury is not considered a constituent of potential concern for upland beneficial use placement of dredged material from Calumet Harbor.

- The use of the inhalation exposure objective for the construction worker is not appropriate, as mercury in the sediments is not likely in the elemental (volatile) form. The USEPA RSL and TACO objectives based on the ingestion pathway are not exceeded.
- If the TACO construction worker inhalation soil remediation objective were appropriate to use, it is essentially equivalent to the UCL95 sediment concentration of mercury.

PAH sediment concentrations

Five PAHs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] were measured at concentrations that exceed the USEPA residential soil RSL (Table 1). In addition, the concentrations of benzo(a)pyrene and dibenz(a,h)anthracene exceed the TACO residential soil objectives as well. However, only a single sample result of any of these 5 PAHs exceeds any of the Illinois TACO background concentrations (Table 3). The maximum concentration of benzo(b)fluoranthene (0.81 mg/kg), detected from sample MU1-GNU, is slightly above the non-metropolitan background concentration (0.7 mg/kg) but is still below the background concentrations measure in Chicago and other metropolitan areas for this constituent. The 95UCL of benzo(b)fluoranthene concentrations is 0.539 mg/kg (Table 5c), which is below all Illinois soil background concentrations.

Because the 95UCL concentration is below all background values for benzo(b)fluoranthene, and all other PAH concentrations are below Illinois soil background concentrations, PAHs are not considered constituents of potential concern for upland beneficial use placement of dredged material from Calumet Harbor.

PCB sediment concentrations

Four different Aroclor mixtures (PCB-1016, PCB -1232, PCB-1248, and PCB-1254) were detected in sediments from the Calumet Harbor (Table 1). Aroclor 1254 was the only PCB detected in every sediment sample.

The concentrations of PCB-1016 and PCB-1248 were below the EPA RSL for these Aroclors.

The maximum concentrations of Aroclors 1232 and 1254 (0.29 mg/kg and 0.25 mg/kg respectively, both from sample MU1-GNU) exceed the USEPA regional screening level of 0.14 mg/kg and 0.22 mg/kg for these PCB Aroclor mixtures, respectively. Only 3 samples had detectable concentrations of Aroclor 1232. The average of these 3 detections of Aroclor 1232 (0.13 mg/kg) is below the USEPA RSL. Because of its low frequency of detection and because the average detected concentration of Aroclor 1232 is below the EPA RSL, it is not considered a contaminant of potential concern. The 95th upper confidence limit on the mean of Aroclor 1254 concentration is 0.074 mg/kg (Table 5d), which is below the RSL for Aroclor 1254.

Therefore, none of the individual Aroclors were measured in Calumet Harbor sediment at concentrations above their respective EPA residential soil RSLs.

The total detected concentration of PCBs (0.59 mg/kg from MU1-GNU) exceeds the USEPA RSL of 0.22 mg/kg for total PCBs. The UCL95 of total PCBs concentrations measured in Calumet Harbor sediments is 0.248 mg/kg (Table 5e) which is just above the RSL for total PCBs. However, since this UCL95 concentration is only approximately 13% greater than the EPA RSL, it still represents an approximately one in a million excess cancer risk, which is well within the USEPA's acceptable risk range. In addition, the most conservative toxicity criterion for PCBs was used by the USEPA in developing a total PCB RSL.

The toxicity criteria for total PCBs varies based on a range of toxicity criteria for the different PCB congeners and Aroclor mixtures (USEPA 1997). For total PCBs, it was assumed that the PCB congeners present are those that can pose high risk because they represent the more highly chlorinated congeners. The upper bound oral cancer slope factor was used in developing the RSL for total PCBs. A central estimate oral cancer slope factor is given, which is one-half the value of the upper bound slope factor. As seen in Table 6 from Appendix B of the Calumet Harbor Sampling Report (USACE 2011), the lower chlorinated Aroclors (1016 and 1232) make up a considerable fraction of the overall total PCBs measured in the Calumet Harbor sediments. Since the PCB mixtures detected in the Calumet Harbor sediment are on average only just over half Aroclor 1254 (one of the more highly chlorinated and toxic PCB mixtures), it may be more appropriate to use the central estimate oral cancer slope factor, rather than the upper bound oral cancer slope factor in assessing risk from exposure to the total PCB mixtures measured in the Calumet Harbor sediments. Using this central tendency oral cancer slope factor would lower the estimate of risk from exposure to total PCBs in Calumet Harbor sediments.

The Illinois TACO uses a single objective for total PCBs of 1 mg/kg, which is equivalent to the level specified in the Toxic Substances Control Act regulation 40 CFR 761 (USEPA 2001) as the soil cleanup objective for high occupancy areas without further conditions. This is considered a safe exposure level in terrestrial systems. The maximum detected total PCB concentration of 0.59 mg/kg is well below this level. No Aroclor-specific objectives are included in the Illinois TACO.

In conclusion, PCBs are not considered constituents of potential concern for upland beneficial use placement of dredged material from Calumet Harbor for the following 4 reasons:

- The UCL95 concentrations of the individual Aroclor mixtures are below their respective USEPA RSL for the individual Aroclors.
- The UCL95 concentration of total PCBs represents an acceptable cancer risk even when using the upper bound oral cancer slope factor.
- Use of the central estimate oral cancer slope factor for high risk and high persistent PCB mixtures may be more appropriate given that on average almost half the total PCBs measured in the Calumet Harbor are Aroclor mixtures with fewer chlorines and lower toxicity.
- The maximum total PCB concentration is well below the Illinois TACO value for total PCBs.

Iron SPLP concentrations

Iron was detected in the aqueous phase from all 12 of the samples for which SPLP analysis was conducted, all at concentrations greater than the USEPA's secondary MCL of 0.3 mg/L. National Secondary Drinking Water Regulations are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. USEPA recommends secondary standards to water systems but does not require systems to comply. The USEPA also sets RSL for tapwater, which represent levels of constituents that would not pose unacceptable health risks in potable water sources. The EPA RSL for tapwater for iron is 11 mg/L. None of the SPLP iron concentrations is above this health based value.

Illinois has not adopted the USEPA's secondary MCL as an enforceable standard. The Illinois TACO Class I Groundwater objective for iron is 5 mg/L. The maximum SPLP concentration of iron of 7.3 mg/L, from discrete sample MU1-GNL, is the only SPLP result that exceeds this TACO Class I Groundwater objective. None of the SPLP iron concentrations from the three composite samples exceeded the Illinois TACO Groundwater objective. The 95th upper confidence limit on the mean of iron SPLP concentrations from the 9 discrete samples is 3.5 mg/L (Table 5f), which is below the Illinois TACO Groundwater objective.

Iron is not considered a constituent of potential concern for groundwater impacts from upland beneficial use placement of dredged material from Calumet Harbor because the UCL95 of the SPLP iron concentrations across samples, as well as the SPLP concentrations from each of the composite samples, are all below the TACO Class I groundwater objective. In addition, none of the SPLP iron concentrations are above the EPA RSL for tapwater, which is a health-based screening level.

Lead SPLP concentrations

Lead was detected in the aqueous phase from all 12 of the samples for which SPLP analysis was conducted. The two greatest detections (from MU1-GNL and MU1-GNU) exceed the TACO Class 1 Groundwater objective, and the greatest detection (MU1-GNL) also exceeds the USEPA's Treatment Technique MCL for lead in drinking water. The USEPA explains that, "Lead is regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For lead, the action level is 0.015 mg/L." This lead MCL treatment technique action level is only exceeded in 1 of 12 total samples, or 1 of 9 discrete samples. None of the SPLP lead concentrations from the three composite samples exceeded the lead MCL (Table 4). The 95th upper confidence limit on the mean of lead SPLP concentrations from the 9 discrete samples is 0.037 mg/L (Table 5g), which is above both the USEPA MCL Treatment Technique Action Level and the Illinois TACO Class I Groundwater objective.

Because of these SPLP aqueous phase lead exceedances, the sediment concentrations of lead were re-evaluated. As indicated in Table 1, none of the sediment lead concentrations exceed any of the direct contact risk based concentrations. However, the average concentration of lead (37 mg/kg) and several of the individual lead sample concentrations (maximum concentration of 85 mg/kg) exceed TACO soil background concentrations for lead in both metropolitan (36 mg/kg) and non-metropolitan areas (20.9 mg/kg) (Table 3). Although the concentrations of lead in these sediment samples is commensurate with sediment lead concentrations measured by the USGS throughout Cook County streambeds, (maximum of 182 mg/kg, Tables 6a and 6b), Cook County lead sediment concentrations are the greatest throughout Illinois (Table 6b). Therefore lead concentrations are ubiquitously elevated in Cook County sediments above typical soil concentrations of lead from unimpacted sites in Illinois, although not to a degree that would pose a direct contact human health risk.

Although there are some discrete sample results and UCL95 concentrations of SPLP aqueous phase concentrations that exceed groundwater drinking water standards, the composite sediment samples do not result in SPLP concentrations above either the TACO Class 1 Groundwater objective nor the MCL Treatment Technique Action Level. The composite sediment samples would be the most representative of the average bulk sediment concentrations resulting from placement of dredged material. In addition,

these possible lead impacts to a drinking water source would be greatly diminished if the potential for the leachate concentrations to be diluted prior to reaching any drinking water source were also considered. Therefore lead should not be considered a constituent of potential concern for groundwater impacts from upland beneficial use placement of dredged material from Calumet Harbor.

Manganese SPLP concentrations

Manganese was detected in the aqueous phase from all 12 of the samples for which SPLP analysis was conducted. The maximum detected aqueous phase concentration of 0.15 mg/L (from MU1-GNL) is greater than the USEPA's secondary MCL of 0.05 mg/L. None of the SPLP manganese concentrations from the three composite samples exceeded the manganese Secondary MCL. None of the aqueous phase samples (from either composite or discrete sediment samples) exceed the Illinois TACO Class I Groundwater objective of 0.15 mg/L. The 95UCL of manganese SPLP concentrations from the 9 discrete samples is 0.097 mg/L (Table 5h), which is below the Illinois TACO Class I Groundwater objective, although it is above the USEPA's secondary MCL. The USEPA's secondary MCL for manganese was developed based on the potential for manganese to produce water that is has a black to brown color, a bitter metallic taste, and/or produce a black staining. The USEPA also sets RSL for tapwater, which represent levels of constituents that would not pose unacceptable health risks in potable water sources. The EPA RSL for tapwater for manganese is 0.32 mg/L. None of the SPLP manganese concentrations are above this health based value.

For the following 3 reasons, manganese is not considered a constituent of potential concern for groundwater impacts from upland beneficial use placement of dredged material from Calumet Harbor.

- None of the SPLP manganese concentrations from the 3 composite sediment samples, which represent average sediment concentrations across the 3 different dredged material management units exceeds any of the screening levels, including the secondary USEPA MCL and the Illinois TACO value.
- The maximum SPLP manganese concentration does not exceed the Illinois TACO Class I groundwater objective.
- None of the SPLP manganese concentrations are above the EPA RSL for tapwater, which is a health based screening level.

Conclusion

In summary, some of the individual sediment or aqueous phase SPLP concentrations exceed either the IEPA TACO or the EPA RSLs, developed to be protective of human health in various industrial or residential settings. However, some of the constituents are either naturally occurring (metals) or are found at low ambient levels throughout most soils (PAHs), and so should not be considered a health threat when compared to background soil and/or streambed sediments concentrations of these constituents measured across Illinois. In addition, when results from composite samples or UCL95 concentrations are considered, these estimates of the average sediment or SPLP concentrations are generally below the most appropriate risk and regulatory based screening levels for protection of human health in Illinois. Therefore, no constituents of potential concern are identified that would

preclude placement of sediments dredged from the Calumet Harbor to be used beneficially in an upland setting in Illinois.

If the dredged sediments are to be placed in settings where environmental exposures are a concern, i.e., a wildlife refuge, wetlands, or ecosystem restoration project, then additional evaluation of potential environmental effects of these levels of sediment constituents should be made.

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US Army Corps of Engineers ®

Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Anions																						
Chloride	mg/kg	16	0	1.40E+01	2.60E+01	1.89E+01	MU1-G2	3-4.6	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Cyanide, Non-amenable	mg/kg	7	0	8.30E-01	2.10E+00	1.33E+00	MU2-GN	0.14-0.21	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E+01
FLUORIDE	mg/kg	16	1	6.60E-01	7.30E+00	2.75E+00	MU3-G1	0.21-0.31	0	-	-	0	-	-	0	4.70E+03	NS	NS	1.20E+04	NS	NS	3.10E+03
Nitrate as N	mg/kg	16	6	4.70E-01	9.40E-01	6.35E-01	MU1-GS	0.086-0.13	0	-	-	0	-	-	0	1.30E+05	NS	NS	3.30E+05	NS	NS	1.30E+05
SULFATE	mg/kg	16	0	1.70E+01	2.40E+02	1.01E+02	MU1-GS	1.6-2.5	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Total Phosphate	mg/kg	16	0	1.40E+02	4.30E+02	3.16E+02	MU1-GNU	0.7-1.1	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Herbicides, Acide																						
2,4,5-T	mg/kg	19	19	-	-	-	-	0.0035-0.034	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+02
2,4-D	mg/kg	19	19	-	-	-	-	0.0077-0.027	0	-	0	0	-	0	0	7.80E+02	NS	1.50E+00	2.00E+03	NS	1.50E+00	6.90E+02
2,4-DB	mg/kg	3	3	-	-	-	-	0.022-0.027	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	4.90E+02
Acifluorfen	mg/kg	3	3	-	-	-	-	0.029-0.036	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Bentazon	mg/kg	3	3	-	-	-	-	0.009-0.011	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.80E+03
Bromoxynil	mg/kg	3	3	-	-	-	-	0.0053-0.0065	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.20E+03
Dacthal	mg/kg	3	3	-	-	-	-	0.0067-0.0082	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+02
Dalapon	mg/kg	19	19	-	-	-	-	0.01-0.086	0	-	0	0	-	0	0	2.30E+03	NS	8.50E-01	6.10E+03	NS	8.50E-01	1.80E+03
Dicamba	mg/kg	3	3	-	-	-	-	0.012-0.015	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.80E+03
Dichlorprop	mg/kg	3	3	-	-	-	-	0.012-0.015	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Dinoseb	mg/kg	19	19	-	-	-	-	0.0064-0.013	0	-	0	0	-	0	0	7.80E+01	NS	3.40E-01	2.00E+02	NS	3.40E-01	6.10E+01
MCPA	mg/kg	3	3	-	-	-	-	0.0079-0.0098	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.10E+01
MCPP	mg/kg	3	3	-	-	-	-	0.014-0.018	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+01
Pentachlorophenol	mg/kg	19	19	-	-	-	-	**0.0084-0.061**	0	-	0	0	-	0	0	3.00E+00	NS	3.00E-02	5.20E+02	NS	3.00E-02	8.90E-01
Picloram	mg/kg	3	3	-	-	-	-	0.0098-0.012	0	-	0	0	-	0	0	5.50E+03	NS	2.00E+00	1.40E+04	NS	2.00E+00	4.30E+03
SILVEX (2,4,5-TP)	mg/kg	19	19	-	-	-	-	0.003-0.011	0	-	0	0	-	0	0	6.30E+02	NS	1.10E+01	1.60E+03	NS	1.10E+01	4.90E+02
Triclopyr	mg/kg	3	3	-	-	-	-	0.01-0.013	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Herbicides, Base Neutral																						
Acetochlor	mg/kg	3	3	-	-	-	-	0.015-0.019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.20E+03
Alachlor	mg/kg	3	3	-	-	-	-	0.015-0.019	0	-	0	0	-	0	0	8.00E+00	NS	4.00E-02	1.60E+03	NS	4.00E-02	8.70E+00
Butylate	mg/kg	3	3	-	-	-	-	0.015-0.019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.10E+03
Chlorpyrifos	mg/kg	3	3	-	-	-	-	0.0062-0.0077	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+01
Cyanazine	mg/kg	3	3	-	-	-	-	0.023-0.029	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.80E-01
Deisopropylatrazine	mg/kg	3	3	-	-	-	-	0.02-0.025	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS

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Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
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Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Herbicides, Base Neutral																						
Desethylatrazine	mg/kg	3	3	-	-	-	-	0.011-0.014	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Dimethenamid	mg/kg	3	3	-	-	-	-	0.0065-0.008	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
EPTC	mg/kg	3	3	-	-	-	-	0.0081-0.0099	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.00E+03
Metolachlor	mg/kg	3	3	-	-	-	-	0.0046-0.0057	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	9.20E+03
Metribuzin	mg/kg	3	3	-	-	-	-	0.0088-0.011	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E+03
Pendimethalin	mg/kg	3	3	-	-	-	-	0.006-0.0075	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.40E+03
Prometon	mg/kg	3	3	-	-	-	-	0.019-0.023	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	9.20E+02
Propazine	mg/kg	3	3	-	-	-	-	0.0088-0.011	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.20E+03
Simazine	mg/kg	3	3	-	-	-	-	0.012-0.015	0	-	0	0	-	0	0	3.90E+02	NS	4.00E-02	1.00E+03	NS	4.00E-02	4.10E+00
Trifluralin	mg/kg	3	3	-	-	-	-	0.0062-0.0077	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.30E+01
Metals																						
ANTIMONY	mg/kg	16	0	1.40E-01	5.40E-01	2.93E-01	MU1-GNL	0.0018-0.0027	0	-	-	0	-	-	0	3.10E+01	NS	NS	8.20E+01	NS	NS	3.10E+01
ARSENIC	mg/kg	16	0	3.70E+00	1.00E+01	6.12E+00	MU1-GNL	0.012-0.019	-	0	-	0	0	-	16	NS	7.50E+02	NS	6.10E+01	2.50E+04	NS	3.90E-01
BARIUM	mg/kg	16	0	1.50E+01	3.80E+01	2.66E+01	MU2-GN	0.0074-0.011	0	0	-	0	0	-	0	5.50E+03	6.90E+05	NS	1.40E+04	8.70E+05	NS	1.50E+04
BERYLLIUM	mg/kg	16	0	2.50E-01	5.90E-01	4.06E-01	MU2-GN	0.0052-0.0079	0	0	-	0	0	-	0	1.60E+02	1.30E+03	NS	4.10E+02	4.40E+04	NS	1.60E+02
BORON	mg/kg	16	0	9.10E+00	1.60E+01	1.27E+01	3 Locations	0.026-0.039	0	-	-	0	-	-	0	1.60E+04	NS	NS	4.10E+04	NS	NS	1.60E+04
CADMIUM	mg/kg	16	0	2.40E-01	8.00E-01	4.67E-01	2 Locations	0.0048-0.0074	0	0	-	0	0	-	0	7.80E+01	1.80E+03	NS	2.00E+02	5.90E+04	NS	7.00E+01
CALCIUM	mg/kg	16	0	5.70E+04	8.90E+04	7.43E+04	MU2-GS	0.92-1.4	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Chromium, Total	mg/kg	16	0	1.10E+01	3.20E+01	1.87E+01	MU2-GN	0.0042-0.0064	0	0	-	0	0	-	-	2.30E+02	2.70E+02	NS	4.10E+03	6.90E+02	NS	NS
Chromium, VI	mg/kg	16	16	-	-	-	-	0.14-0.21	0	0	-	0	0	-	0	2.30E+02	2.70E+02	NS	4.10E+03	6.90E+02	NS	2.90E-01
COBALT	mg/kg	16	0	4.60E+00	8.50E+00	6.39E+00	MU2-GN	0.001-0.0016	0	-	-	0	-	-	0	4.70E+03	NS	NS	1.20E+04	NS	NS	2.30E+01
COPPER	mg/kg	16	0	1.20E+01	3.40E+01	2.19E+01	MU2-GN	0.023-0.035	0	-	-	0	-	-	0	2.90E+03	NS	NS	8.20E+03	NS	NS	3.10E+03
Cyanide, Amenable	mg/kg	16	16	-	-	-	-	0.5-0.5	0	-	-	0	-	-	0	1.60E+03	NS	NS	4.10E+03	NS	NS	2.20E+01
IRON	mg/kg	16	0	1.10E+04	4.30E+04	2.04E+04	MU1-GNU	0.25-3	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.50E+04
LEAD	mg/kg	16	0	1.70E+01	8.50E+01	3.73E+01	MU1-GNU	0.0026-0.004	0	-	-	0	-	-	0	4.00E+02	NS	NS	7.00E+02	NS	NS	4.00E+02
MAGNESIUM	mg/kg	16	0	2.70E+04	4.40E+04	3.59E+04	MU3-G2	0.13-0.2	0	-	-	0	-	-	-	3.25E+05	NS	NS	7.30E+05	NS	NS	NS
MANGANESE	mg/kg	16	0	3.60E+02	7.30E+02	5.39E+02	MU2-GN	0.0071-0.011	0	0	-	0	0	-	0	1.60E+03	6.90E+04	NS	4.10E+03	8.70E+03	NS	1.80E+03
MERCURY	mg/kg	16	0	4.50E-02	1.60E-01	8.68E-02	MU1-GNL	0.0076-0.011	0	0	-	0	5	-	0	2.30E+01	1.00E+01	NS	6.10E+01	1.00E-01	NS	1.00E+01
NICKEL	mg/kg	16	0	9.20E+00	2.20E+01	1.45E+01	MU2-GN	0.0078-0.012	0	0	-	0	0	-	0	1.60E+03	1.30E+04	NS	4.10E+03	4.40E+05	NS	1.50E+03
POTASSIUM	mg/kg	16	0	9.90E+02	1.90E+03	1.43E+03	MU1-G1	0.94-1.4	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
SELENIUM	mg/kg	16	0	2.70E-01	6.30E-01	4.49E-01	MU2-GN	0.035-0.053	0	-	-	0	-	-	0	3.90E+02	NS	NS	1.00E+03	NS	NS	3.90E+02

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Metals																						
SILVER	mg/kg	16	0	5.20E-02	2.50E-01	1.19E-01	MU1-GNU	0.0027-0.0041	0	-	-	0	-	-	0	3.90E+02	NS	NS	1.00E+03	NS	NS	3.90E+02
SODIUM	mg/kg	16	0	1.20E+02	1.80E+02	1.57E+02	2 Locations	0.94-1.4	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
THALLIUM	mg/kg	16	0	1.80E-01	5.30E-01	3.09E-01	MU1-GNL	0.0014-0.0021	0	-	-	0	-	-	0	6.30E+00	NS	NS	1.60E+02	NS	NS	7.80E-01
VANADIUM	mg/kg	16	0	1.40E+01	2.50E+01	1.89E+01	MU2-GN	0.0055-0.0083	0	-	-	0	-	-	0	5.50E+02	NS	NS	1.40E+03	NS	NS	3.90E+02
ZINC	mg/kg	16	0	5.20E+01	1.90E+02	9.39E+01	MU1-GNU	0.045-0.068	0	-	-	0	-	-	0	2.30E+04	NS	NS	6.10E+04	NS	NS	2.30E+04
Organic, Semi-Volatile																						
2,2'-oxybis[1-chloropropane]	mg/kg	16	16	-	-	-	-	0.002-0.015	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	4.60E+00
2,4,5-TRICHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.01-0.073	0	-	0	0	-	0	0	7.80E+03	NS	2.70E+02	2.00E+05	NS	2.70E+02	6.10E+03
2,4,6-TRICHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.014-0.1	0	0	0	0	0	0	0	5.80E+01	2.00E+02	2.00E-01	1.10E+04	5.40E+02	2.00E-01	4.40E+01
2,4-DICHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.0019-0.014	0	-	0	0	-	0	0	2.30E+02	NS	1.00E+00	6.10E+02	NS	1.00E+00	1.80E+02
2,4-DIMETHYLPHENOL	mg/kg	16	16	-	-	-	-	0.015-0.11	0	-	0	0	-	0	0	1.60E+03	NS	9.00E+00	4.10E+04	NS	9.00E+00	1.20E+03
2,4-DINITROPHENOL	mg/kg	16	16	-	-	-	-	**0.11-0.82**	0	-	0	0	-	0	0	1.60E+02	NS	2.00E-01	4.10E+02	NS	2.00E-01	1.20E+02
2,4-DINITROTOLUENE	mg/kg	16	16	-	-	-	-	**0.0076-0.055**	0	-	0	0	-	0	0	9.00E-01	NS	8.00E-04	1.80E+02	NS	8.00E-04	1.60E+00
2,6-DINITROTOLUENE	mg/kg	16	16	-	-	-	-	**0.0097-0.071**	0	-	0	0	-	0	0	9.00E-01	NS	7.00E-04	1.80E+02	NS	7.00E-04	6.10E+01
2-CHLORONAPHTHALENE	mg/kg	16	16	-	-	-	-	0.002-0.014	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.30E+03
2-CHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.0077-0.056	0	0	0	0	0	0	0	3.90E+02	5.30E+04	4.00E+00	1.00E+04	5.30E+04	4.00E+00	3.90E+02
2-METHYLNAPHTHALENE	mg/kg	16	0	1.80E-02	1.30E-01	5.04E-02	MU1-GNL	0.0017-0.012	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.30E+02
2-Methylphenol	mg/kg	16	16	-	-	-	-	0.0066-0.048	0	-	0	0	-	0	0	3.90E+03	NS	1.50E+01	1.00E+05	NS	1.50E+01	3.10E+03
2-NITROANILINE	mg/kg	16	16	-	-	-	-	0.042-0.31	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+02
3,3'-DICHLOROBENZIDINE	mg/kg	16	16	-	-	-	-	**0.0099-0.072**	0	-	0	0	-	0	0	1.00E+00	NS	7.00E-03	2.80E+02	NS	7.00E-03	1.10E+00
4-CHLOROANILINE	mg/kg	16	16	-	-	-	-	0.0075-0.055	0	-	0	0	-	0	0	3.10E+02	NS	7.00E-01	8.20E+02	NS	7.00E-01	2.40E+00
ACENAPHTHENE	mg/kg	16	0	3.60E-02	9.50E-02	6.29E-02	MU1-GNU	0.0018-0.013	0	-	0	0	-	0	0	4.70E+03	NS	5.70E+02	1.20E+05	NS	5.70E+02	3.40E+03
ACENAPHTHYLENE	mg/kg	16	0	2.00E-02	8.80E-02	4.26E-02	MU1-GNL	0.0021-0.016	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
ANTHRACENE	mg/kg	16	0	7.80E-02	2.90E-01	1.48E-01	MU1-GNL	0.0018-0.013	0	-	0	0	-	0	0	2.30E+04	NS	1.20E+04	6.10E+05	NS	1.20E+04	1.70E+04
Atrazine	mg/kg	19	19	-	-	-	-	**0.0081-0.067**	0	-	0	0	-	0	0	2.70E+03	NS	6.60E-02	7.10E+03	NS	6.60E-02	2.10E+00
Benzo[a]anthracene	mg/kg	16	0	1.90E-01	5.70E-01	3.84E-01	MU1-GNL	0.0024-0.017	0	-	0	0	-	0	16	9.00E-01	NS	2.00E+00	1.70E+02	NS	2.00E+00	1.50E-01
Benzo[a]pyrene	mg/kg	16	0	2.10E-01	6.10E-01	4.08E-01	MU1-GNU	0.0019-0.014	16	-	0	0	-	0	16	9.00E-02	NS	8.00E+00	1.70E+01	NS	8.00E+00	1.50E-02
Benzo[b]fluoranthene	mg/kg	16	0	2.00E-01	8.10E-01	4.71E-01	MU1-GNU	0.0029-0.022	0	-	0	0	-	0	16	9.00E-01	NS	5.00E+00	1.70E+02	NS	5.00E+00	1.50E-01
Benzo[k]fluoranthene	mg/kg	16	8	9.00E-02	2.60E-01	1.74E-01	MU1-G3	0.0038-0.028	0	-	0	0	-	0	0	9.00E+00	NS	4.90E+01	1.70E+03	NS	4.90E+01	1.50E+00
BENZOIC ACID	mg/kg	16	16	-	-	-	-	0.039-0.28	0	-	0	0	-	0	0	3.10E+05	NS	4.00E+02	8.20E+05	NS	4.00E+02	2.40E+05
BENZYL ALCOHOL	mg/kg	16	16	-	-	-	-	0.011-0.083	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03

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US Army Corps of Engineers ®

Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Organic, Semi-Volatile																						
Bis(2-chloroethyl)ether	mg/kg	16	16	-	-	-	-	0.0025-0.018	0	0	0	0	0	0	0	6.00E-01	2.00E-01	4.00E-04	7.50E+01	6.60E-01	4.00E-04	2.10E-01
BIS(2-ETHYLHEXYL) PHTHALATE	mg/kg	16	0	2.40E-02	2.40E-01	1.12E-01	MU3-G1	0.015-0.11	0	0	0	0	0	0	0	4.60E+01	3.10E+04	3.60E+03	4.10E+03	3.10E+04	3.60E+03	3.50E+01
Butyl benzyl phthalate	mg/kg	16	16	-	-	-	-	0.013-0.094	0	0	0	0	0	0	0	1.60E+04	9.30E+02	9.30E+02	4.10E+05	9.30E+02	9.30E+02	2.60E+02
CARBAZOLE	mg/kg	16	0	1.70E-02	4.50E-02	3.00E-02	MU3-G1	0.0017-0.013	0	-	0	0	-	0	-	3.20E+01	NS	6.00E-01	6.20E+03	NS	6.00E-01	NS
CHRYSENE	mg/kg	16	0	2.40E-01	6.40E-01	4.26E-01	MU1-GNU	0.0022-0.016	0	-	0	0	-	0	0	8.80E+01	NS	1.60E+02	1.70E+04	NS	1.60E+02	1.50E+01
DIBENZ(A,H)ANTHRACENE	mg/kg	16	0	1.50E-02	1.10E-01	6.63E-02	MU1-GNU	0.0021-0.015	2	-	0	0	-	0	15	9.00E-02	NS	2.00E+00	1.70E+01	NS	2.00E+00	1.50E-02
DIBENZOFURAN	mg/kg	16	2	1.90E-02	7.10E-02	4.01E-02	MU1-GNU	0.0092-0.067	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.80E+01
DIETHYL PHTHALATE	mg/kg	16	16	-	-	-	-	0.01-0.075	0	0	0	0	0	0	0	6.30E+04	2.00E+03	4.70E+02	1.00E+06	2.00E+03	4.70E+02	4.90E+04
DIMETHYL PHTHALATE	mg/kg	16	16	-	-	-	-	0.01-0.075	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
DI-N-BUTYL PHTHALATE	mg/kg	16	16	-	-	-	-	0.012-0.086	0	0	0	0	0	0	0	7.80E+03	2.30E+03	2.30E+03	2.00E+05	2.30E+03	2.30E+03	6.10E+03
Di-n-octyl phthalate	mg/kg	16	16	-	-	-	-	0.0099-0.072	0	0	0	0	0	0	0	1.60E+03	1.00E+04	1.00E+04	4.10E+03	1.00E+04	1.00E+04	7.30E+02
DMF	mg/kg	13	0	0.00E+00	0.00E+00	0.00E+00	13 Locations	-	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03
FLUORANTHENE	mg/kg	16	0	3.80E-01	8.60E-01	6.44E-01	MU3-G1	0.002-0.015	0	-	0	0	-	0	0	3.10E+03	NS	4.30E+03	8.20E+04	NS	4.30E+03	2.30E+03
FLUORENE	mg/kg	16	0	3.70E-02	1.50E-01	7.86E-02	MU1-GNL	0.0025-0.018	0	-	0	0	-	0	0	3.10E+03	NS	5.60E+02	8.20E+04	NS	5.60E+02	2.30E+03
HEXACHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.002-0.015	0	0	0	0	0	0	0	4.00E-01	1.00E+00	2.00E+00	7.80E+01	2.60E+00	2.00E+00	3.00E-01
HEXACHLOROCYCLOPENTADIENE	mg/kg	16	16	-	-	-	-	0.01-0.074	0	0	0	0	0	0	0	5.50E+02	1.00E+01	4.00E+02	1.40E+04	1.10E+00	4.00E+02	3.70E+02
HEXACHLOROETHANE	mg/kg	16	16	-	-	-	-	0.0067-0.049	0	-	0	0	-	0	0	7.80E+01	NS	5.00E-01	2.00E+03	NS	5.00E-01	1.20E+01
Indeno[1,2,3-cd]pyrene	mg/kg	16	0	1.20E-01	3.20E-01	2.17E-01	MU2-GN	0.0019-0.014	0	-	0	0	-	0	13	9.00E-01	NS	1.40E+01	1.70E+02	NS	1.40E+01	1.50E-01
ISOPHORONE	mg/kg	16	16	-	-	-	-	0.0071-0.052	0	0	0	0	0	0	0	1.56E+04	4.60E+03	8.00E+00	4.10E+05	4.60E+03	8.00E+00	5.10E+02
Methylphenol, 3 & 4	mg/kg	16	5	1.30E-02	1.70E-01	8.14E-02	MU1-GNU	0.0092-0.067	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03
NAPHTHALENE	mg/kg	16	0	1.70E-02	1.90E-01	6.43E-02	MU1-GNL	0.0016-0.012	0	0	0	0	0	0	0	1.60E+03	1.70E+02	1.20E+01	4.10E+03	1.80E+00	1.20E+01	3.60E+00
NITROBENZENE	mg/kg	16	16	-	-	-	-	0.0078-0.057	0	0	0	0	0	0	0	3.90E+01	9.20E+01	1.00E-01	1.00E+03	9.40E+00	1.00E-01	4.80E+00
N-NITROSODI-N-PROPYLAMINE	mg/kg	16	16	-	-	-	-	0.0022-0.016	0	-	0	0	-	0	0	9.00E-02	NS	5.00E-05	1.80E+01	NS	5.00E-05	6.90E-02
N-NITROSODIPHENYLAMINE	mg/kg	16	16	-	-	-	-	0.0087-0.063	0	-	0	0	-	0	0	1.30E+02	NS	1.00E+00	2.50E+04	NS	1.00E+00	9.90E+01
PHENANTHRENE	mg/kg	16	0	2.70E-01	8.00E-01	5.07E-01	MU1-GNL	0.003-0.022	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
PHENOL	mg/kg	16	16	-	-	-	-	0.0022-0.016	0	-	0	0	-	0	0	2.30E+04	NS	1.00E+02	6.10E+04	NS	1.00E+02	1.80E+04
PYRENE	mg/kg	16	0	3.40E-01	1.00E+00	6.89E-01	MU1-GNU	0.0019-0.014	0	-	0	0	-	0	0	2.30E+03	NS	4.20E+03	6.10E+04	NS	4.20E+03	1.70E+03
Organic, Volatile																						
1,1,1,2-TETRACHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00081-0.0019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.90E+00
1,1,1-Trichloroethane	mg/kg	16	16	-	-	-	-	0.00053-0.0012	-	0	0	-	0	0	0	NS	1.20E+03	2.00E+00	NS	1.20E+03	2.00E+00	8.70E+03
1,1,2,2-TETRACHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00078-0.0018	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.60E-01

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Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Organic, Volatile																						
1,1,2-TRICHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00091-0.0021	0	0	0	0	0	0	0	3.10E+02	1.80E+03	2.00E-02	8.20E+03	1.80E+03	2.00E-02	1.10E+00
1,1-DICHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00063-0.0015	0	0	0	0	0	0	0	7.80E+03	1.30E+03	2.30E+01	2.00E+05	1.30E+02	2.30E+01	3.30E+00
1,1-DICHLOROETHENE	mg/kg	16	16	-	-	-	-	0.00092-0.0022	0	0	0	0	0	0	0	3.90E+03	2.90E+02	6.00E-02	1.00E+04	3.00E+00	6.00E-02	2.40E+02
1,2,4-TRICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00096-0.0022	0	0	0	0	0	0	0	7.80E+02	3.20E+03	5.00E+00	2.00E+03	9.20E+02	5.00E+00	2.20E+01
1,2,4-TRIMETHYLBENZENE	mg/kg	16	16	-	-	-	-	0.00071-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.20E+01
1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	16	16	-	-	-	-	0.00082-0.0019	0	0	0	0	0	0	0	4.60E-01	1.10E+01	2.00E-03	8.90E+01	1.10E-01	2.00E-03	5.40E-03
1,2-Dibromoethane	mg/kg	16	16	-	-	-	-	**0.00094-0.0022**	0	0	0	0	0	0	0	3.20E-01	6.00E-02	4.00E-04	6.20E+01	1.60E-01	4.00E-04	3.40E-02
1,2-DICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00087-0.002	0	0	0	0	0	0	0	7.00E+03	5.60E+02	1.70E+01	1.80E+04	3.10E+02	1.70E+01	1.90E+03
1,2-DICHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00067-0.0016	0	0	0	0	0	0	0	7.00E+00	4.00E-01	2.00E-02	1.40E+03	9.90E-01	2.00E-02	4.30E-01
1,2-DICHLOROPROPANE	mg/kg	16	16	-	-	-	-	0.00059-0.0014	0	0	0	0	0	0	0	9.00E+00	1.50E+01	3.00E-02	1.80E+03	5.00E-01	3.00E-02	9.40E-01
1,3,5-Trimethylbenzene	mg/kg	16	16	-	-	-	-	0.00073-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.80E+02
1,3-DICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00071-0.0017	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
1,4-DICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00069-0.0016	-	0	0	-	0	0	0	NS	1.10E+04	2.00E+00	NS	3.40E+02	2.00E+00	2.40E+00
2-Butanone (MEK)	mg/kg	16	16	-	-	-	-	0.00096-0.0022	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.80E+04
4-Methyl-2-pentanone (MIBK)	mg/kg	16	16	-	-	-	-	0.00071-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.30E+03
ACETONE	mg/kg	16	6	1.30E-02	2.80E-02	1.99E-02	MU1-GNU	0.0054-0.013	0	0	0	-	0	0	0	7.00E+04	1.00E+05	2.50E+01	NS	1.00E+05	2.50E+01	6.10E+04
ACROLEIN	mg/kg	16	16	-	-	-	-	0.0077-0.018	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E-01
BENZENE	mg/kg	16	16	-	-	-	-	0.00074-0.0017	0	0	0	0	0	0	0	1.20E+01	8.00E-01	3.00E-02	2.30E+03	2.20E+00	3.00E-02	1.10E+00
BROMODICHLOROMETHANE	mg/kg	16	16	-	-	-	-	0.00061-0.0014	0	0	0	0	0	0	0	1.00E+01	3.00E+03	6.00E-01	2.00E+03	3.00E+03	6.00E-01	2.70E-01
BROMOFORM	mg/kg	16	16	-	-	-	-	0.00048-0.0011	0	0	0	0	0	0	0	8.10E+01	5.30E+01	8.00E-01	1.60E+04	1.40E+02	8.00E-01	6.20E+01
BROMOMETHANE	mg/kg	16	16	-	-	-	-	0.0008-0.0019	0	0	0	0	0	0	0	1.10E+02	1.00E+01	2.00E-01	1.00E+03	3.90E+00	2.00E-01	7.30E+00
CARBON DISULFIDE	mg/kg	16	16	-	-	-	-	0.00056-0.0013	0	0	0	0	0	0	0	7.80E+03	7.20E+02	3.20E+01	2.00E+04	9.00E+00	3.20E+01	8.20E+02
CARBON TETRACHLORIDE	mg/kg	16	16	-	-	-	-	0.00049-0.0011	0	0	0	0	0	0	0	5.00E+00	3.00E-01	7.00E-02	4.10E+02	9.00E-01	7.00E-02	6.10E-01
CHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00083-0.0019	0	0	0	0	0	0	0	1.60E+03	1.30E+02	1.00E+00	4.10E+03	1.30E+00	1.00E+00	2.90E+02
CHLOROETHANE	mg/kg	16	16	-	-	-	-	0.0017-0.0039	0	0	0	0	0	0	0	1.60E+03	1.30E+02	1.00E+00	4.10E+03	1.30E+00	1.00E+00	1.50E+04
CHLOROFORM	mg/kg	16	16	-	-	-	-	0.00064-0.0015	0	0	0	0	0	0	0	1.00E+02	3.00E-01	6.00E-01	2.00E+03	7.60E-01	6.00E-01	2.90E-01
cis-1,2-Dichloroethene	mg/kg	16	16	-	-	-	-	0.00077-0.0018	0	0	0	0	0	0	0	7.80E+02	1.20E+03	4.00E-01	2.00E+04	1.20E+03	4.00E-01	1.60E+02
CIS-1,3-DICHLOROPROPENE	mg/kg	16	16	-	-	-	-	0.00074-0.0017	0	0	0	0	0	0	0	6.40E+00	1.10E+00	4.00E-03	1.20E+03	3.90E-01	4.00E-03	1.70E+00
CYCLOHEXANE	mg/kg	16	16	-	-	-	-	0.0004-0.00095	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.00E+03
DIBROMOCHLOROMETHANE	mg/kg	16	16	-	-	-	-	0.00077-0.0018	0	0	0	0	0	0	0	1.60E+03	1.30E+03	4.00E-01	4.10E+04	1.30E+03	4.00E-01	6.80E-01
ETHYLBENZENE	mg/kg	16	16	-	-	-	-	0.0007-0.0016	0	0	0	0	0	0	0	7.80E+03	4.00E+02	1.30E+01	2.00E+04	5.80E+01	1.30E+01	5.40E+00
HEXACHLOROBUTADIENE	mg/kg	16	16	-	-	-	-	0.0012-0.0029	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.20E+00

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Organic, Volatile																						
Hexane	mg/kg	16	13	1.10E-03	3.20E-03	2.30E-03	MU1-G1	0.0011-0.0026	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.70E+02
Isopropylbenzene	mg/kg	16	16	-	-	-	-	0.00074-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.10E+03
Methyl tert-butyl ether	mg/kg	16	16	-	-	-	-	0.00081-0.0019	0	0	0	0	0	0	0	7.80E+02	8.80E+03	3.20E-01	2.00E+03	1.40E+02	3.20E-01	4.30E+01
METHYLENE CHLORIDE	mg/kg	16	11	1.60E-03	4.50E-03	2.90E-03	MU3-G2	0.00073-0.0017	0	0	0	0	0	0	0	8.50E+01	1.30E+01	2.00E-02	1.20E+04	3.40E+01	2.00E-02	5.60E+01
m-Xylene & p-Xylene	mg/kg	16	16	-	-	-	-	0.0016-0.0037	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
n-Butyl alcohol	mg/kg	16	16	-	-	-	-	0.036-0.084	0	0	0	0	0	0	0	7.80E+03	1.00E+04	1.70E+01	2.00E+05	1.00E+04	1.70E+01	6.10E+03
N-PROPYLBENZENE	mg/kg	16	16	-	-	-	-	0.00083-0.0019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.40E+03
o-Xylene	mg/kg	16	16	-	-	-	-	0.00085-0.002	0	0	0	0	0	0	0	1.60E+04	4.10E+02	1.90E+02	4.10E+04	6.50E+00	1.90E+02	6.90E+02
STYRENE	mg/kg	16	16	-	-	-	-	0.00077-0.0018	0	0	0	0	0	0	0	1.60E+04	1.50E+03	4.00E+00	4.10E+04	4.30E+02	4.00E+00	6.30E+03
Tetrachloroethene	mg/kg	16	16	-	-	-	-	0.00074-0.0017	0	0	0	0	0	0	0	1.20E+01	1.10E+01	6.00E-02	2.40E+03	2.80E+01	6.00E-02	2.20E+01
TOLUENE	mg/kg	16	16	-	-	-	-	0.00079-0.0019	0	0	0	0	0	0	0	1.60E+04	6.50E+02	1.20E+01	4.10E+05	4.20E+01	1.20E+01	5.00E+03
TRANS-1,2-DICHLOROETHENE	mg/kg	16	16	-	-	-	-	0.00065-0.0015	0	0	0	0	0	0	0	1.60E+03	3.10E+03	7.00E-01	4.10E+04	3.10E+03	7.00E-01	1.50E+02
TRANS-1,3-DICHLOROPROPENE	mg/kg	16	16	-	-	-	-	0.00065-0.0015	0	0	0	0	0	0	0	6.40E+00	1.10E+00	4.00E-03	1.20E+03	3.90E-01	4.00E-03	1.70E+00
Trichloroethene	mg/kg	16	16	-	-	-	-	0.00072-0.0017	0	0	0	0	0	0	0	5.80E+01	5.00E+00	6.00E-02	1.20E+03	1.20E+01	6.00E-02	9.10E-01
TRICHLOROFLUOROMETHANE	mg/kg	16	16	-	-	-	-	0.001-0.0023	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.90E+02
VINYL ACETATE	mg/kg	16	16	-	-	-	-	0.00039-0.0009	0	0	0	0	0	0	0	7.80E+04	1.00E+03	1.70E+02	2.00E+05	1.00E+01	1.70E+02	9.70E+02
VINYL CHLORIDE	mg/kg	16	16	-	-	-	-	0.00051-0.0012	0	0	0	0	0	0	0	4.60E-01	2.80E-01	1.00E-02	1.70E+02	1.10E+00	1.00E-02	6.00E-02
XYLENES, TOTAL	mg/kg	16	16	-	-	-	-	0.0024-0.0057	0	0	0	0	0	0	0	1.60E+04	3.20E+02	1.50E+02	4.10E+04	5.60E+00	1.50E+02	6.30E+02
Pesticides																						
2,4'-DDD	mg/kg	16	2	1.20E-03	2.10E-02	4.92E-03	MU1-GNU	0.00007-0.00011	0	-	0	0	-	0	0	3.00E+00	NS	1.60E+01	5.20E+02	NS	1.60E+01	2.00E+00
2,4'-DDE	mg/kg	16	16	-	-	-	-	0.00011-0.00016	0	-	0	0	-	0	0	2.00E+00	NS	5.40E+01	3.70E+02	NS	5.40E+01	1.40E+00
2,4'-DDT	mg/kg	16	16	-	-	-	-	0.0001-0.00015	0	-	0	0	0	0	0	2.00E+00	NS	3.20E+01	1.00E+02	2.10E+03	3.20E+01	1.70E+00
Chlordane (technical)	mg/kg	16	16	-	-	-	-	0.00051-0.00078	0	0	0	0	0	0	0	1.80E+00	7.20E+01	1.00E+01	1.00E+02	2.20E+01	1.00E+01	1.60E+00
Pesticides, N-Methyl Carbmate																						
3-Hydroxycarbofuran	mg/kg	6	6	-	-	-	-	0.0067-0.0082	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Aldicarb	mg/kg	6	6	-	-	-	-	0.0062-0.0077	0	-	0	0	-	0	0	7.80E+01	NS	1.30E-02	2.00E+02	NS	1.30E-02	6.10E+01
Aldicarb sulfone	mg/kg	6	6	-	-	-	-	0.006-0.0075	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+01
Aldicarb sulfoxide	mg/kg	6	6	-	-	-	-	0.0059-0.0073	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Carbaryl	mg/kg	6	6	-	-	-	-	0.0059-0.0073	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03
Carbofuran	mg/kg	6	6	-	-	-	-	0.0065-0.008	0	-	0	0	-	0	0	3.90E+02	NS	2.20E-01	1.00E+03	NS	2.20E-01	3.10E+02
Methiocarb	mg/kg	6	6	-	-	-	-	0.0068-0.0084	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS

1 - TACO Table A Resident Ingestion
2 - TACO Table A Resident Inhalation
3 - TACO Table A Groundwater Ingestion Exposure Route Class I
4 - TACO Table B Construction Worker Ingestion
5 - TACO Table B Construction Worker Inhalation
6 - TACO Table B Groundwater Ingestion Exposure Route Class I
7 - USEPA Residential Soil

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

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Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Pesticides, N-Methyl Carbmate																						
Methomyl	mg/kg	6	6	-	-	-	-	0.0057-0.0071	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E+03
Oxamyl	mg/kg	6	6	-	-	-	-	0.0057-0.0071	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E+03
Propoxur	mg/kg	6	6	-	-	-	-	0.0057-0.0071	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.40E+02
Pesticides, Organochlorine																						
4,4'-DDD	mg/kg	19	1	1.40E-03	1.10E-02	3.81E-03	MU1-COMP	0.00015-0.00096	0	-	0	0	-	0	0	3.00E+00	NS	1.60E+01	5.20E+02	NS	1.60E+01	2.00E+00
4,4'-DDE	mg/kg	19	1	6.90E-04	1.90E-02	4.46E-03	MU3-GS	0.00018-0.00075	0	-	0	0	-	0	0	2.00E+00	NS	5.40E+01	3.70E+02	NS	5.40E+01	1.40E+00
4,4'-DDT	mg/kg	19	4	5.70E-04	3.80E-02	6.38E-03	MU3-GS	0.00017-0.0012	0	-	0	0	0	0	0	2.00E+00	NS	3.20E+01	1.00E+02	2.10E+03	3.20E+01	1.70E+00
Aldrin	mg/kg	19	18	5.10E-04	5.10E-04	5.10E-04	MU1-GS	0.00021-0.00042	0	0	0	0	0	0	0	4.00E-02	3.00E+00	5.00E-01	6.10E+00	9.30E+00	5.00E-01	2.90E-02
alpha-BHC	mg/kg	19	19	-	-	-	-	0.00019-0.00042	0	0	0	0	0	0	0	1.00E-01	8.00E-01	5.00E-04	2.00E+01	2.10E+00	5.00E-04	7.70E-02
alpha-Chlordane	mg/kg	19	19	-	-	-	-	0.00023-0.00035	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
beta-BHC	mg/kg	19	19	-	-	-	-	0.0003-0.00048	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.70E-01
Chlordane (tech)	mg/kg	3	3	-	-	-	-	0.0068-0.0084	0	0	0	0	0	0	0	1.80E+00	7.20E+01	1.00E+01	1.00E+02	2.20E+01	1.00E+01	1.60E+00
delta-BHC	mg/kg	3	3	-	-	-	-	0.0012-0.0015	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Dieldrin	mg/kg	19	18	3.50E-04	3.50E-04	3.50E-04	MU3-G2	0.00019-0.00096	0	0	0	0	0	0	0	4.00E-02	1.00E+00	4.00E-03	7.80E+00	3.10E+00	4.00E-03	3.00E-02
Endosulfan I	mg/kg	19	17	4.50E-04	1.20E-03	8.25E-04	MU1-GNU	0.00022-0.00038	0	-	0	0	-	0	0	4.70E+02	NS	1.80E+01	1.20E+03	NS	1.80E+01	3.70E+02
Endosulfan II	mg/kg	19	19	-	-	-	-	0.00021-0.00075	0	-	0	0	-	0	0	4.70E+02	NS	1.80E+01	1.20E+03	NS	1.80E+01	3.70E+02
Endosulfan sulfate	mg/kg	19	18	6.40E-04	6.40E-04	6.40E-04	MU1-GNU	0.00012-0.0013	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Endrin	mg/kg	19	19	-	-	-	-	0.00023-0.0011	0	-	0	0	-	0	0	2.30E+01	NS	1.00E+00	6.10E+01	NS	1.00E+00	1.80E+01
Endrin aldehyde	mg/kg	19	19	-	-	-	-	0.00023-0.0017	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Endrin ketone	mg/kg	19	19	-	-	-	-	0.00018-0.00086	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
gamma-BHC (Lindane)	mg/kg	19	6	5.70E-04	3.80E-03	2.30E-03	MU1-G3	0.0002-0.00038	0	-	0	0	-	0	0	5.00E-01	NS	9.00E-03	9.60E+01	NS	9.00E-03	5.20E-01
gamma-Chlordane	mg/kg	19	19	-	-	-	-	0.00023-0.00036	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Heptachlor	mg/kg	19	19	-	-	-	-	0.00026-0.0025	0	0	0	0	0	0	0	1.00E-01	1.00E-01	2.30E+01	2.80E+01	1.60E+01	2.30E+01	1.10E-01
Heptachlor epoxide	mg/kg	19	17	3.80E-04	4.90E-04	4.35E-04	MU1-G3	0.00023-0.00042	0	0	0	0	0	0	0	7.00E-02	5.00E+00	7.00E-01	2.70E+00	1.30E+01	7.00E-01	5.30E-02
Methoxychlor	mg/kg	19	16	1.60E-03	2.80E-03	2.23E-03	MU3-GS	0.00024-0.0046	0	-	0	0	-	0	0	3.90E+02	NS	1.60E+02	1.00E+03	NS	1.60E+02	3.10E+02
Toxaphene	mg/kg	19	19	-	-	-	-	0.000077-0.012	0	0	0	0	0	0	0	6.00E-01	8.90E+01	3.10E+01	1.10E+02	2.40E+02	3.10E+01	4.40E-01
Polychlorinated Biphenyl																						
PCB-1016	mg/kg	16	1	9.30E-03	4.80E-02	2.20E-02	MU1-GNU	0.0017-0.0026	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.90E+00
PCB-1221	mg/kg	16	16	-	-	-	-	0.0022-0.0034	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.40E-01
PCB-1232	mg/kg	16	13	2.70E-02	2.90E-01	1.31E-01	MU1-GNU	0.002-0.003	-	-	-	-	-	-	1	NS	NS	NS	NS	NS	NS	1.40E-01
PCB-1242	mg/kg	16	16	-	-	-	-	0.0019-0.0029	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E-01

1 - TACO Table A Resident Ingestion
2 - TACO Table A Resident Inhalation
3 - TACO Table A Groundwater Ingestion Exposure Route Class I
4 - TACO Table B Construction Worker Ingestion
5 - TACO Table B Construction Worker Inhalation
6 - TACO Table B Groundwater Ingestion Exposure Route Class I
7 - USEPA Residential Soil

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

US Army Corps of Engineers ®

Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Polychlorinated Biphenyl																						
PCB-1248	mg/kg	16	14	4.00E-02	4.90E-02	4.45E-02	MU3-GN	0.0011-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E-01
PCB-1254	mg/kg	16	0	1.40E-02	2.50E-01	5.09E-02	MU1-GNU	0.0017-0.0025	-	-	-	-	-	-	1	NS	NS	NS	NS	NS	NS	2.20E-01
PCB-1260	mg/kg	16	16	-	-	-	-	0.0017-0.0025	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E-01
Polychlorinated biphenyls, Total	mg/kg	16	0	2.30E-02	5.90E-01	1.02E-01	MU1-GNU	0.0025-0.0039	0	-	-	0	-	-	1	1.00E+00	NS	NS	1.00E+00	NS	NS	2.20E-01

1 - TACO Table A Resident Ingestion
2 - TACO Table A Resident Inhalation
3 - TACO Table A Groundwater Ingestion Exposure Route Class I
4 - TACO Table B Construction Worker Ingestion
5 - TACO Table B Construction Worker Inhalation
6 - TACO Table B Groundwater Ingestion Exposure Route Class I
7 - USEPA Residential Soil

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

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Table 2: Summary of SPLP Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	Value 1	Value 2
Metals												
ANTIMONY	mg/L	12	11	3.40E-03	3.40E-03	3.40E-03	MU1-GNL	0.0013-0.0013	0	0	6.00E-03	6.00E-03
ARSENIC	mg/L	12	3	2.70E-03	2.30E-02	5.60E-03	MU1-GNL	0.0027-0.0027	0	1	5.00E-02	1.00E-02
BARIUM	mg/L	12	0	9.20E-03	2.40E-02	1.35E-02	MU1-GNL	0.00062-0.00062	0	0	2.00E+00	2.00E+00
BERYLLIUM	mg/L	12	12	-	-	-	-	0.00023-0.00023	0	0	4.00E-03	4.00E-03
BORON	mg/L	12	0	2.30E-01	5.10E-01	3.00E-01	MU1-GNL	0.0013-0.0013	0	-	2.00E+00	NS
CADMIUM	mg/L	12	10	2.10E-04	4.30E-04	3.20E-04	MU1-GNL	0.00013-0.00013	0	0	5.00E-03	5.00E-03
CALCIUM	mg/L	12	0	1.60E+01	2.20E+01	1.93E+01	2 Locations	0.0097-0.0097	-	-	NS	NS
Chromium, Total	mg/L	12	0	2.50E-03	7.40E-03	4.41E-03	MU1-GNL	0.00057-0.00057	0	0	1.00E-01	1.00E-01
Chromium, VI	mg/L	12	12	-	-	-	-	0.0017-0.0017	-	-	NS	NS
COBALT	mg/L	12	0	4.70E-04	2.40E-03	1.25E-03	MU1-GNL	0.0004-0.0004	0	-	1.00E+00	NS
COPPER	mg/L	12	2	2.70E-03	1.10E-02	4.83E-03	MU1-GNL	0.0027-0.0027	0	0	6.50E-01	1.30E+00
Cyanide, Amenable	mg/L	12	12	-	-	-	-	0.01-0.01	0	0	2.00E-01	2.00E-01
IRON	mg/L	12	0	8.20E-01	7.30E+00	1.91E+00	MU1-GNL	0.012-0.012	1	12	5.00E+00	3.00E-01
LEAD	mg/L	12	0	2.60E-03	5.70E-02	9.63E-03	MU1-GNL	0.0013-0.0013	2	1	7.50E-03	1.50E-02
MAGNESIUM	mg/L	12	0	2.00E+00	3.00E+00	2.47E+00	2 Locations	0.021-0.021	-	-	NS	NS
MANGANESE	mg/L	12	0	8.10E-03	1.50E-01	2.78E-02	MU1-GNL	0.00068-0.00068	0	1	1.50E-01	5.00E-02
MERCURY	mg/L	12	12	-	-	-	-	0.000038-0.000038	0	0	2.00E-03	2.00E-03
NICKEL	mg/L	12	3	1.70E-03	4.90E-03	2.54E-03	MU1-GNL	0.0016-0.0016	0	-	1.00E-01	NS
POTASSIUM	mg/L	12	1	8.50E-01	2.60E+00	1.27E+00	MU1-GNL	0.75-0.75	-	-	NS	NS
SELENIUM	mg/L	12	12	-	-	-	-	0.003-0.003	0	0	5.00E-02	5.00E-02
SILVER	mg/L	12	12	-	-	-	-	0.00068-0.00068	0	-	5.00E-02	NS
SODIUM	mg/L	12	0	1.80E+01	2.20E+01	1.88E+01	MU1-GNL	0.22-0.22	-	-	NS	NS
THALLIUM	mg/L	12	12	-	-	-	-	**0.0024-0.0024**	0	0	2.00E-03	2.00E-03
VANADIUM	mg/L	12	0	3.00E-03	8.60E-03	5.21E-03	MU1-GNL	0.0019-0.0019	0	-	4.90E-02	NS
ZINC	mg/L	12	0	7.30E-03	1.10E-01	2.11E-02	MU1-GNL	0.0025-0.0025	0	-	5.00E+00	NS

1 - TACO Table E - Groundwater Ingestion Route - Class I
2 - USEPA MCLs

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

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Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Anions						
Cyanide, Non-amenable						
MU1-GNL	mg/kg	335.1	1.70E+00	_	5.10E-01	5.00E-01
MU1-GNU	mg/kg	335.1	2.00E+00	_	5.10E-01	5.00E-01
MU1-GS	mg/kg	335.1	8.50E-01	_	5.10E-01	5.00E-01
MU2-GN	mg/kg	335.1	2.10E+00	_	5.10E-01	5.00E-01
MU2-GS	mg/kg	335.1	8.30E-01	_	5.10E-01	5.00E-01
MU3-GN	mg/kg	335.1	9.60E-01	_	5.10E-01	5.00E-01
MU3-GS	mg/kg	335.1	8.60E-01	_	5.10E-01	5.00E-01
SULFATE						
MU1-G1	mg/kg	300	1.90E+02	_	8.55E+01	1.10E+02
MU1-G2	mg/kg	300	4.00E+01	_	8.55E+01	1.10E+02
MU1-G3	mg/kg	300	5.50E+01	_	8.55E+01	1.10E+02
MU1-GNL	mg/kg	300	1.70E+01	_	8.55E+01	1.10E+02
MU1-GNU	mg/kg	300	9.70E+01	_	8.55E+01	1.10E+02
MU1-GS	mg/kg	300	2.40E+02	_	8.55E+01	1.10E+02
MU2-G1	mg/kg	300	1.50E+02	_	8.55E+01	1.10E+02
MU2-G2	mg/kg	300	6.90E+01	_	8.55E+01	1.10E+02
MU2-G3	mg/kg	300	2.20E+01	_	8.55E+01	1.10E+02
MU2-GN	mg/kg	300	1.70E+02	_	8.55E+01	1.10E+02
MU2-GS	mg/kg	300	8.80E+01	_	8.55E+01	1.10E+02
MU3-G1	mg/kg	300	5.60E+01	_	8.55E+01	1.10E+02
MU3-G2	mg/kg	300	3.50E+01	_	8.55E+01	1.10E+02
MU3-G3	mg/kg	300	4.10E+01	_	8.55E+01	1.10E+02
MU3-GN	mg/kg	300	1.40E+02	_	8.55E+01	1.10E+02
MU3-GS	mg/kg	300	2.00E+02	_	8.55E+01	1.10E+02
Metals						
ANTIMONY						
MU1-G1	mg/kg	6020	2.80E-01	_	4.00E+00	3.30E+00
MU1-G2	mg/kg	6020	2.50E-01	_	4.00E+00	3.30E+00
MU1-G3	mg/kg	6020	3.80E-01	_	4.00E+00	3.30E+00
MU1-GNL	mg/kg	6020	5.40E-01	_	4.00E+00	3.30E+00
MU1-GNU	mg/kg	6020	5.00E-01	_	4.00E+00	3.30E+00
MU1-GS	mg/kg	6020	1.60E-01	_	4.00E+00	3.30E+00
MU2-G1	mg/kg	6020	2.60E-01	_	4.00E+00	3.30E+00
MU2-G2	mg/kg	6020	1.70E-01	_	4.00E+00	3.30E+00
MU2-G3	mg/kg	6020	1.40E-01	_	4.00E+00	3.30E+00
MU2-GN	mg/kg	6020	5.00E-01	_	4.00E+00	3.30E+00
MU2-GS	mg/kg	6020	1.70E-01	_	4.00E+00	3.30E+00
MU3-G1	mg/kg	6020	3.30E-01	_	4.00E+00	3.30E+00
MU3-G2	mg/kg	6020	2.70E-01	_	4.00E+00	3.30E+00
MU3-G3	mg/kg	6020	3.10E-01	_	4.00E+00	3.30E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

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Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
ANTIMONY						
MU3-GN	mg/kg	6020	2.10E-01	_	4.00E+00	**3.30E+00**
MU3-GS	mg/kg	6020	2.10E-01	_	4.00E+00	**3.30E+00**
ARSENIC						
MU1-G1	mg/kg	6020	7.10E+00	_	1.30E+01	**1.13E+01**
MU1-G2	mg/kg	6020	6.20E+00	_	1.30E+01	**1.13E+01**
MU1-G3	mg/kg	6020	6.80E+00	_	1.30E+01	**1.13E+01**
MU1-GNL	mg/kg	6020	1.00E+01	_	1.30E+01	**1.13E+01**
MU1-GNU	mg/kg	6020	9.80E+00	_	1.30E+01	**1.13E+01**
MU1-GS	mg/kg	6020	4.00E+00	_	1.30E+01	**1.13E+01**
MU2-G1	mg/kg	6020	5.20E+00	_	1.30E+01	**1.13E+01**
MU2-G2	mg/kg	6020	3.70E+00	_	1.30E+01	**1.13E+01**
MU2-G3	mg/kg	6020	3.90E+00	_	1.30E+01	**1.13E+01**
MU2-GN	mg/kg	6020	9.20E+00	_	1.30E+01	**1.13E+01**
MU2-GS	mg/kg	6020	3.90E+00	_	1.30E+01	**1.13E+01**
MU3-G1	mg/kg	6020	5.80E+00	_	1.30E+01	**1.13E+01**
MU3-G2	mg/kg	6020	5.70E+00	_	1.30E+01	**1.13E+01**
MU3-G3	mg/kg	6020	5.80E+00	_	1.30E+01	**1.13E+01**
MU3-GN	mg/kg	6020	5.50E+00	_	1.30E+01	**1.13E+01**
MU3-GS	mg/kg	6020	5.30E+00	_	1.30E+01	**1.13E+01**
BARIUM						
MU1-G1	mg/kg	6020	3.30E+01	_	**1.10E+02**	1.22E+02
MU1-G2	mg/kg	6020	2.80E+01	_	**1.10E+02**	1.22E+02
MU1-G3	mg/kg	6020	3.00E+01	_	**1.10E+02**	1.22E+02
MU1-GNL	mg/kg	6020	3.70E+01	_	**1.10E+02**	1.22E+02
MU1-GNU	mg/kg	6020	3.50E+01	_	**1.10E+02**	1.22E+02
MU1-GS	mg/kg	6020	1.90E+01	_	**1.10E+02**	1.22E+02
MU2-G1	mg/kg	6020	2.40E+01	_	**1.10E+02**	1.22E+02
MU2-G2	mg/kg	6020	1.50E+01	_	**1.10E+02**	1.22E+02
MU2-G3	mg/kg	6020	1.70E+01	_	**1.10E+02**	1.22E+02
MU2-GN	mg/kg	6020	3.80E+01	_	**1.10E+02**	1.22E+02
MU2-GS	mg/kg	6020	2.00E+01	_	**1.10E+02**	1.22E+02
MU3-G1	mg/kg	6020	2.70E+01	_	**1.10E+02**	1.22E+02
MU3-G2	mg/kg	6020	2.60E+01	_	**1.10E+02**	1.22E+02
MU3-G3	mg/kg	6020	2.90E+01	_	**1.10E+02**	1.22E+02
MU3-GN	mg/kg	6020	2.50E+01	_	**1.10E+02**	1.22E+02
MU3-GS	mg/kg	6020	2.20E+01	_	**1.10E+02**	1.22E+02
BERYLLIUM						
MU1-G1	mg/kg	6020	4.90E-01	_	5.90E-01	**5.60E-01**
MU1-G2	mg/kg	6020	4.30E-01	_	5.90E-01	**5.60E-01**
MU1-G3	mg/kg	6020	4.60E-01	_	5.90E-01	**5.60E-01**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
BERYLLIUM						
MU1-GNL	mg/kg	6020	5.30E-01	_	5.90E-01	5.60E-01
MU1-GNU	mg/kg	6020	5.70E-01	_	5.90E-01	5.60E-01
MU1-GS	mg/kg	6020	2.70E-01	_	5.90E-01	5.60E-01
MU2-G1	mg/kg	6020	3.70E-01	_	5.90E-01	5.60E-01
MU2-G2	mg/kg	6020	2.50E-01	_	5.90E-01	5.60E-01
MU2-G3	mg/kg	6020	2.70E-01	_	5.90E-01	5.60E-01
MU2-GN	mg/kg	6020	5.90E-01	_	5.90E-01	5.60E-01
MU2-GS	mg/kg	6020	2.90E-01	_	5.90E-01	5.60E-01
MU3-G1	mg/kg	6020	4.10E-01	_	5.90E-01	5.60E-01
MU3-G2	mg/kg	6020	4.00E-01	_	5.90E-01	5.60E-01
MU3-G3	mg/kg	6020	4.00E-01	_	5.90E-01	5.60E-01
MU3-GN	mg/kg	6020	4.10E-01	_	5.90E-01	5.60E-01
MU3-GS	mg/kg	6020	3.60E-01	_	5.90E-01	5.60E-01
CADMIUM						
MU1-G1	mg/kg	6020	5.20E-01	_	6.00E-01	5.00E-01
MU1-G2	mg/kg	6020	4.40E-01	_	6.00E-01	5.00E-01
MU1-G3	mg/kg	6020	5.30E-01	_	6.00E-01	5.00E-01
MU1-GNL	mg/kg	6020	4.40E-01	_	6.00E-01	5.00E-01
MU1-GNU	mg/kg	6020	8.00E-01	_	6.00E-01	5.00E-01
MU1-GS	mg/kg	6020	3.00E-01	_	6.00E-01	5.00E-01
MU2-G1	mg/kg	6020	4.30E-01	_	6.00E-01	5.00E-01
MU2-G2	mg/kg	6020	3.20E-01	_	6.00E-01	5.00E-01
MU2-G3	mg/kg	6020	2.40E-01	_	6.00E-01	5.00E-01
MU2-GN	mg/kg	6020	8.00E-01	_	6.00E-01	5.00E-01
MU2-GS	mg/kg	6020	3.60E-01	_	6.00E-01	5.00E-01
MU3-G1	mg/kg	6020	5.40E-01	_	6.00E-01	5.00E-01
MU3-G2	mg/kg	6020	4.90E-01	_	6.00E-01	5.00E-01
MU3-G3	mg/kg	6020	4.60E-01	_	6.00E-01	5.00E-01
MU3-GN	mg/kg	6020	3.70E-01	_	6.00E-01	5.00E-01
MU3-GS	mg/kg	6020	4.30E-01	_	6.00E-01	5.00E-01
CALCIUM						
MU1-G1	mg/kg	6020	7.00E+04	_	9.30E+03	5.53E+03
MU1-G2	mg/kg	6020	6.60E+04	_	9.30E+03	5.53E+03
MU1-G3	mg/kg	6020	7.50E+04	_	9.30E+03	5.53E+03
MU1-GNL	mg/kg	6020	6.90E+04	_	9.30E+03	5.53E+03
MU1-GNU	mg/kg	6020	5.70E+04	_	9.30E+03	5.53E+03
MU1-GS	mg/kg	6020	6.20E+04	_	9.30E+03	5.53E+03
MU2-G1	mg/kg	6020	6.90E+04	_	9.30E+03	5.53E+03
MU2-G2	mg/kg	6020	7.80E+04	_	9.30E+03	5.53E+03
MU2-G3	mg/kg	6020	6.60E+04	_	9.30E+03	5.53E+03

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
CALCIUM						
MU2-GN	mg/kg	6020	7.40E+04	_	9.30E+03	5.53E+03
MU2-GS	mg/kg	6020	8.90E+04	_	9.30E+03	5.53E+03
MU3-G1	mg/kg	6020	7.90E+04	_	9.30E+03	5.53E+03
MU3-G2	mg/kg	6020	8.70E+04	_	9.30E+03	5.53E+03
MU3-G3	mg/kg	6020	8.40E+04	_	9.30E+03	5.53E+03
MU3-GN	mg/kg	6020	7.80E+04	_	9.30E+03	5.53E+03
MU3-GS	mg/kg	6020	8.50E+04	_	9.30E+03	5.53E+03
Chromium, Total						
MU1-G1	mg/kg	6020	2.20E+01	_	1.62E+01	1.30E+01
MU1-G2	mg/kg	6020	2.00E+01	_	1.62E+01	1.30E+01
MU1-G3	mg/kg	6020	2.10E+01	_	1.62E+01	1.30E+01
MU1-GNL	mg/kg	6020	1.70E+01	_	1.62E+01	1.30E+01
MU1-GNU	mg/kg	6020	2.90E+01	_	1.62E+01	1.30E+01
MU1-GS	mg/kg	6020	1.20E+01	_	1.62E+01	1.30E+01
MU2-G1	mg/kg	6020	1.70E+01	_	1.62E+01	1.30E+01
MU2-G2	mg/kg	6020	1.20E+01	_	1.62E+01	1.30E+01
MU2-G3	mg/kg	6020	1.10E+01	_	1.62E+01	1.30E+01
MU2-GN	mg/kg	6020	3.20E+01	_	1.62E+01	1.30E+01
MU2-GS	mg/kg	6020	1.20E+01	_	1.62E+01	1.30E+01
MU3-G1	mg/kg	6020	2.10E+01	_	1.62E+01	1.30E+01
MU3-G2	mg/kg	6020	1.90E+01	_	1.62E+01	1.30E+01
MU3-G3	mg/kg	6020	2.10E+01	_	1.62E+01	1.30E+01
MU3-GN	mg/kg	6020	1.70E+01	_	1.62E+01	1.30E+01
MU3-GS	mg/kg	6020	1.60E+01	_	1.62E+01	1.30E+01
COBALT						
MU1-G1	mg/kg	6020	7.50E+00	_	8.90E+00	8.90E+00
MU1-G2	mg/kg	6020	6.70E+00	_	8.90E+00	8.90E+00
MU1-G3	mg/kg	6020	7.40E+00	_	8.90E+00	8.90E+00
MU1-GNL	mg/kg	6020	6.70E+00	_	8.90E+00	8.90E+00
MU1-GNU	mg/kg	6020	6.60E+00	_	8.90E+00	8.90E+00
MU1-GS	mg/kg	6020	4.90E+00	_	8.90E+00	8.90E+00
MU2-G1	mg/kg	6020	6.00E+00	_	8.90E+00	8.90E+00
MU2-G2	mg/kg	6020	4.60E+00	_	8.90E+00	8.90E+00
MU2-G3	mg/kg	6020	4.60E+00	_	8.90E+00	8.90E+00
MU2-GN	mg/kg	6020	8.50E+00	_	8.90E+00	8.90E+00
MU2-GS	mg/kg	6020	5.60E+00	_	8.90E+00	8.90E+00
MU3-G1	mg/kg	6020	7.20E+00	_	8.90E+00	8.90E+00
MU3-G2	mg/kg	6020	6.50E+00	_	8.90E+00	8.90E+00
MU3-G3	mg/kg	6020	7.10E+00	_	8.90E+00	8.90E+00
MU3-GN	mg/kg	6020	6.50E+00	_	8.90E+00	8.90E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
COBALT						
MU3-GS	mg/kg	6020	5.90E+00	_	8.90E+00	8.90E+00
COPPER						
MU1-G1	mg/kg	6020	2.60E+01	_	1.96E+01	1.20E+01
MU1-G2	mg/kg	6020	2.30E+01	_	1.96E+01	1.20E+01
MU1-G3	mg/kg	6020	2.50E+01	_	1.96E+01	1.20E+01
MU1-GNL	mg/kg	6020	1.90E+01	_	1.96E+01	1.20E+01
MU1-GNU	mg/kg	6020	3.10E+01	_	1.96E+01	1.20E+01
MU1-GS	mg/kg	6020	1.50E+01	_	1.96E+01	1.20E+01
MU2-G1	mg/kg	6020	2.10E+01	_	1.96E+01	1.20E+01
MU2-G2	mg/kg	6020	1.30E+01	_	1.96E+01	1.20E+01
MU2-G3	mg/kg	6020	1.20E+01	_	1.96E+01	1.20E+01
MU2-GN	mg/kg	6020	3.40E+01	_	1.96E+01	1.20E+01
MU2-GS	mg/kg	6020	1.30E+01	_	1.96E+01	1.20E+01
MU3-G1	mg/kg	6020	2.60E+01	_	1.96E+01	1.20E+01
MU3-G2	mg/kg	6020	2.40E+01	_	1.96E+01	1.20E+01
MU3-G3	mg/kg	6020	2.80E+01	_	1.96E+01	1.20E+01
MU3-GN	mg/kg	6020	2.00E+01	_	1.96E+01	1.20E+01
MU3-GS	mg/kg	6020	2.10E+01	_	1.96E+01	1.20E+01
Cyanide, Amenable						
MU1-G1	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-G2	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-G3	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-GNL	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-GNU	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-GS	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-G1	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-G2	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-G3	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-GN	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-GS	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-G1	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-G2	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-G3	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-GN	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-GS	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
IRON						
MU1-G1	mg/kg	6020	2.10E+04	_	1.59E+04	1.50E+04
MU1-G2	mg/kg	6020	1.90E+04	_	1.59E+04	1.50E+04
MU1-G3	mg/kg	6020	2.00E+04	_	1.59E+04	1.50E+04
MU1-GNL	mg/kg	6020	4.00E+04	_	1.59E+04	1.50E+04

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
IRON						
MU1-GNU	mg/kg	6020	4.30E+04	_	1.59E+04	1.50E+04
MU1-GS	mg/kg	6020	1.20E+04	_	1.59E+04	1.50E+04
MU2-G1	mg/kg	6020	1.60E+04	_	1.59E+04	1.50E+04
MU2-G2	mg/kg	6020	1.20E+04	_	1.59E+04	1.50E+04
MU2-G3	mg/kg	6020	1.10E+04	_	1.59E+04	1.50E+04
MU2-GN	mg/kg	6020	3.50E+04	_	1.59E+04	1.50E+04
MU2-GS	mg/kg	6020	1.30E+04	_	1.59E+04	1.50E+04
MU3-G1	mg/kg	6020	1.80E+04	_	1.59E+04	1.50E+04
MU3-G2	mg/kg	6020	1.70E+04	_	1.59E+04	1.50E+04
MU3-G3	mg/kg	6020	1.90E+04	_	1.59E+04	1.50E+04
MU3-GN	mg/kg	6020	1.60E+04	_	1.59E+04	1.50E+04
MU3-GS	mg/kg	6020	1.50E+04	_	1.59E+04	1.50E+04
LEAD						
MU1-G1	mg/kg	6020	4.10E+01	_	3.60E+01	2.09E+01
MU1-G2	mg/kg	6020	3.90E+01	_	3.60E+01	2.09E+01
MU1-G3	mg/kg	6020	3.80E+01	_	3.60E+01	2.09E+01
MU1-GNL	mg/kg	6020	5.40E+01	_	3.60E+01	2.09E+01
MU1-GNU	mg/kg	6020	8.50E+01	_	3.60E+01	2.09E+01
MU1-GS	mg/kg	6020	1.90E+01	_	3.60E+01	2.09E+01
MU2-G1	mg/kg	6020	3.20E+01	_	3.60E+01	2.09E+01
MU2-G2	mg/kg	6020	1.90E+01	_	3.60E+01	2.09E+01
MU2-G3	mg/kg	6020	1.70E+01	_	3.60E+01	2.09E+01
MU2-GN	mg/kg	6020	7.90E+01	_	3.60E+01	2.09E+01
MU2-GS	mg/kg	6020	2.00E+01	_	3.60E+01	2.09E+01
MU3-G1	mg/kg	6020	3.70E+01	_	3.60E+01	2.09E+01
MU3-G2	mg/kg	6020	3.30E+01	_	3.60E+01	2.09E+01
MU3-G3	mg/kg	6020	3.10E+01	_	3.60E+01	2.09E+01
MU3-GN	mg/kg	6020	2.60E+01	_	3.60E+01	2.09E+01
MU3-GS	mg/kg	6020	2.60E+01	_	3.60E+01	2.09E+01
MAGNESIUM						
MU1-G1	mg/kg	6020	3.30E+04	_	4.82E+03	2.70E+03
MU1-G2	mg/kg	6020	3.10E+04	_	4.82E+03	2.70E+03
MU1-G3	mg/kg	6020	3.70E+04	_	4.82E+03	2.70E+03
MU1-GNL	mg/kg	6020	3.30E+04	_	4.82E+03	2.70E+03
MU1-GNU	mg/kg	6020	2.70E+04	_	4.82E+03	2.70E+03
MU1-GS	mg/kg	6020	2.90E+04	_	4.82E+03	2.70E+03
MU2-G1	mg/kg	6020	3.40E+04	_	4.82E+03	2.70E+03
MU2-G2	mg/kg	6020	3.80E+04	_	4.82E+03	2.70E+03
MU2-G3	mg/kg	6020	3.10E+04	_	4.82E+03	2.70E+03
MU2-GN	mg/kg	6020	3.60E+04	_	4.82E+03	2.70E+03

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
MAGNESIUM						
MU2-GS	mg/kg	6020	4.10E+04	_	4.82E+03	2.70E+03
MU3-G1	mg/kg	6020	4.00E+04	_	4.82E+03	2.70E+03
MU3-G2	mg/kg	6020	4.40E+04	_	4.82E+03	2.70E+03
MU3-G3	mg/kg	6020	4.20E+04	_	4.82E+03	2.70E+03
MU3-GN	mg/kg	6020	3.80E+04	_	4.82E+03	2.70E+03
MU3-GS	mg/kg	6020	4.10E+04	_	4.82E+03	2.70E+03
MANGANESE						
MU1-G1	mg/kg	6020	5.70E+02	_	6.36E+02	6.30E+02
MU1-G2	mg/kg	6020	5.00E+02	_	6.36E+02	6.30E+02
MU1-G3	mg/kg	6020	5.50E+02	_	6.36E+02	6.30E+02
MU1-GNL	mg/kg	6020	6.80E+02	_	6.36E+02	6.30E+02
MU1-GNU	mg/kg	6020	7.20E+02	_	6.36E+02	6.30E+02
MU1-GS	mg/kg	6020	3.80E+02	_	6.36E+02	6.30E+02
MU2-G1	mg/kg	6020	4.90E+02	_	6.36E+02	6.30E+02
MU2-G2	mg/kg	6020	4.10E+02	_	6.36E+02	6.30E+02
MU2-G3	mg/kg	6020	3.60E+02	_	6.36E+02	6.30E+02
MU2-GN	mg/kg	6020	7.30E+02	_	6.36E+02	6.30E+02
MU2-GS	mg/kg	6020	4.40E+02	_	6.36E+02	6.30E+02
MU3-G1	mg/kg	6020	5.40E+02	_	6.36E+02	6.30E+02
MU3-G2	mg/kg	6020	6.00E+02	_	6.36E+02	6.30E+02
MU3-G3	mg/kg	6020	6.00E+02	_	6.36E+02	6.30E+02
MU3-GN	mg/kg	6020	5.00E+02	_	6.36E+02	6.30E+02
MU3-GS	mg/kg	6020	5.60E+02	_	6.36E+02	6.30E+02
MERCURY						
MU1-G1	mg/kg	7471A	9.50E-02	_	6.00E-02	5.00E-02
MU1-G2	mg/kg	7471A	8.30E-02	_	6.00E-02	5.00E-02
MU1-G3	mg/kg	7471A	1.10E-01	_	6.00E-02	5.00E-02
MU1-GNL	mg/kg	7471A	1.60E-01	_	6.00E-02	5.00E-02
MU1-GNU	mg/kg	7471A	1.40E-01	_	6.00E-02	5.00E-02
MU1-GS	mg/kg	7471A	5.00E-02	_	6.00E-02	5.00E-02
MU2-G1	mg/kg	7471A	1.10E-01	_	6.00E-02	5.00E-02
MU2-G2	mg/kg	7471A	5.10E-02	_	6.00E-02	5.00E-02
MU2-G3	mg/kg	7471A	5.00E-02	_	6.00E-02	5.00E-02
MU2-GN	mg/kg	7471A	1.10E-01	_	6.00E-02	5.00E-02
MU2-GS	mg/kg	7471A	4.50E-02	_	6.00E-02	5.00E-02
MU3-G1	mg/kg	7471A	7.70E-02	_	6.00E-02	5.00E-02
MU3-G2	mg/kg	7471A	8.50E-02	_	6.00E-02	5.00E-02
MU3-G3	mg/kg	7471A	6.90E-02	_	6.00E-02	5.00E-02
MU3-GN	mg/kg	7471A	5.40E-02	_	6.00E-02	5.00E-02
MU3-GS	mg/kg	7471A	1.00E-01	_	6.00E-02	5.00E-02

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
NICKEL						
MU1-G1	mg/kg	6020	1.70E+01	_	1.80E+01	1.30E+01
MU1-G2	mg/kg	6020	1.50E+01	_	1.80E+01	1.30E+01
MU1-G3	mg/kg	6020	1.70E+01	_	1.80E+01	1.30E+01
MU1-GNL	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU1-GNU	mg/kg	6020	1.80E+01	_	1.80E+01	1.30E+01
MU1-GS	mg/kg	6020	1.00E+01	_	1.80E+01	1.30E+01
MU2-G1	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU2-G2	mg/kg	6020	9.20E+00	_	1.80E+01	1.30E+01
MU2-G3	mg/kg	6020	9.30E+00	_	1.80E+01	1.30E+01
MU2-GN	mg/kg	6020	2.20E+01	_	1.80E+01	1.30E+01
MU2-GS	mg/kg	6020	1.20E+01	_	1.80E+01	1.30E+01
MU3-G1	mg/kg	6020	1.60E+01	_	1.80E+01	1.30E+01
MU3-G2	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU3-G3	mg/kg	6020	1.70E+01	_	1.80E+01	1.30E+01
MU3-GN	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU3-GS	mg/kg	6020	1.30E+01	_	1.80E+01	1.30E+01
POTASSIUM						
MU1-G1	mg/kg	6020	1.90E+03	_	1.27E+03	1.10E+03
MU1-G2	mg/kg	6020	1.60E+03	_	1.27E+03	1.10E+03
MU1-G3	mg/kg	6020	1.70E+03	_	1.27E+03	1.10E+03
MU1-GNL	mg/kg	6020	1.30E+03	_	1.27E+03	1.10E+03
MU1-GNU	mg/kg	6020	1.30E+03	_	1.27E+03	1.10E+03
MU1-GS	mg/kg	6020	1.00E+03	_	1.27E+03	1.10E+03
MU2-G1	mg/kg	6020	1.40E+03	_	1.27E+03	1.10E+03
MU2-G2	mg/kg	6020	9.90E+02	_	1.27E+03	1.10E+03
MU2-G3	mg/kg	6020	1.10E+03	_	1.27E+03	1.10E+03
MU2-GN	mg/kg	6020	1.80E+03	_	1.27E+03	1.10E+03
MU2-GS	mg/kg	6020	1.10E+03	_	1.27E+03	1.10E+03
MU3-G1	mg/kg	6020	1.50E+03	_	1.27E+03	1.10E+03
MU3-G2	mg/kg	6020	1.50E+03	_	1.27E+03	1.10E+03
MU3-G3	mg/kg	6020	1.80E+03	_	1.27E+03	1.10E+03
MU3-GN	mg/kg	6020	1.50E+03	_	1.27E+03	1.10E+03
MU3-GS	mg/kg	6020	1.40E+03	_	1.27E+03	1.10E+03
SELENIUM						
MU1-G1	mg/kg	6020	5.80E-01	_	4.80E-01	3.70E-01
MU1-G2	mg/kg	6020	4.40E-01	_	4.80E-01	3.70E-01
MU1-G3	mg/kg	6020	5.40E-01	_	4.80E-01	3.70E-01
MU1-GNL	mg/kg	6020	3.40E-01	_	4.80E-01	3.70E-01
MU1-GNU	mg/kg	6020	5.30E-01	_	4.80E-01	3.70E-01
MU1-GS	mg/kg	6020	3.60E-01	_	4.80E-01	3.70E-01

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
SELENIUM						
MU2-G1	mg/kg	6020	4.50E-01	_	4.80E-01	3.70E-01
MU2-G2	mg/kg	6020	3.30E-01	_	4.80E-01	3.70E-01
MU2-G3	mg/kg	6020	2.70E-01	_	4.80E-01	3.70E-01
MU2-GN	mg/kg	6020	6.30E-01	_	4.80E-01	3.70E-01
MU2-GS	mg/kg	6020	2.70E-01	_	4.80E-01	3.70E-01
MU3-G1	mg/kg	6020	5.10E-01	_	4.80E-01	3.70E-01
MU3-G2	mg/kg	6020	4.80E-01	_	4.80E-01	3.70E-01
MU3-G3	mg/kg	6020	5.50E-01	_	4.80E-01	3.70E-01
MU3-GN	mg/kg	6020	4.30E-01	_	4.80E-01	3.70E-01
MU3-GS	mg/kg	6020	4.70E-01	_	4.80E-01	3.70E-01
SILVER						
MU1-G1	mg/kg	6020	1.40E-01	_	5.50E-01	5.00E-01
MU1-G2	mg/kg	6020	1.10E-01	_	5.50E-01	5.00E-01
MU1-G3	mg/kg	6020	1.20E-01	_	5.50E-01	5.00E-01
MU1-GNL	mg/kg	6020	1.70E-01	_	5.50E-01	5.00E-01
MU1-GNU	mg/kg	6020	2.50E-01	_	5.50E-01	5.00E-01
MU1-GS	mg/kg	6020	6.20E-02	_	5.50E-01	5.00E-01
MU2-G1	mg/kg	6020	9.80E-02	_	5.50E-01	5.00E-01
MU2-G2	mg/kg	6020	5.80E-02	_	5.50E-01	5.00E-01
MU2-G3	mg/kg	6020	5.50E-02	_	5.50E-01	5.00E-01
MU2-GN	mg/kg	6020	2.40E-01	_	5.50E-01	5.00E-01
MU2-GS	mg/kg	6020	5.20E-02	_	5.50E-01	5.00E-01
MU3-G1	mg/kg	6020	1.40E-01	_	5.50E-01	5.00E-01
MU3-G2	mg/kg	6020	1.10E-01	_	5.50E-01	5.00E-01
MU3-G3	mg/kg	6020	1.20E-01	_	5.50E-01	5.00E-01
MU3-GN	mg/kg	6020	8.50E-02	_	5.50E-01	5.00E-01
MU3-GS	mg/kg	6020	9.40E-02	_	5.50E-01	5.00E-01
SODIUM						
MU1-G1	mg/kg	6020	1.60E+02	_	1.30E+02	1.30E+02
MU1-G2	mg/kg	6020	1.50E+02	_	1.30E+02	1.30E+02
MU1-G3	mg/kg	6020	1.60E+02	_	1.30E+02	1.30E+02
MU1-GNL	mg/kg	6020	1.60E+02	_	1.30E+02	1.30E+02
MU1-GNU	mg/kg	6020	1.40E+02	_	1.30E+02	1.30E+02
MU1-GS	mg/kg	6020	1.20E+02	_	1.30E+02	1.30E+02
MU2-G1	mg/kg	6020	1.40E+02	_	1.30E+02	1.30E+02
MU2-G2	mg/kg	6020	1.50E+02	_	1.30E+02	1.30E+02
MU2-G3	mg/kg	6020	1.40E+02	_	1.30E+02	1.30E+02
MU2-GN	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02
MU2-GS	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02
MU3-G1	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02

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1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
SODIUM						
MU3-G2	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02
MU3-G3	mg/kg	6020	1.80E+02	_	1.30E+02	1.30E+02
MU3-GN	mg/kg	6020	1.50E+02	_	1.30E+02	1.30E+02
MU3-GS	mg/kg	6020	1.80E+02	_	1.30E+02	1.30E+02
THALLIUM						
MU1-G1	mg/kg	6020	3.60E-01	_	3.20E-01	4.20E-01
MU1-G2	mg/kg	6020	3.10E-01	_	3.20E-01	4.20E-01
MU1-G3	mg/kg	6020	3.30E-01	_	3.20E-01	4.20E-01
MU1-GNL	mg/kg	6020	5.30E-01	_	3.20E-01	4.20E-01
MU1-GNU	mg/kg	6020	4.90E-01	_	3.20E-01	4.20E-01
MU1-GS	mg/kg	6020	1.90E-01	_	3.20E-01	4.20E-01
MU2-G1	mg/kg	6020	2.70E-01	_	3.20E-01	4.20E-01
MU2-G2	mg/kg	6020	1.90E-01	_	3.20E-01	4.20E-01
MU2-G3	mg/kg	6020	1.80E-01	_	3.20E-01	4.20E-01
MU2-GN	mg/kg	6020	4.40E-01	_	3.20E-01	4.20E-01
MU2-GS	mg/kg	6020	2.40E-01	_	3.20E-01	4.20E-01
MU3-G1	mg/kg	6020	3.10E-01	_	3.20E-01	4.20E-01
MU3-G2	mg/kg	6020	3.00E-01	_	3.20E-01	4.20E-01
MU3-G3	mg/kg	6020	3.00E-01	_	3.20E-01	4.20E-01
MU3-GN	mg/kg	6020	2.50E-01	_	3.20E-01	4.20E-01
MU3-GS	mg/kg	6020	2.60E-01	_	3.20E-01	4.20E-01
VANADIUM						
MU1-G1	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU1-G2	mg/kg	6020	1.90E+01	_	2.52E+01	2.50E+01
MU1-G3	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU1-GNL	mg/kg	6020	2.00E+01	_	2.52E+01	2.50E+01
MU1-GNU	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU1-GS	mg/kg	6020	1.40E+01	_	2.52E+01	2.50E+01
MU2-G1	mg/kg	6020	1.70E+01	_	2.52E+01	2.50E+01
MU2-G2	mg/kg	6020	1.50E+01	_	2.52E+01	2.50E+01
MU2-G3	mg/kg	6020	1.40E+01	_	2.52E+01	2.50E+01
MU2-GN	mg/kg	6020	2.50E+01	_	2.52E+01	2.50E+01
MU2-GS	mg/kg	6020	1.60E+01	_	2.52E+01	2.50E+01
MU3-G1	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU3-G2	mg/kg	6020	2.00E+01	_	2.52E+01	2.50E+01
MU3-G3	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU3-GN	mg/kg	6020	1.90E+01	_	2.52E+01	2.50E+01
MU3-GS	mg/kg	6020	1.80E+01	_	2.52E+01	2.50E+01
ZINC						
MU1-G1	mg/kg	6020	1.00E+02	_	9.50E+01	6.02E+01

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
ZINC						
MU1-G2	mg/kg	6020	9.20E+01	_	9.50E+01	6.02E+01
MU1-G3	mg/kg	6020	9.80E+01	_	9.50E+01	6.02E+01
MU1-GNL	mg/kg	6020	1.10E+02	_	9.50E+01	6.02E+01
MU1-GNU	mg/kg	6020	1.90E+02	_	9.50E+01	6.02E+01
MU1-GS	mg/kg	6020	6.00E+01	_	9.50E+01	6.02E+01
MU2-G1	mg/kg	6020	8.30E+01	_	9.50E+01	6.02E+01
MU2-G2	mg/kg	6020	6.30E+01	_	9.50E+01	6.02E+01
MU2-G3	mg/kg	6020	5.20E+01	_	9.50E+01	6.02E+01
MU2-GN	mg/kg	6020	1.80E+02	_	9.50E+01	6.02E+01
MU2-GS	mg/kg	6020	6.20E+01	_	9.50E+01	6.02E+01
MU3-G1	mg/kg	6020	9.60E+01	_	9.50E+01	6.02E+01
MU3-G2	mg/kg	6020	8.50E+01	_	9.50E+01	6.02E+01
MU3-G3	mg/kg	6020	8.70E+01	_	9.50E+01	6.02E+01
MU3-GN	mg/kg	6020	6.90E+01	_	9.50E+01	6.02E+01
MU3-GS	mg/kg	6020	7.60E+01	_	9.50E+01	6.02E+01
Organic, Semi-Volatile						
2-METHYLNAPHTHALENE						
MU1-G1	mg/kg	8270C LL	5.20E-02	_	1.40E-01	2.90E-01
MU1-G2	mg/kg	8270C LL	5.70E-02	_	1.40E-01	2.90E-01
MU1-G3	mg/kg	8270C LL	5.40E-02	_	1.40E-01	2.90E-01
MU1-GNL	mg/kg	8270C LL	1.30E-01	_	1.40E-01	2.90E-01
MU1-GNU	mg/kg	8270C LL	1.10E-01	_	1.40E-01	2.90E-01
MU1-GS	mg/kg	8270C LL	1.80E-02	_	1.40E-01	2.90E-01
MU2-G1	mg/kg	8270C LL	5.10E-02	_	1.40E-01	2.90E-01
MU2-G2	mg/kg	8270C LL	3.60E-02	_	1.40E-01	2.90E-01
MU2-G3	mg/kg	8270C LL	2.40E-02	_	1.40E-01	2.90E-01
MU2-GN	mg/kg	8270C LL	5.10E-02	_	1.40E-01	2.90E-01
MU2-GS	mg/kg	8270C LL	3.00E-02	_	1.40E-01	2.90E-01
MU3-G1	mg/kg	8270C LL	5.70E-02	_	1.40E-01	2.90E-01
MU3-G2	mg/kg	8270C LL	3.40E-02	_	1.40E-01	2.90E-01
MU3-G3	mg/kg	8270C LL	3.90E-02	_	1.40E-01	2.90E-01
MU3-GN	mg/kg	8270C LL	2.70E-02	_	1.40E-01	2.90E-01
MU3-GS	mg/kg	8270C LL	3.70E-02	_	1.40E-01	2.90E-01
ACENAPHTHENE						
MU1-G1	mg/kg	8270C LL	7.10E-02	9.00E-02	1.30E-01	4.00E-02
MU1-G2	mg/kg	8270C LL	6.70E-02	9.00E-02	1.30E-01	4.00E-02
MU1-G3	mg/kg	8270C LL	6.70E-02	9.00E-02	1.30E-01	4.00E-02
MU1-GNL	mg/kg	8270C LL	8.80E-02	9.00E-02	1.30E-01	4.00E-02
MU1-GNU	mg/kg	8270C LL	9.50E-02	9.00E-02	1.30E-01	4.00E-02
MU1-GS	mg/kg	8270C LL	3.60E-02	9.00E-02	1.30E-01	4.00E-02

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
ACENAPHTHENE						
MU2-G1	mg/kg	8270C LL	5.90E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-G2	mg/kg	8270C LL	6.30E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-G3	mg/kg	8270C LL	4.20E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-GN	mg/kg	8270C LL	6.00E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-GS	mg/kg	8270C LL	4.20E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-G1	mg/kg	8270C LL	7.80E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-G2	mg/kg	8270C LL	7.20E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-G3	mg/kg	8270C LL	5.90E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-GN	mg/kg	8270C LL	5.00E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-GS	mg/kg	8270C LL	5.80E-02	9.00E-02	1.30E-01	**4.00E-02**
ACENAPHTHYLENE						
MU1-G1	mg/kg	8270C LL	3.60E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-G2	mg/kg	8270C LL	5.10E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-G3	mg/kg	8270C LL	5.00E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-GNL	mg/kg	8270C LL	8.80E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-GNU	mg/kg	8270C LL	8.10E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-GS	mg/kg	8270C LL	2.10E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-G1	mg/kg	8270C LL	3.60E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-G2	mg/kg	8270C LL	3.50E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-G3	mg/kg	8270C LL	2.00E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-GN	mg/kg	8270C LL	5.30E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-GS	mg/kg	8270C LL	2.20E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-G1	mg/kg	8270C LL	4.70E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-G2	mg/kg	8270C LL	4.20E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-G3	mg/kg	8270C LL	3.80E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-GN	mg/kg	8270C LL	3.30E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-GS	mg/kg	8270C LL	2.90E-02	**3.00E-02**	7.00E-02	4.00E-02
ANTHRACENE						
MU1-G1	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-G2	mg/kg	8270C LL	1.60E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-G3	mg/kg	8270C LL	1.70E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-GNL	mg/kg	8270C LL	2.90E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-GNU	mg/kg	8270C LL	2.30E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-GS	mg/kg	8270C LL	7.80E-02	2.50E-01	4.00E-01	**1.40E-01**
MU2-G1	mg/kg	8270C LL	1.30E-01	2.50E-01	4.00E-01	**1.40E-01**
MU2-G2	mg/kg	8270C LL	1.50E-01	2.50E-01	4.00E-01	**1.40E-01**
MU2-G3	mg/kg	8270C LL	9.40E-02	2.50E-01	4.00E-01	**1.40E-01**
MU2-GN	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
MU2-GS	mg/kg	8270C LL	8.90E-02	2.50E-01	4.00E-01	**1.40E-01**
MU3-G1	mg/kg	8270C LL	1.90E-01	2.50E-01	4.00E-01	**1.40E-01**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
ANTHRACENE						
MU3-G2	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
MU3-G3	mg/kg	8270C LL	1.00E-01	2.50E-01	4.00E-01	**1.40E-01**
MU3-GN	mg/kg	8270C LL	1.20E-01	2.50E-01	4.00E-01	**1.40E-01**
MU3-GS	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
Benzo[a]anthracene						
MU1-G1	mg/kg	8270C LL	3.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-G2	mg/kg	8270C LL	4.30E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-G3	mg/kg	8270C LL	4.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-GNL	mg/kg	8270C LL	5.70E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-GNU	mg/kg	8270C LL	5.10E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-GS	mg/kg	8270C LL	1.90E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-G1	mg/kg	8270C LL	3.70E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-G2	mg/kg	8270C LL	4.10E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-G3	mg/kg	8270C LL	2.30E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-GN	mg/kg	8270C LL	4.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-GS	mg/kg	8270C LL	2.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-G1	mg/kg	8270C LL	4.60E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-G2	mg/kg	8270C LL	4.20E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-G3	mg/kg	8270C LL	3.00E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-GN	mg/kg	8270C LL	3.20E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-GS	mg/kg	8270C LL	4.80E-01	1.10E+00	1.80E+00	**7.20E-01**
Benzo[a]pyrene						
MU1-G1	mg/kg	8270C LL	3.30E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-G2	mg/kg	8270C LL	4.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-G3	mg/kg	8270C LL	5.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-GNL	mg/kg	8270C LL	4.70E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-GNU	mg/kg	8270C LL	6.10E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-GS	mg/kg	8270C LL	2.10E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-G1	mg/kg	8270C LL	4.00E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-G2	mg/kg	8270C LL	4.30E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-G3	mg/kg	8270C LL	2.60E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-GN	mg/kg	8270C LL	4.60E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-GS	mg/kg	8270C LL	2.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-G1	mg/kg	8270C LL	5.00E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-G2	mg/kg	8270C LL	4.60E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-G3	mg/kg	8270C LL	3.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-GN	mg/kg	8270C LL	3.40E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-GS	mg/kg	8270C LL	4.60E-01	1.30E+00	2.10E+00	**9.80E-01**
Benzo[b]fluoranthene						
MU1-G1	mg/kg	8270C LL	5.00E-01	1.50E+00	2.10E+00	**7.00E-01**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
Benzo[b]fluoranthene						
MU1-G2	mg/kg	8270C LL	5.80E-01	1.50E+00	2.10E+00	7.00E-01
MU1-G3	mg/kg	8270C LL	4.80E-01	1.50E+00	2.10E+00	7.00E-01
MU1-GNL	mg/kg	8270C LL	6.00E-01	1.50E+00	2.10E+00	7.00E-01
MU1-GNU	mg/kg	8270C LL	8.10E-01	1.50E+00	2.10E+00	7.00E-01
MU1-GS	mg/kg	8270C LL	2.00E-01	1.50E+00	2.10E+00	7.00E-01
MU2-G1	mg/kg	8270C LL	4.10E-01	1.50E+00	2.10E+00	7.00E-01
MU2-G2	mg/kg	8270C LL	5.60E-01	1.50E+00	2.10E+00	7.00E-01
MU2-G3	mg/kg	8270C LL	2.50E-01	1.50E+00	2.10E+00	7.00E-01
MU2-GN	mg/kg	8270C LL	5.70E-01	1.50E+00	2.10E+00	7.00E-01
MU2-GS	mg/kg	8270C LL	3.20E-01	1.50E+00	2.10E+00	7.00E-01
MU3-G1	mg/kg	8270C LL	4.80E-01	1.50E+00	2.10E+00	7.00E-01
MU3-G2	mg/kg	8270C LL	4.20E-01	1.50E+00	2.10E+00	7.00E-01
MU3-G3	mg/kg	8270C LL	3.80E-01	1.50E+00	2.10E+00	7.00E-01
MU3-GN	mg/kg	8270C LL	3.40E-01	1.50E+00	2.10E+00	7.00E-01
MU3-GS	mg/kg	8270C LL	6.30E-01	1.50E+00	2.10E+00	7.00E-01
Benzo[k]fluoranthene						
MU1-G1	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-G2	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-G3	mg/kg	8270C LL	2.60E-01	9.90E-01	1.70E+00	6.30E-01
MU1-GNL	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-GNU	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-GS	mg/kg	8270C LL	9.00E-02	9.90E-01	1.70E+00	6.30E-01
MU2-G1	mg/kg	8270C LL	1.50E-01	9.90E-01	1.70E+00	6.30E-01
MU2-G2	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU2-G3	mg/kg	8270C LL	1.10E-01	9.90E-01	1.70E+00	6.30E-01
MU2-GN	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU2-GS	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU3-G1	mg/kg	8270C LL	2.50E-01	9.90E-01	1.70E+00	6.30E-01
MU3-G2	mg/kg	8270C LL	2.50E-01	9.90E-01	1.70E+00	6.30E-01
MU3-G3	mg/kg	8270C LL	1.50E-01	9.90E-01	1.70E+00	6.30E-01
MU3-GN	mg/kg	8270C LL	1.30E-01	9.90E-01	1.70E+00	6.30E-01
MU3-GS	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
CHRYSENE						
MU1-G1	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	1.10E+00
MU1-G2	mg/kg	8270C LL	4.60E-01	1.20E+00	2.70E+00	1.10E+00
MU1-G3	mg/kg	8270C LL	5.50E-01	1.20E+00	2.70E+00	1.10E+00
MU1-GNL	mg/kg	8270C LL	5.90E-01	1.20E+00	2.70E+00	1.10E+00
MU1-GNU	mg/kg	8270C LL	6.40E-01	1.20E+00	2.70E+00	1.10E+00
MU1-GS	mg/kg	8270C LL	2.40E-01	1.20E+00	2.70E+00	1.10E+00
MU2-G1	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	1.10E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
CHRYSENE						
MU2-G2	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	**1.10E+00**
MU2-G3	mg/kg	8270C LL	2.90E-01	1.20E+00	2.70E+00	**1.10E+00**
MU2-GN	mg/kg	8270C LL	5.00E-01	1.20E+00	2.70E+00	**1.10E+00**
MU2-GS	mg/kg	8270C LL	2.60E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-G1	mg/kg	8270C LL	4.90E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-G2	mg/kg	8270C LL	4.40E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-G3	mg/kg	8270C LL	3.40E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-GN	mg/kg	8270C LL	3.30E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-GS	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	**1.10E+00**
DIBENZ(A,H)ANTHRACENE						
MU1-G1	mg/kg	8270C LL	4.40E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-G2	mg/kg	8270C LL	6.30E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-G3	mg/kg	8270C LL	6.80E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-GNL	mg/kg	8270C LL	6.10E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-GNU	mg/kg	8270C LL	1.10E-01	2.00E-01	4.20E-01	**1.50E-01**
MU1-GS	mg/kg	8270C LL	1.50E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-G1	mg/kg	8270C LL	6.40E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-G2	mg/kg	8270C LL	6.70E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-G3	mg/kg	8270C LL	4.30E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-GN	mg/kg	8270C LL	1.00E-01	2.00E-01	4.20E-01	**1.50E-01**
MU2-GS	mg/kg	8270C LL	5.20E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-G1	mg/kg	8270C LL	8.10E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-G2	mg/kg	8270C LL	8.40E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-G3	mg/kg	8270C LL	6.30E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-GN	mg/kg	8270C LL	6.80E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-GS	mg/kg	8270C LL	7.80E-02	2.00E-01	4.20E-01	**1.50E-01**
FLUORANTHENE						
MU1-G1	mg/kg	8270C LL	6.30E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-G2	mg/kg	8270C LL	6.80E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-G3	mg/kg	8270C LL	7.70E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-GNL	mg/kg	8270C LL	7.50E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-GNU	mg/kg	8270C LL	7.80E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-GS	mg/kg	8270C LL	3.80E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-G1	mg/kg	8270C LL	6.10E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-G2	mg/kg	8270C LL	6.70E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-G3	mg/kg	8270C LL	4.20E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-GN	mg/kg	8270C LL	7.60E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-GS	mg/kg	8270C LL	5.10E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-G1	mg/kg	8270C LL	8.60E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-G2	mg/kg	8270C LL	7.50E-01	2.70E+00	4.10E+00	**1.80E+00**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
FLUORANTHENE						
MU3-G3	mg/kg	8270C LL	5.60E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-GN	mg/kg	8270C LL	5.50E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-GS	mg/kg	8270C LL	6.30E-01	2.70E+00	4.10E+00	**1.80E+00**
FLUORENE						
MU1-G1	mg/kg	8270C LL	9.10E-02	1.00E-01	1.80E-01	**4.00E-02**
MU1-G2	mg/kg	8270C LL	8.00E-02	1.00E-01	1.80E-01	**4.00E-02**
MU1-G3	mg/kg	8270C LL	9.30E-02	1.00E-01	1.80E-01	**4.00E-02**
MU1-GNL	mg/kg	8270C LL	1.50E-01	1.00E-01	1.80E-01	**4.00E-02**
MU1-GNU	mg/kg	8270C LL	1.40E-01	1.00E-01	1.80E-01	**4.00E-02**
MU1-GS	mg/kg	8270C LL	3.70E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-G1	mg/kg	8270C LL	7.40E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-G2	mg/kg	8270C LL	6.70E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-G3	mg/kg	8270C LL	4.40E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-GN	mg/kg	8270C LL	7.50E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-GS	mg/kg	8270C LL	4.50E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-G1	mg/kg	8270C LL	1.00E-01	1.00E-01	1.80E-01	**4.00E-02**
MU3-G2	mg/kg	8270C LL	7.60E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-G3	mg/kg	8270C LL	5.90E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-GN	mg/kg	8270C LL	5.20E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-GS	mg/kg	8270C LL	7.40E-02	1.00E-01	1.80E-01	**4.00E-02**
Indeno[1,2,3-cd]pyrene						
MU1-G1	mg/kg	8270C LL	1.70E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-G2	mg/kg	8270C LL	2.10E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-G3	mg/kg	8270C LL	2.90E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-GNL	mg/kg	8270C LL	2.00E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-GNU	mg/kg	8270C LL	3.10E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-GS	mg/kg	8270C LL	1.20E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-G1	mg/kg	8270C LL	2.10E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-G2	mg/kg	8270C LL	2.30E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-G3	mg/kg	8270C LL	1.30E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-GN	mg/kg	8270C LL	3.20E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-GS	mg/kg	8270C LL	1.50E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-G1	mg/kg	8270C LL	2.50E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-G2	mg/kg	8270C LL	2.30E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-G3	mg/kg	8270C LL	1.90E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-GN	mg/kg	8270C LL	2.20E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-GS	mg/kg	8270C LL	2.40E-01	8.60E-01	1.60E+00	**5.10E-01**
NAPHTHALENE						
MU1-G1	mg/kg	8270C LL	6.20E-02	**4.00E-02**	2.00E-01	1.70E-01
MU1-G2	mg/kg	8270C LL	7.20E-02	**4.00E-02**	2.00E-01	1.70E-01

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
NAPHTHALENE						
MU1-G3	mg/kg	8270C LL	6.90E-02	4.00E-02	2.00E-01	1.70E-01
MU1-GNL	mg/kg	8270C LL	1.90E-01	4.00E-02	2.00E-01	1.70E-01
MU1-GNU	mg/kg	8270C LL	1.60E-01	4.00E-02	2.00E-01	1.70E-01
MU1-GS	mg/kg	8270C LL	1.70E-02	4.00E-02	2.00E-01	1.70E-01
MU2-G1	mg/kg	8270C LL	6.30E-02	4.00E-02	2.00E-01	1.70E-01
MU2-G2	mg/kg	8270C LL	4.60E-02	4.00E-02	2.00E-01	1.70E-01
MU2-G3	mg/kg	8270C LL	2.80E-02	4.00E-02	2.00E-01	1.70E-01
MU2-GN	mg/kg	8270C LL	6.80E-02	4.00E-02	2.00E-01	1.70E-01
MU2-GS	mg/kg	8270C LL	2.20E-02	4.00E-02	2.00E-01	1.70E-01
MU3-G1	mg/kg	8270C LL	6.60E-02	4.00E-02	2.00E-01	1.70E-01
MU3-G2	mg/kg	8270C LL	4.50E-02	4.00E-02	2.00E-01	1.70E-01
MU3-G3	mg/kg	8270C LL	4.80E-02	4.00E-02	2.00E-01	1.70E-01
MU3-GN	mg/kg	8270C LL	3.10E-02	4.00E-02	2.00E-01	1.70E-01
MU3-GS	mg/kg	8270C LL	4.10E-02	4.00E-02	2.00E-01	1.70E-01
PHENANTHRENE						
MU1-G1	mg/kg	8270C LL	5.10E-01	1.30E+00	2.50E+00	9.90E-01
MU1-G2	mg/kg	8270C LL	5.00E-01	1.30E+00	2.50E+00	9.90E-01
MU1-G3	mg/kg	8270C LL	5.80E-01	1.30E+00	2.50E+00	9.90E-01
MU1-GNL	mg/kg	8270C LL	8.00E-01	1.30E+00	2.50E+00	9.90E-01
MU1-GNU	mg/kg	8270C LL	7.70E-01	1.30E+00	2.50E+00	9.90E-01
MU1-GS	mg/kg	8270C LL	2.70E-01	1.30E+00	2.50E+00	9.90E-01
MU2-G1	mg/kg	8270C LL	4.70E-01	1.30E+00	2.50E+00	9.90E-01
MU2-G2	mg/kg	8270C LL	5.10E-01	1.30E+00	2.50E+00	9.90E-01
MU2-G3	mg/kg	8270C LL	3.40E-01	1.30E+00	2.50E+00	9.90E-01
MU2-GN	mg/kg	8270C LL	5.40E-01	1.30E+00	2.50E+00	9.90E-01
MU2-GS	mg/kg	8270C LL	3.50E-01	1.30E+00	2.50E+00	9.90E-01
MU3-G1	mg/kg	8270C LL	5.90E-01	1.30E+00	2.50E+00	9.90E-01
MU3-G2	mg/kg	8270C LL	5.30E-01	1.30E+00	2.50E+00	9.90E-01
MU3-G3	mg/kg	8270C LL	3.90E-01	1.30E+00	2.50E+00	9.90E-01
MU3-GN	mg/kg	8270C LL	3.80E-01	1.30E+00	2.50E+00	9.90E-01
MU3-GS	mg/kg	8270C LL	5.80E-01	1.30E+00	2.50E+00	9.90E-01
PYRENE						
MU1-G1	mg/kg	8270C LL	6.50E-01	1.90E+00	3.00E+00	1.20E+00
MU1-G2	mg/kg	8270C LL	7.50E-01	1.90E+00	3.00E+00	1.20E+00
MU1-G3	mg/kg	8270C LL	9.20E-01	1.90E+00	3.00E+00	1.20E+00
MU1-GNL	mg/kg	8270C LL	8.10E-01	1.90E+00	3.00E+00	1.20E+00
MU1-GNU	mg/kg	8270C LL	1.00E+00	1.90E+00	3.00E+00	1.20E+00
MU1-GS	mg/kg	8270C LL	3.40E-01	1.90E+00	3.00E+00	1.20E+00
MU2-G1	mg/kg	8270C LL	6.60E-01	1.90E+00	3.00E+00	1.20E+00
MU2-G2	mg/kg	8270C LL	7.50E-01	1.90E+00	3.00E+00	1.20E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
PYRENE						
MU2-G3	mg/kg	8270C LL	5.20E-01	1.90E+00	3.00E+00	**1.20E+00**
MU2-GN	mg/kg	8270C LL	6.90E-01	1.90E+00	3.00E+00	**1.20E+00**
MU2-GS	mg/kg	8270C LL	4.80E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-G1	mg/kg	8270C LL	7.90E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-G2	mg/kg	8270C LL	7.30E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-G3	mg/kg	8270C LL	5.40E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-GN	mg/kg	8270C LL	5.70E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-GS	mg/kg	8270C LL	8.30E-01	1.90E+00	3.00E+00	**1.20E+00**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
METALLIC SPECIES					
ANTIMONY					
MU1-COMP	mg/L	6010B	ND	6.00E-03	6.00E-03
MU1-G3	mg/L	6010B	ND	6.00E-03	6.00E-03
MU1-GNL	mg/L	6010B	3.40E-03	6.00E-03	6.00E-03
MU1-GNU	mg/L	6010B	ND	6.00E-03	6.00E-03
MU1-GS	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-COMP	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-G1	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-GN	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-GS	mg/L	6010B	ND	6.00E-03	6.00E-03
MU3-COMP	mg/L	6010B	ND	6.00E-03	6.00E-03
MU3-GN	mg/L	6010B	ND	6.00E-03	6.00E-03
MU3-GS	mg/L	6010B	ND	6.00E-03	6.00E-03
ARSENIC					
MU1-COMP	mg/L	6010B	3.50E-03	5.00E-02	1.00E-02
MU1-G3	mg/L	6010B	3.30E-03	5.00E-02	1.00E-02
MU1-GNL	mg/L	6010B	2.30E-02	5.00E-02	1.00E-02
MU1-GNU	mg/L	6010B	5.00E-03	5.00E-02	1.00E-02
MU1-GS	mg/L	6010B	ND	5.00E-02	1.00E-02
MU2-COMP	mg/L	6010B	3.20E-03	5.00E-02	1.00E-02
MU2-G1	mg/L	6010B	3.10E-03	5.00E-02	1.00E-02
MU2-GN	mg/L	6010B	3.00E-03	5.00E-02	1.00E-02
MU2-GS	mg/L	6010B	ND	5.00E-02	1.00E-02
MU3-COMP	mg/L	6010B	ND	5.00E-02	1.00E-02
MU3-GN	mg/L	6010B	3.60E-03	5.00E-02	1.00E-02
MU3-GS	mg/L	6010B	2.70E-03	5.00E-02	1.00E-02
BARIUM					
MU1-COMP	mg/L	6010B	1.40E-02	2.00E+00	2.00E+00
MU1-G3	mg/L	6010B	1.40E-02	2.00E+00	2.00E+00
MU1-GNL	mg/L	6010B	2.40E-02	2.00E+00	2.00E+00
MU1-GNU	mg/L	6010B	1.60E-02	2.00E+00	2.00E+00
MU1-GS	mg/L	6010B	9.20E-03	2.00E+00	2.00E+00
MU2-COMP	mg/L	6010B	1.20E-02	2.00E+00	2.00E+00
MU2-G1	mg/L	6010B	9.30E-03	2.00E+00	2.00E+00
MU2-GN	mg/L	6010B	9.50E-03	2.00E+00	2.00E+00
MU2-GS	mg/L	6010B	1.00E-02	2.00E+00	2.00E+00
MU3-COMP	mg/L	6010B	1.50E-02	2.00E+00	2.00E+00
MU3-GN	mg/L	6010B	1.40E-02	2.00E+00	2.00E+00
MU3-GS	mg/L	6010B	1.50E-02	2.00E+00	2.00E+00

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
BERYLLIUM					
MU1-COMP	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-G3	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-GNL	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-GNU	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-GS	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-COMP	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-G1	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-GN	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-GS	mg/L	6010B	ND	4.00E-03	4.00E-03
MU3-COMP	mg/L	6010B	ND	4.00E-03	4.00E-03
MU3-GN	mg/L	6010B	ND	4.00E-03	4.00E-03
MU3-GS	mg/L	6010B	ND	4.00E-03	4.00E-03
BORON					
MU1-COMP	mg/L	6010B	3.10E-01	2.00E+00	-
MU1-G3	mg/L	6010B	2.80E-01	2.00E+00	-
MU1-GNL	mg/L	6010B	5.10E-01	2.00E+00	-
MU1-GNU	mg/L	6010B	3.30E-01	2.00E+00	-
MU1-GS	mg/L	6010B	2.30E-01	2.00E+00	-
MU2-COMP	mg/L	6010B	3.40E-01	2.00E+00	-
MU2-G1	mg/L	6010B	2.50E-01	2.00E+00	-
MU2-GN	mg/L	6010B	2.70E-01	2.00E+00	-
MU2-GS	mg/L	6010B	2.80E-01	2.00E+00	-
MU3-COMP	mg/L	6010B	2.50E-01	2.00E+00	-
MU3-GN	mg/L	6010B	2.70E-01	2.00E+00	-
MU3-GS	mg/L	6010B	2.80E-01	2.00E+00	-
CADMIUM					
MU1-COMP	mg/L	6010B	ND	5.00E-03	-
MU1-G3	mg/L	6010B	ND	5.00E-03	-
MU1-GNL	mg/L	6010B	4.30E-04	5.00E-03	-
MU1-GNU	mg/L	6010B	2.10E-04	5.00E-03	-
MU1-GS	mg/L	6010B	ND	5.00E-03	-
MU2-COMP	mg/L	6010B	ND	5.00E-03	-
MU2-G1	mg/L	6010B	ND	5.00E-03	-
MU2-GN	mg/L	6010B	ND	5.00E-03	-
MU2-GS	mg/L	6010B	ND	5.00E-03	-
MU3-COMP	mg/L	6010B	ND	5.00E-03	-
MU3-GN	mg/L	6010B	ND	5.00E-03	-
MU3-GS	mg/L	6010B	ND	5.00E-03	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
CALCIUM					
MU1-COMP	mg/L	6010B	2.20E+01	-	-
MU1-G3	mg/L	6010B	2.20E+01	-	-
MU1-GNL	mg/L	6010B	1.60E+01	-	-
MU1-GNU	mg/L	6010B	2.00E+01	-	-
MU1-GS	mg/L	6010B	2.10E+01	-	-
MU2-COMP	mg/L	6010B	1.90E+01	-	-
MU2-G1	mg/L	6010B	1.90E+01	-	-
MU2-GN	mg/L	6010B	2.10E+01	-	-
MU2-GS	mg/L	6010B	1.70E+01	-	-
MU3-COMP	mg/L	6010B	1.70E+01	-	-
MU3-GN	mg/L	6010B	1.70E+01	-	-
MU3-GS	mg/L	6010B	2.10E+01	-	-
MU1-COMP	mg/L	6010B	3.20E-03	**1.00E-01**	**1.00E-01**
MU1-G3	mg/L	6010B	2.70E-03	**1.00E-01**	**1.00E-01**
MU1-GNL	mg/L	6010B	7.40E-03	**1.00E-01**	**1.00E-01**
MU1-GNU	mg/L	6010B	6.00E-03	**1.00E-01**	**1.00E-01**
MU1-GS	mg/L	6010B	2.50E-03	**1.00E-01**	**1.00E-01**
MU2-COMP	mg/L	6010B	4.80E-03	**1.00E-01**	**1.00E-01**
MU2-G1	mg/L	6010B	3.60E-03	**1.00E-01**	**1.00E-01**
MU2-GN	mg/L	6010B	3.50E-03	**1.00E-01**	**1.00E-01**
MU2-GS	mg/L	6010B	4.10E-03	**1.00E-01**	**1.00E-01**
MU3-COMP	mg/L	6010B	5.00E-03	**1.00E-01**	**1.00E-01**
MU3-GN	mg/L	6010B	5.10E-03	**1.00E-01**	**1.00E-01**
MU3-GS	mg/L	6010B	5.00E-03	**1.00E-01**	**1.00E-01**
COBALT					
MU1-COMP	mg/L	6010B	1.20E-03	**1.00E+00**	-
MU1-G3	mg/L	6010B	5.10E-04	**1.00E+00**	-
MU1-GNL	mg/L	6010B	2.40E-03	**1.00E+00**	-
MU1-GNU	mg/L	6010B	1.40E-03	**1.00E+00**	-
MU1-GS	mg/L	6010B	4.70E-04	**1.00E+00**	-
MU2-COMP	mg/L	6010B	1.20E-03	**1.00E+00**	-
MU2-G1	mg/L	6010B	7.80E-04	**1.00E+00**	-
MU2-GN	mg/L	6010B	1.10E-03	**1.00E+00**	-
MU2-GS	mg/L	6010B	1.50E-03	**1.00E+00**	-
MU3-COMP	mg/L	6010B	1.30E-03	**1.00E+00**	-
MU3-GN	mg/L	6010B	1.60E-03	**1.00E+00**	-
MU3-GS	mg/L	6010B	1.50E-03	**1.00E+00**	-
COPPER					
MU1-COMP	mg/L	6010B	ND	**6.50E-01**	1.30E+00
MU1-G3	mg/L	6010B	ND	**6.50E-01**	1.30E+00
MU1-GNL	mg/L	6010B	1.10E-02	**6.50E-01**	1.30E+00
MU1-GNU	mg/L	6010B	5.60E-03	**6.50E-01**	1.30E+00
MU1-GS	mg/L	6010B	2.70E-03	**6.50E-01**	1.30E+00
MU2-COMP	mg/L	6010B	3.50E-03	**6.50E-01**	1.30E+00
MU2-G1	mg/L	6010B	3.40E-03	**6.50E-01**	1.30E+00
MU2-GN	mg/L	6010B	3.60E-03	**6.50E-01**	1.30E+00
MU2-GS	mg/L	6010B	4.90E-03	**6.50E-01**	1.30E+00
MU3-COMP	mg/L	6010B	4.50E-03	**6.50E-01**	1.30E+00
MU3-GN	mg/L	6010B	4.70E-03	**6.50E-01**	1.30E+00
MU3-GS	mg/L	6010B	4.40E-03	**6.50E-01**	1.30E+00

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
Cr (VI)					
MU1-COMP	mg/L	7196A	ND	-	-
MU1-G3	mg/L	7196A	ND	-	-
MU1-GNL	mg/L	7196A	ND	-	-
MU1-GNU	mg/L	7196A	ND	-	-
MU1-GS	mg/L	7196A	ND	-	-
MU2-COMP	mg/L	7196A	ND	-	-
MU2-G1	mg/L	7196A	ND	-	-
MU2-GN	mg/L	7196A	ND	-	-
MU2-GS	mg/L	7196A	ND	-	-
MU3-COMP	mg/L	7196A	ND	-	-
MU3-GN	mg/L	7196A	ND	-	-
MU3-GS	mg/L	7196A	ND	-	-
IRON					
MU1-COMP	mg/L	6010B	9.30E-01	5.00E+00	-
MU1-G3	mg/L	6010B	8.90E-01	5.00E+00	-
MU1-GNL	mg/L	6010B	7.30E+00	5.00E+00	-
MU1-GNU	mg/L	6010B	2.00E+00	5.00E+00	-
MU1-GS	mg/L	6010B	8.20E-01	5.00E+00	-
MU2-COMP	mg/L	6010B	1.40E+00	5.00E+00	-
MU2-G1	mg/L	6010B	1.10E+00	5.00E+00	-
MU2-GN	mg/L	6010B	1.10E+00	5.00E+00	-
MU2-GS	mg/L	6010B	1.50E+00	5.00E+00	-
MU3-COMP	mg/L	6010B	1.90E+00	5.00E+00	-
MU3-GN	mg/L	6010B	2.20E+00	5.00E+00	-
MU3-GS	mg/L	6010B	1.80E+00	5.00E+00	-
LEAD					
MU1-COMP	mg/L	6010B	2.60E-03	7.50E-03	1.50E-02
MU1-G3	mg/L	6010B	2.80E-03	7.50E-03	1.50E-02
MU1-GNL	mg/L	6010B	5.70E-02	7.50E-03	1.50E-02
MU1-GNU	mg/L	6010B	1.20E-02	7.50E-03	1.50E-02
MU1-GS	mg/L	6010B	2.70E-03	7.50E-03	1.50E-02
MU2-COMP	mg/L	6010B	5.20E-03	7.50E-03	1.50E-02
MU2-G1	mg/L	6010B	5.60E-03	7.50E-03	1.50E-02
MU2-GN	mg/L	6010B	6.60E-03	7.50E-03	1.50E-02
MU2-GS	mg/L	6010B	6.00E-03	7.50E-03	1.50E-02
MU3-COMP	mg/L	6010B	4.90E-03	7.50E-03	1.50E-02
MU3-GN	mg/L	6010B	6.30E-03	7.50E-03	1.50E-02
MU3-GS	mg/L	6010B	3.90E-03	7.50E-03	1.50E-02
MAGNESIUM					
MU1-COMP	mg/L	6010B	2.50E+00	-	-
MU1-G3	mg/L	6010B	2.30E+00	-	-
MU1-GNL	mg/L	6010B	3.00E+00	-	-
MU1-GNU	mg/L	6010B	3.00E+00	-	-
MU1-GS	mg/L	6010B	2.10E+00	-	-
MU2-COMP	mg/L	6010B	2.40E+00	-	-
MU2-G1	mg/L	6010B	2.30E+00	-	-
MU2-GN	mg/L	6010B	2.60E+00	-	-
MU2-GS	mg/L	6010B	2.00E+00	-	-
MU3-COMP	mg/L	6010B	2.50E+00	-	-
MU3-GN	mg/L	6010B	2.50E+00	-	-
MU3-GS	mg/L	6010B	2.40E+00	-	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
MANGANESE					
MU1-COMP	mg/L	6010B	9.00E-03	1.50E-01	-
MU1-G3	mg/L	6010B	8.10E-03	1.50E-01	-
MU1-GNL	mg/L	6010B	1.50E-01	1.50E-01	-
MU1-GNU	mg/L	6010B	2.60E-02	1.50E-01	-
MU1-GS	mg/L	6010B	1.10E-02	1.50E-01	-
MU2-COMP	mg/L	6010B	1.60E-02	1.50E-01	-
MU2-G1	mg/L	6010B	1.30E-02	1.50E-01	-
MU2-GN	mg/L	6010B	1.90E-02	1.50E-01	-
MU2-GS	mg/L	6010B	2.00E-02	1.50E-01	-
MU3-COMP	mg/L	6010B	2.10E-02	1.50E-01	-
MU3-GN	mg/L	6010B	2.30E-02	1.50E-01	-
MU3-GS	mg/L	6010B	1.80E-02	1.50E-01	-
MERCURY					
MU1-COMP	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-G3	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-GNL	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-GNU	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-GS	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-COMP	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-G1	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-GN	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-GS	mg/L	7470A	ND	2.00E-03	2.00E-03
MU3-COMP	mg/L	7470A	ND	2.00E-03	2.00E-03
MU3-GN	mg/L	7470A	ND	2.00E-03	2.00E-03
MU3-GS	mg/L	7470A	ND	2.00E-03	2.00E-03
NICKEL					
MU1-COMP	mg/L	6010B	ND	1.00E-01	-
MU1-G3	mg/L	6010B	ND	1.00E-01	-
MU1-GNL	mg/L	6010B	4.90E-03	1.00E-01	-
MU1-GNU	mg/L	6010B	2.30E-03	1.00E-01	-
MU1-GS	mg/L	6010B	ND	1.00E-01	-
MU2-COMP	mg/L	6010B	1.90E-03	1.00E-01	-
MU2-G1	mg/L	6010B	2.30E-03	1.00E-01	-
MU2-GN	mg/L	6010B	1.70E-03	1.00E-01	-
MU2-GS	mg/L	6010B	2.30E-03	1.00E-01	-
MU3-COMP	mg/L	6010B	1.80E-03	1.00E-01	-
MU3-GN	mg/L	6010B	2.70E-03	1.00E-01	-
MU3-GS	mg/L	6010B	3.00E-03	1.00E-01	-
POTASSIUM					
MU1-COMP	mg/L	6010B	1.10E+00	-	-
MU1-G3	mg/L	6010B	9.80E-01	-	-
MU1-GNL	mg/L	6010B	2.60E+00	-	-
MU1-GNU	mg/L	6010B	1.60E+00	-	-
MU1-GS	mg/L	6010B	ND	-	-
MU2-COMP	mg/L	6010B	1.00E+00	-	-
MU2-G1	mg/L	6010B	8.50E-01	-	-
MU2-GN	mg/L	6010B	9.20E-01	-	-
MU2-GS	mg/L	6010B	9.00E-01	-	-
MU3-COMP	mg/L	6010B	1.30E+00	-	-
MU3-GN	mg/L	6010B	1.30E+00	-	-
MU3-GS	mg/L	6010B	1.40E+00	-	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
SELENIUM					
MU1-COMP	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-G3	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-GNL	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-GNU	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-GS	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-COMP	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-G1	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-GN	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-GS	mg/L	6010B	ND	5.00E-02	5.00E-02
MU3-COMP	mg/L	6010B	ND	5.00E-02	5.00E-02
MU3-GN	mg/L	6010B	ND	5.00E-02	5.00E-02
MU3-GS	mg/L	6010B	ND	5.00E-02	5.00E-02
SILVER					
MU1-COMP	mg/L	6010B	ND	5.00E-02	-
MU1-G3	mg/L	6010B	ND	5.00E-02	-
MU1-GNL	mg/L	6010B	ND	5.00E-02	-
MU1-GNU	mg/L	6010B	ND	5.00E-02	-
MU1-GS	mg/L	6010B	ND	5.00E-02	-
MU2-COMP	mg/L	6010B	ND	5.00E-02	-
MU2-G1	mg/L	6010B	ND	5.00E-02	-
MU2-GN	mg/L	6010B	ND	5.00E-02	-
MU2-GS	mg/L	6010B	ND	5.00E-02	-
MU3-COMP	mg/L	6010B	ND	5.00E-02	-
MU3-GN	mg/L	6010B	ND	5.00E-02	-
MU3-GS	mg/L	6010B	ND	5.00E-02	-
SODIUM					
MU1-COMP	mg/L	6010B	1.80E+01	-	-
MU1-G3	mg/L	6010B	1.90E+01	-	-
MU1-GNL	mg/L	6010B	2.20E+01	-	-
MU1-GNU	mg/L	6010B	1.90E+01	-	-
MU1-GS	mg/L	6010B	1.80E+01	-	-
MU2-COMP	mg/L	6010B	2.00E+01	-	-
MU2-G1	mg/L	6010B	1.80E+01	-	-
MU2-GN	mg/L	6010B	1.90E+01	-	-
MU2-GS	mg/L	6010B	1.90E+01	-	-
MU3-COMP	mg/L	6010B	1.80E+01	-	-
MU3-GN	mg/L	6010B	1.80E+01	-	-
MU3-GS	mg/L	6010B	1.80E+01	-	-
THALLIUM					
MU1-COMP	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-G3	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-GNL	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-GNU	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-GS	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-COMP	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-G1	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-GN	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-GS	mg/L	6010B	ND	2.00E-03	2.00E-03
MU3-COMP	mg/L	6010B	ND	2.00E-03	2.00E-03
MU3-GN	mg/L	6010B	ND	2.00E-03	2.00E-03
MU3-GS	mg/L	6010B	ND	2.00E-03	2.00E-03

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
VANADIUM					
MU1-COMP	mg/L	6010B	3.10E-03	**4.90E-02**	-
MU1-G3	mg/L	6010B	3.50E-03	**4.90E-02**	-
MU1-GNL	mg/L	6010B	8.60E-03	**4.90E-02**	-
MU1-GNU	mg/L	6010B	6.20E-03	**4.90E-02**	-
MU1-GS	mg/L	6010B	3.00E-03	**4.90E-02**	-
MU2-COMP	mg/L	6010B	5.70E-03	**4.90E-02**	-
MU2-G1	mg/L	6010B	5.10E-03	**4.90E-02**	-
MU2-GN	mg/L	6010B	3.30E-03	**4.90E-02**	-
MU2-GS	mg/L	6010B	4.00E-03	**4.90E-02**	-
MU3-COMP	mg/L	6010B	6.50E-03	**4.90E-02**	-
MU3-GN	mg/L	6010B	7.00E-03	**4.90E-02**	-
MU3-GS	mg/L	6010B	6.50E-03	**4.90E-02**	-
ZINC					
MU1-COMP	mg/L	6010B	8.10E-03	**5.00E+00**	-
MU1-G3	mg/L	6010B	9.40E-03	**5.00E+00**	-
MU1-GNL	mg/L	6010B	1.10E-01	**5.00E+00**	-
MU1-GNU	mg/L	6010B	2.70E-02	**5.00E+00**	-
MU1-GS	mg/L	6010B	7.30E-03	**5.00E+00**	-
MU2-COMP	mg/L	6010B	1.40E-02	**5.00E+00**	-
MU2-G1	mg/L	6010B	1.20E-02	**5.00E+00**	-
MU2-GN	mg/L	6010B	1.60E-02	**5.00E+00**	-
MU2-GS	mg/L	6010B	1.20E-02	**5.00E+00**	-
MU3-COMP	mg/L	6010B	1.20E-02	**5.00E+00**	-
MU3-GN	mg/L	6010B	1.40E-02	**5.00E+00**	-
MU3-GS	mg/L	6010B	1.10E-02	**5.00E+00**	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Table 5a. ProUCL Evaluation of Arsenic SPLP Results

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	WorkSheet_b.wst
Full Precision	OFF
Confidence Coefficient	95%
umber of Bootstrap Operations	2000

AsSPLP

General Statistics

Number of Valid Data	12	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	3
		Percent Non-Detects	25.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0027	Minimum Detected	-5.915
Maximum Detected	0.023	Maximum Detected	-3.772
Mean of Detected	0.0056	Mean of Detected	-5.479
SD of Detected	0.00656	SD of Detected	0.662
Minimum Non-Detect	0.0027	Minimum Non-Detect	-5.915
Maximum Non-Detect	0.0027	Maximum Non-Detect	-5.915

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.471	Shapiro Wilk Test Statistic	0.611
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.00454	Mean	-5.761
SD	0.00591	SD	0.761
95% DL/2 (t) UCL	0.0076	95% H-Stat (DL/2) UCL	0.00748
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.00363	Mean in Log Scale	-5.815
SD	0.00663	SD in Log Scale	0.839
95% MLE (t) UCL	0.00707	Mean in Original Scale	0.00448
95% MLE (Tiku) UCL	0.00709	SD in Original Scale	0.00595
		95% t UCL	0.00756
		95% Percentile Bootstrap UCL	0.00778
		95% BCA Bootstrap UCL	0.00923
		95% H UCL	0.00825

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.307	Data do not follow a Discernable Distribution (0.05)	
Theta Star	0.00428		
nu star	23.53		
A-D Test Statistic	1.934	**Nonparametric Statistics**	
5% A-D Critical Value	0.731	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.731	Mean	0.00488
5% K-S Critical Value	0.283	SD	0.0055
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00168
		95% KM (t) UCL	0.0079
Assuming Gamma Distribution		95% KM (z) UCL	0.00764
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0078
Minimum	1E-06	95% KM (bootstrap t) UCL	0.0398
Maximum	0.023	95% KM (BCA) UCL	0.00827
Mean	0.0042	95% KM (Percentile Bootstrap) UCL	0.00817
Median	0.00315	95% KM (Chebyshev) UCL	0.0122
SD	0.00614	97.5% KM (Chebyshev) UCL	0.0154
k star	0.3	99% KM (Chebyshev) UCL	0.0216
Theta star	0.014		
Nu star	7.192	**Potential UCLs to Use**	
AppChi2	2.277	95% KM (BCA) UCL	0.00827
95% Gamma Approximate UCL (Use when n >= 40)	0.0133		
95% Adjusted Gamma UCL (Use when n < 40)	0.0161		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Table 5b. ProUCL Evaluation of Mercury Sediment Results

General UCL Statistics for Full Data Sets

User Selected Options	
From File	WorkSheet_a.wst
Full Precision	OFF
Confidence Coefficient	95%
ımber of Bootstrap Operations	2000

mercury

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	13

Raw Statistics		Log-transformed Statistics	
Minimum	0.045	Minimum of Log Data	-3.101
Maximum	0.16	Maximum of Log Data	-1.833
Mean	0.0868	Mean of log Data	-2.516
Geometric Mean	0.0808	SD of log Data	0.394
Median	0.084		
SD	0.0339		
Std. Error of Mean	0.00849		
Coefficient of Variation	0.391		
Skewness	0.627		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.928	Shapiro Wilk Test Statistic	0.94
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.102	95% H-UCL	0.106
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.125
95% Adjusted-CLT UCL (Chen-1995)	0.102	97.5% Chebyshev (MVUE) UCL	0.141
95% Modified-t UCL (Johnson-1978)	0.102	99% Chebyshev (MVUE) UCL	0.174

Gamma Distribution Test		Data Distribution
k star (bias corrected)	5.817	Data appear Normal at 5% Significance Level
Theta Star	0.0149	
MLE of Mean	0.0868	
MLE of Standard Deviation	0.036	
nu star	186.1	
Approximate Chi Square Value (.05)	155.6	Nonparametric Statistics
Adjusted Level of Significance	0.0335	95% CLT UCL 0.101
Adjusted Chi Square Value	152.4	95% Jackknife UCL 0.102
		95% Standard Bootstrap UCL 0.1
Anderson-Darling Test Statistic	0.383	95% Bootstrap-t UCL 0.104
Anderson-Darling 5% Critical Value	0.74	95% Hall's Bootstrap UCL 0.103
Kolmogorov-Smirnov Test Statistic	0.164	95% Percentile Bootstrap UCL 0.101
Kolmogorov-Smirnov 5% Critical Value	0.216	95% BCA Bootstrap UCL 0.102
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.124
		97.5% Chebyshev(Mean, Sd) UCL 0.14
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.171
95% Approximate Gamma UCL (Use when n >= 40)	0.104	
95% Adjusted Gamma UCL (Use when n < 40)	0.106	

Potential UCL to Use		
	Use 95% Student's-t UCL	0.102

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5c. ProUCL Evaluation of Benzo(b)Fluroanthene Sediment Results

General UCL Statistics for Full Data Sets

User Selected Options	
From File	WorkSheet_a.wst
Full Precision	OFF
Confidence Coefficient	95%
ımber of Bootstrap Operations	2000

B(b)F

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	15

Raw Statistics		Log-transformed Statistics	
Minimum	0.2	Minimum of Log Data	-1.609
Maximum	0.81	Maximum of Log Data	-0.211
Mean	0.471	Mean of log Data	-0.811
Geometric Mean	0.445	SD of log Data	0.362
Median	0.48		
SD	0.156		
Std. Error of Mean	0.039		
Coefficient of Variation	0.331		
Skewness	0.222		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.981	Shapiro Wilk Test Statistic	0.96
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.539	95% H-UCL	0.568
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.662
95% Adjusted-CLT UCL (Chen-1995)	0.537	97.5% Chebyshev (MVUE) UCL	0.744
95% Modified-t UCL (Johnson-1978)	0.539	99% Chebyshev (MVUE) UCL	0.906

Gamma Distribution Test		Data Distribution
k star (bias corrected)	7.295	Data appear Normal at 5% Significance Level
Theta Star	0.0645	
MLE of Mean	0.471	
MLE of Standard Deviation	0.174	
nu star	233.4	
Approximate Chi Square Value (.05)	199.1	Nonparametric Statistics
Adjusted Level of Significance	0.0335	95% CLT UCL 0.535
Adjusted Chi Square Value	195.5	95% Jackknife UCL 0.539
		95% Standard Bootstrap UCL 0.533
Anderson-Darling Test Statistic	0.228	95% Bootstrap-t UCL 0.54
Anderson-Darling 5% Critical Value	0.739	95% Hall's Bootstrap UCL 0.544
Kolmogorov-Smirnov Test Statistic	0.13	95% Percentile Bootstrap UCL 0.53
Kolmogorov-Smirnov 5% Critical Value	0.215	95% BCA Bootstrap UCL 0.536
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.64
		97.5% Chebyshev(Mean, Sd) UCL 0.714
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.858
95% Approximate Gamma UCL (Use when n >= 40)	0.552	
95% Adjusted Gamma UCL (Use when n < 40)	0.562	

Potential UCL to Use		Use 95% Student's-t UCL	0.539

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5d. ProUCL Evaluation of Aroclor 1254 Sediment Results

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	WorkSheet_b.wst
Full Precision	OFF
Confidence Coefficient	95%
umber of Bootstrap Operations	2000

1254

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	16

Raw Statistics		**Log-transformed Statistics**	
Minimum	0.014	Minimum of Log Data	-4.269
Maximum	0.25	Maximum of Log Data	-1.386
Mean	0.0509	Mean of log Data	-3.283
Geometric Mean	0.0375	SD of log Data	0.718
Median	0.0305		
SD	0.0565		
Std. Error of Mean	0.0141		
Coefficient of Variation	1.11		
Skewness	3.259		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.571	Shapiro Wilk Test Statistic	0.908
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.0756	95% H-UCL	0.0743
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.087
95% Adjusted-CLT UCL (Chen-1995)	0.0864	97.5% Chebyshev (MVUE) UCL	0.104
95% Modified-t UCL (Johnson-1978)	0.0776	99% Chebyshev (MVUE) UCL	0.138

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	1.494	**Data Follow Appr. Gamma Distribution at 5% Significance Level**
Theta Star	0.034	
MLE of Mean	0.0509	
MLE of Standard Deviation	0.0416	
nu star	47.82	
Approximate Chi Square Value (.05)	32.95	**Nonparametric Statistics**
Adjusted Level of Significance	0.0335	95% CLT UCL 0.0741
Adjusted Chi Square Value	31.55	95% Jackknife UCL 0.0756
		95% Standard Bootstrap UCL 0.0735
Anderson-Darling Test Statistic	1.01	95% Bootstrap-t UCL 0.114
Anderson-Darling 5% Critical Value	0.752	95% Hall's Bootstrap UCL 0.157
Kolmogorov-Smirnov Test Statistic	0.209	95% Percentile Bootstrap UCL 0.0749
Kolmogorov-Smirnov 5% Critical Value	0.218	95% BCA Bootstrap UCL 0.0892
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.112
		97.5% Chebyshev(Mean, Sd) UCL 0.139
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.191
95% Approximate Gamma UCL (Use when n >= 40)	0.0738	
95% Adjusted Gamma UCL (Use when n < 40)	0.0771	

Potential UCL to Use	Use 95% Approximate Gamma UCL 0.0738

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5e. ProUCL Evaluation of Total PCB Sediment Results

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	WorkSheet_b.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

totalPCB

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	14

Raw Statistics		Log-transformed Statistics	
Minimum	0.023	Minimum of Log Data	-3.772
Maximum	0.59	Maximum of Log Data	-0.528
Mean	0.102	Mean of log Data	-2.628
Geometric Mean	0.0722	SD of log Data	0.717
Median	0.058		
SD	0.134		
Std. Error of Mean	0.0334		
Coefficient of Variation	1.315		
Skewness	3.656		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.474	Shapiro Wilk Test Statistic	0.861
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.16	95% H-UCL	0.143
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.167
95% Adjusted-CLT UCL (Chen-1995)	0.189	97.5% Chebyshev (MVUE) UCL	0.2
95% Modified-t UCL (Johnson-1978)	0.165	99% Chebyshev (MVUE) UCL	0.265

Gamma Distribution Test		Data Distribution
k star (bias corrected)	1.346	**Data do not follow a Discernable Distribution (0.05)**
Theta Star	0.0756	
MLE of Mean	0.102	
MLE of Standard Deviation	0.0877	
nu star	43.08	
Approximate Chi Square Value (.05)	29.03	**Nonparametric Statistics**
Adjusted Level of Significance	0.0335	95% CLT UCL 0.157
Adjusted Chi Square Value	27.72	95% Jackknife UCL 0.16
		95% Standard Bootstrap UCL 0.156
Anderson-Darling Test Statistic	1.567	95% Bootstrap-t UCL 0.334
Anderson-Darling 5% Critical Value	0.754	95% Hall's Bootstrap UCL 0.393
Kolmogorov-Smirnov Test Statistic	0.283	95% Percentile Bootstrap UCL 0.163
Kolmogorov-Smirnov 5% Critical Value	0.219	95% BCA Bootstrap UCL 0.202
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.248
		97.5% Chebyshev(Mean, Sd) UCL 0.311
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.435
95% Approximate Gamma UCL (Use when n >= 40)	0.151	
95% Adjusted Gamma UCL (Use when n < 40)	0.158	

Potential UCL to Use	Use 95% Chebyshev (Mean, Sd) UCL 0.248

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5f. ProUCL Evaluation of Iron SPLP Results

General UCL Statistics for Full Data Sets

User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Confidence Coefficient	95%
umber of Bootstrap Operations	2000

Fe

General Statistics

Number of Valid Observations 9

Number of Distinct Observations 8

Raw Statistics	
Minimum	0.82
Maximum	7.3
Mean	2.079
Geometric Mean	1.619
Median	1.5
SD	2.019
Std. Error of Mean	0.673
Coefficient of Variation	0.971
Skewness	2.667

Log-transformed Statistics	
Minimum of Log Data	-0.198
Maximum of Log Data	1.988
Mean of log Data	0.482
SD of log Data	0.666

Warning: There are only 9 Values in this data

Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test	
Shapiro Wilk Test Statistic	0.617
Shapiro Wilk Critical Value	0.829

Data not Normal at 5% Significance Level

Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.86
Shapiro Wilk Critical Value	0.829

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution	
95% Student's-t UCL	3.33
95% UCLs (Adjusted for Skewness)	
95% Adjusted-CLT UCL (Chen-1995)	3.825
95% Modified-t UCL (Johnson-1978)	3.43

Assuming Lognormal Distribution	
95% H-UCL	3.691
95% Chebyshev (MVUE) UCL	3.907
97.5% Chebyshev (MVUE) UCL	4.747
99% Chebyshev (MVUE) UCL	6.398

Gamma Distribution Test	
k star (bias corrected)	1.51
Theta Star	1.377
MLE of Mean	2.079
MLE of Standard Deviation	1.692
nu star	27.18
Approximate Chi Square Value (.05)	16.29
Adjusted Level of Significance	0.0231
Adjusted Chi Square Value	14.54
Anderson-Darling Test Statistic	0.82
Anderson-Darling 5% Critical Value	0.729
Kolmogorov-Smirnov Test Statistic	0.266
Kolmogorov-Smirnov 5% Critical Value	0.282

Data follow Appr. Gamma Distribution at 5% Significance Level

Assuming Gamma Distribution	
95% Approximate Gamma UCL (Use when n >= 40)	3.469
95% Adjusted Gamma UCL (Use when n < 40)	3.886

Data Distribution

Data Follow Appr. Gamma Distribution at 5% Significance Level

Nonparametric Statistics	
95% CLT UCL	3.186
95% Jackknife UCL	3.33
95% Standard Bootstrap UCL	3.111
95% Bootstrap-t UCL	5.829
95% Hall's Bootstrap UCL	7.52
95% Percentile Bootstrap UCL	3.312
95% BCA Bootstrap UCL	3.923
95% Chebyshev(Mean, Sd) UCL	5.012
97.5% Chebyshev(Mean, Sd) UCL	6.282
99% Chebyshev(Mean, Sd) UCL	8.775

Potential UCL to Use

Use 95% Approximate Gamma UCL 3.469

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5g. ProUCL Evaluation of Lead SPLP Results

General UCL Statistics for Full Data Sets

User Selected Options

From File	WorkSheet.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Pb

General Statistics

Number of Valid Observations	9	Number of Distinct Observations	9

Raw Statistics		**Log-transformed Statistics**	
Minimum	0.0027	Minimum of Log Data	-5.915
Maximum	0.057	Maximum of Log Data	-2.865
Mean	0.0114	Mean of log Data	-5.002
Geometric Mean	0.00673	SD of log Data	0.925
Median	0.006		
SD	0.0173		
Std. Error of Mean	0.00577		
Coefficient of Variation	1.514		
Skewness	2.858		

Warning: There are only 9 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.527	Shapiro Wilk Test Statistic	0.829
Shapiro Wilk Critical Value	0.829	Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.0222	95% H-UCL	0.0282
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.0232
95% Adjusted-CLT UCL (Chen-1995)	0.0268	97.5% Chebyshev (MVUE) UCL	0.029
95% Modified-t UCL (Johnson-1978)	0.0231	99% Chebyshev (MVUE) UCL	0.0405

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	0.793	Data do not follow a Discernable Distribution (0.05)
Theta Star	0.0144	
MLE of Mean	0.0114	
MLE of Standard Deviation	0.0128	
nu star	14.28	
Approximate Chi Square Value (.05)	6.761	**Nonparametric Statistics**
Adjusted Level of Significance	0.0231	95% CLT UCL 0.0209
Adjusted Chi Square Value	5.707	95% Jackknife UCL 0.0222
		95% Standard Bootstrap UCL 0.0205
Anderson-Darling Test Statistic	1.152	95% Bootstrap-t UCL 0.0854
Anderson-Darling 5% Critical Value	0.742	95% Hall's Bootstrap UCL 0.0796
Kolmogorov-Smirnov Test Statistic	0.352	95% Percentile Bootstrap UCL 0.0227
Kolmogorov-Smirnov 5% Critical Value	0.286	95% BCA Bootstrap UCL 0.0282
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.0366
		97.5% Chebyshev(Mean, Sd) UCL 0.0475
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.0688
95% Approximate Gamma UCL (Use when n >= 40)	0.0241	
95% Adjusted Gamma UCL (Use when n < 40)	0.0286	

Potential UCL to Use	Use 95% Chebyshev (Mean, Sd) UCL 0.0366

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5h. ProUCL Evaluation of Manganese SPLP Results

General UCL Statistics for Full Data Sets

User Selected Options

From File	WorkSheet.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Mn

General Statistics

Number of Valid Observations	9	Number of Distinct Observations	9

Raw Statistics		**Log-transformed Statistics**	
Minimum	0.0081	Minimum of Log Data	-4.816
Maximum	0.15	Maximum of Log Data	-1.897
Mean	0.032	Mean of log Data	-3.876
Geometric Mean	0.0207	SD of log Data	0.83
Median	0.019		
SD	0.0446		
Std. Error of Mean	0.0149		
Coefficient of Variation	1.394		
Skewness	2.905		

Warning: There are only 9 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.515	Shapiro Wilk Test Statistic	0.816
Shapiro Wilk Critical Value	0.829	Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.0597	95% H-UCL	0.068
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.0626
95% Adjusted-CLT UCL (Chen-1995)	0.0719	97.5% Chebyshev (MVUE) UCL	0.0776
95% Modified-t UCL (Johnson-1978)	0.0621	99% Chebyshev (MVUE) UCL	0.107

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	0.936	Data do not follow a Discernable Distribution (0.05)
Theta Star	0.0342	
MLE of Mean	0.032	
MLE of Standard Deviation	0.0331	
nu star	16.86	
Approximate Chi Square Value (.05)	8.569	**Nonparametric Statistics**
Adjusted Level of Significance	0.0231	95% CLT UCL 0.0565
Adjusted Chi Square Value	7.358	95% Jackknife UCL 0.0597
		95% Standard Bootstrap UCL 0.0547
Anderson-Darling Test Statistic	1.242	95% Bootstrap-t UCL 0.183
Anderson-Darling 5% Critical Value	0.738	95% Hall's Bootstrap UCL 0.188
Kolmogorov-Smirnov Test Statistic	0.36	95% Percentile Bootstrap UCL 0.0612
Kolmogorov-Smirnov 5% Critical Value	0.285	95% BCA Bootstrap UCL 0.076
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.0968
		97.5% Chebyshev(Mean, Sd) UCL 0.125
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.18
95% Approximate Gamma UCL (Use when n >= 40)	0.063	
95% Adjusted Gamma UCL (Use when n < 40)	0.0733	

Potential UCL to Use	Use 95% Chebyshev (Mean, Sd) UCL 0.0968

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 6a. Average concentrations of elements in Cook County, Illinois

USGS Streambed Sediment Survey

(Calculated from cells in the geochemical grid plotting in this area.)

Element	Symbol	Mean	Std. dev.	Minimum	Maximum
Aluminum	Al (wt%)	5.199	0.485	3.713	6.411
Arsenic	As (ppm)	10.739	2.368	3.664	23.719
Calcium	Ca (wt%)	4.675	1.305	0.989	7.929
Copper	Cu (ppm)	104.22	70.848	19.156	387.926
Iron	Fe (wt%)	3.069	0.296	2.105	4.091
Mercury	Hg (ppm)	1.048	1.225	0.022	10.988
Magnesium	Mg (wt%)	2.462	0.56	0.94	3.976
Manganese	Mn (ppm)	682.1	124.389	395.23	1246.71
Sodium	Na (wt%)	0.459	0.055	0.27	0.645
Phosphorus	P (wt%)	0.193	0.085	0.046	0.523
Lead	Pb (ppm)	181.63	128.164	21.411	848.523
Selenium	Se (ppm)	1.143	0.497	0.337	3.831
Titanium	Ti (wt%)	0.237	0.018	0.136	0.302
Zinc	Zn (ppm)	404.93	250.98	52.65	1120.24

URL: http://mrdata.usgs.gov/geochem/county.php?place=f17031&el=Hg&rf=upper-midwestern

Page Contact Information: pschweitzer@usgs.gov

Page Last modified: 13:36 on 06-Apr-2012

Other counties:

http://mrdata.usgs.gov/geochem/doc/averages/hg/upper-midwestern.html

Table 6b. Average County-Wide Concentrations of Elements in Illinois Streambed Sediments

USGS Streambed Sediment Survey (units are the same as those used for each constituent in Table 4a)

County	State	As	σ_As	Hg	σ_Hg	Pb	σ_Pb	Mn	σ_Mn	Fe	σ_Fe
Adams	Illinois	7.715	3.134	0.011	0.002	19.011	5.439	859.559	389.434	1.847	0.362
Alexander	Illinois	7.291	1.365	0.031	0.007	36.590	42.386	973.027	259.095	2.069	0.257
Bond	Illinois	9.241	2.489	0.012	0.002	18.792	4.314	793.555	136.101	1.760	0.347
Boone	Illinois	5.093	1.018	0.018	0.003	12.385	1.157	762.586	103.663	2.312	0.247
Brown	Illinois	4.444	0.859	0.010	0.001	12.838	1.676	503.745	52.224	1.458	0.157
Bureau	Illinois	6.608	2.092	0.025	0.006	15.624	4.697	559.262	90.362	1.899	0.335
Calhoun	Illinois	12.131	4.016	0.024	0.021	29.936	11.368	1673.430	833.893	2.836	0.470
Carroll	Illinois	6.915	2.224	0.014	0.004	53.276	54.840	891.877	168.719	1.954	0.259
Cass	Illinois	4.685	0.995	0.013	0.002	13.137	2.011	629.091	108.184	1.969	0.437
Champaign	Illinois	7.101	1.763	0.020	0.005	18.556	2.869	705.615	236.902	2.118	0.252
Christian	Illinois	7.932	1.695	0.022	0.005	23.201	1.498	809.026	150.502	2.097	0.169
Clark	Illinois	6.907	2.113	0.010	0.001	11.819	2.115	430.160	95.925	1.317	0.247
Clay	Illinois	5.406	2.640	0.010	0.001	14.996	2.718	680.661	160.093	1.961	0.277
Clinton	Illinois	14.729	3.376	0.019	0.004	31.983	6.401	1246.530	202.748	2.728	0.304
Coles	Illinois	5.837	1.054	0.018	0.005	18.205	3.583	667.446	171.218	2.037	0.213
Cook	Illinois	10.739	2.368	1.048	1.225	181.632	128.164	682.096	124.389	3.069	0.296
Crawford	Illinois	7.673	1.934	0.013	0.002	18.325	4.312	810.010	240.659	1.956	0.417
Cumberland	Illinois	7.883	2.167	0.010	0.001	22.854	4.974	804.804	127.404	1.872	0.161
De Kalb	Illinois	7.214	1.067	0.044	0.047	27.704	19.034	760.023	114.821	2.147	0.211
De Witt	Illinois	8.362	0.762	0.038	0.006	21.813	2.301	817.141	80.808	2.503	0.081
Douglas	Illinois	5.734	0.878	0.015	0.004	17.184	2.004	599.921	99.605	2.041	0.209
Du Page	Illinois	10.462	1.550	0.321	0.158	89.297	35.824	823.465	163.975	3.094	0.175
Edgar	Illinois	6.025	1.796	0.015	0.004	13.148	1.912	514.358	99.946	1.678	0.246
Edwards	Illinois	11.234	1.451	0.020	0.013	21.506	2.117	1173.330	141.250	2.418	0.174
Effingham	Illinois	4.026	0.761	0.010	0.000	14.737	4.315	605.878	115.992	1.800	0.336
Fayette	Illinois	7.896	5.059	0.012	0.002	18.112	6.115	867.762	349.608	1.957	0.556
Ford	Illinois	8.227	1.715	0.022	0.006	21.808	3.081	594.288	90.334	2.401	0.288
Franklin	Illinois	10.926	4.324	0.019	0.005	25.163	5.910	946.274	440.731	2.526	0.604
Fulton	Illinois	7.719	2.439	0.020	0.011	19.381	6.379	867.171	309.246	2.432	0.440
Gallatin	Illinois	6.249	1.224	0.173	0.149	16.089	2.804	715.409	182.093	1.908	0.246
Greene	Illinois	9.861	2.237	0.013	0.003	21.354	3.466	1379.160	383.850	2.451	0.132
Grundy	Illinois	9.609	2.165	0.207	0.152	55.262	23.451	773.087	144.489	2.683	0.237
Hamilton	Illinois	6.646	0.701	0.029	0.007	19.290	1.360	722.577	84.544	2.069	0.197
Hancock	Illinois	8.070	2.629	0.012	0.004	17.797	4.957	791.361	287.630	1.804	0.439
Hardin	Illinois	5.273	1.182	0.314	0.202	15.460	1.071	586.444	111.367	1.585	0.132
Henderson	Illinois	10.363	2.881	0.028	0.004	21.882	2.631	1215.680	327.635	2.717	0.447
Henry	Illinois	7.893	2.893	0.016	0.004	15.265	3.329	827.221	210.683	2.125	0.306
Iroquois	Illinois	8.216	1.336	0.036	0.016	23.319	1.768	589.885	93.748	2.586	0.201
Jackson	Illinois	6.729	3.152	0.052	0.013	25.809	10.709	924.335	253.967	2.028	0.507
Jasper	Illinois	9.482	2.426	0.012	0.002	24.101	3.302	880.985	147.455	2.155	0.295
Jefferson	Illinois	14.389	5.084	0.019	0.005	25.955	6.819	1351.870	521.173	3.049	0.894
Jersey	Illinois	9.700	1.990	0.028	0.022	29.833	10.430	1429.010	310.737	2.529	0.394
Jo Daviess	Illinois	6.342	0.900	0.020	0.005	57.860	74.440	852.109	127.346	2.097	0.240
Johnson	Illinois	6.204	1.021	0.038	0.006	16.155	4.345	675.303	108.241	1.819	0.222
Kane	Illinois	8.249	1.434	0.161	0.141	57.953	31.304	801.698	116.363	2.593	0.202
Kankakee	Illinois	13.387	6.785	0.059	0.034	28.640	5.991	812.885	332.826	3.109	1.033
Kendall	Illinois	8.157	1.323	0.160	0.096	50.663	17.799	860.474	122.130	2.566	0.168
Knox	Illinois	12.540	5.444	0.018	0.004	21.728	3.975	1140.270	513.110	2.782	0.434
Lake	Illinois	7.933	1.838	0.207	0.203	41.447	18.123	854.937	120.668	2.632	0.344
La Salle	Illinois	8.459	2.134	0.142	0.149	42.420	26.913	659.149	111.947	2.525	0.352
Lawrence	Illinois	11.807	3.097	0.017	0.005	25.957	5.137	1155.570	129.719	2.964	0.572
Lee	Illinois	7.984	3.603	0.037	0.023	23.975	15.311	666.462	230.019	1.924	0.431
Livingston	Illinois	9.845	2.026	0.029	0.011	22.064	3.628	667.387	127.049	2.676	0.353
Logan	Illinois	7.243	1.161	0.019	0.005	18.579	1.749	740.164	118.981	2.208	0.208
McDonough	Illinois	10.749	1.889	0.018	0.005	23.420	3.890	1110.790	267.031	2.495	0.188

Table 6b. Average County-Wide Concentrations of Elements in Illinois Streambed Sediments

USGS Streambed Sediment Survey (units are the same as those used for each constituent in Table 4a)

County	State	As	σ_As	Hg	σ_Hg	Pb	σ_Pb	Mn	σ_Mn	Fe	σ_Fe
McHenry	Illinois	6.559	1.708	0.087	0.087	24.577	18.499	714.892	209.855	2.129	0.319
McLean	Illinois	9.373	1.068	0.038	0.005	22.289	2.329	816.785	148.805	2.604	0.198
Macon	Illinois	7.091	1.010	0.022	0.007	20.234	1.983	743.393	89.247	2.151	0.223
Macoupin	Illinois	9.204	4.983	0.013	0.004	21.615	8.906	1290.700	756.527	1.854	0.645
Madison	Illinois	8.281	2.468	0.015	0.004	25.997	7.659	1129.180	346.107	2.138	0.488
Marion	Illinois	9.959	4.550	0.013	0.003	22.337	5.185	926.356	238.095	2.252	0.370
Marshall	Illinois	9.783	1.896	0.030	0.005	21.011	2.616	728.208	91.576	2.575	0.356
Mason	Illinois	5.393	1.835	0.013	0.002	13.610	2.290	666.869	175.314	1.927	0.390
Massac	Illinois	7.516	1.562	0.039	0.011	20.725	3.723	828.247	172.755	2.062	0.301
Menard	Illinois	8.628	2.185	0.015	0.003	19.108	2.963	804.374	185.430	2.053	0.229
Mercer	Illinois	8.324	3.556	0.022	0.013	18.675	4.134	854.274	169.875	2.157	0.427
Monroe	Illinois	10.786	5.321	0.019	0.008	27.790	10.278	1261.040	577.457	2.173	0.538
Montgomery	Illinois	7.395	4.152	0.013	0.004	18.790	5.596	723.498	330.832	1.864	0.516
Morgan	Illinois	9.808	4.613	0.017	0.003	23.056	8.538	1295.100	708.781	2.243	0.382
Moultrie	Illinois	6.859	0.633	0.016	0.002	21.665	3.545	751.401	115.867	1.844	0.129
Ogle	Illinois	6.205	1.273	0.019	0.005	16.395	2.834	965.187	286.860	2.014	0.275
Peoria	Illinois	10.693	3.595	0.014	0.003	20.090	4.952	1164.010	689.521	2.735	0.604
Perry	Illinois	7.407	2.936	0.020	0.006	20.842	4.635	925.695	317.164	1.992	0.416
Piatt	Illinois	8.166	1.506	0.025	0.007	20.730	1.735	674.761	87.837	2.482	0.350
Pike	Illinois	6.768	1.998	0.018	0.011	17.326	2.168	1271.690	1348.950	2.104	0.815
Pope	Illinois	5.826	0.837	0.048	0.023	18.530	3.474	649.545	176.148	1.756	0.170
Pulaski	Illinois	9.452	1.573	0.036	0.005	35.538	18.790	1067.130	268.717	2.388	0.203
Putnam	Illinois	8.203	0.731	0.033	0.005	21.384	1.837	740.500	99.448	2.461	0.093
Randolph	Illinois	5.403	0.833	0.029	0.006	17.620	2.409	639.826	178.770	1.837	0.175
Richland	Illinois	8.835	2.708	0.011	0.001	18.036	4.559	866.673	164.025	2.136	0.333
Rock Island	Illinois	6.229	1.661	0.017	0.004	16.372	2.142	894.904	280.676	2.240	0.412
St. Clair	Illinois	12.406	4.373	0.022	0.006	34.574	11.059	1459.470	517.765	3.095	0.485
Saline	Illinois	5.728	0.435	0.032	0.007	20.883	2.621	587.196	133.976	2.169	0.307
Sangamon	Illinois	8.789	2.185	0.023	0.006	27.227	4.600	1106.060	398.442	2.308	0.207
Schuyler	Illinois	4.676	1.217	0.011	0.001	11.252	1.937	563.195	88.126	1.718	0.260
Scott	Illinois	6.528	1.170	0.016	0.002	16.307	3.017	714.566	189.467	1.943	0.213
Shelby	Illinois	6.375	3.335	0.012	0.002	19.062	5.058	830.050	262.178	1.998	0.494
Stark	Illinois	15.475	3.468	0.023	0.003	23.031	2.787	1304.420	485.836	2.760	0.398
Stephenson	Illinois	5.936	0.591	0.017	0.003	17.578	2.722	849.023	100.983	2.095	0.115
Tazewell	Illinois	8.159	1.420	0.019	0.007	19.535	3.371	831.274	175.334	2.208	0.234
Union	Illinois	5.665	0.933	0.032	0.003	17.340	3.691	797.997	125.879	1.754	0.165
Vermilion	Illinois	9.562	3.024	0.027	0.014	22.766	5.232	1090.820	698.872	2.466	0.554
Wabash	Illinois	15.393	2.828	0.019	0.005	36.492	9.536	1434.950	285.226	2.907	0.287
Warren	Illinois	6.707	2.103	0.027	0.006	19.655	2.414	771.951	169.989	2.010	0.365
Washington	Illinois	10.304	2.418	0.018	0.005	25.612	6.836	1025.710	222.101	2.392	0.380
Wayne	Illinois	9.724	1.770	0.019	0.010	21.063	2.214	932.460	158.223	2.362	0.350
White	Illinois	6.344	1.301	0.057	0.017	18.664	1.764	706.166	60.230	1.992	0.256
Whiteside	Illinois	8.859	3.565	0.018	0.003	14.225	5.372	1120.830	472.467	1.944	0.436
Will	Illinois	11.009	2.530	0.244	0.228	66.762	43.343	716.142	138.249	2.897	0.276
Williamson	Illinois	4.174	0.727	0.022	0.007	19.695	6.344	564.648	113.963	1.576	0.226
Winnebago	Illinois	5.855	1.773	0.021	0.004	16.161	3.136	929.035	355.482	2.289	0.398
Woodford	Illinois	9.758	1.844	0.035	0.010	25.211	7.493	753.138	155.937	2.589	0.372
	minimum	*4.03*		*0.01*		*11*		*430*		*1.32*	
	average	*8.27*		*0.05*		*26*		*870*		*2.24*	
	maximum	*15.48*		*1.05*		*182*		*1673*		*3.11*	
		As		Hg		Pb		Mn		Fe	

Calumet Harbor Dredged Material
Human Health Risk-Based Screening for Upland Beneficial Use Determination

Summary

Chemical testing of sediments from the Calumet Harbor was performed in order to assess the potential suitability of the dredged material for upland beneficial use (USACE 2011). The initial evaluation of this suitability for upland beneficial use involves comparison of sediment and aqueous phase synthetic precipitation leaching procedure (SPLP) concentrations to risk-based concentrations developed by the US and Illinois Environmental Protection Agencies (USEPA and IEPA, respectively). This is a standard approach for this type of evaluation (US ERDC 2007, 2012, and GLC 2004). These risk based concentrations were developed to be protective of human health under different scenarios where people would be exposed to potentially contaminated soils including residential and industrial properties and construction sites, or could be drinking potentially contaminated groundwater (USEPA 2012 and IEPA 2007).

On May 16, 2013, a discussion was held between the US Army Corps of Engineers (USACE) and Illinois EPA regarding the evaluation procedure needed to obtain Illinois EPA (IEPA) approval to use dredged material from Calumet Harbor in upland beneficial use settings, such as on recreational parkland (athletic fields), brownfields, roadbeds, and/or for structural fill or landfill cover. It was decided that if USACE would like blanket approval to use the dredged material in these types of upland setting where there is no ecological exposure component, the concentrations of constituents in the sediment must be compared to the lower of the lowest IEPA TACO Tier I soil remediation objective value (IEPA 2007) or the USEPA regional residential soil screening level (RSL) (USEPA 2012). The TACO Tier I evaluation includes a consideration of potential groundwater impacts from soil constituents. For metals, the results of the synthetic precipitation leaching procedure (SPLP) analyses were compared to the IEPA Class I Groundwater objectives as well as USEPA Maximum Contaminant Levels for drinking water. In addition, concentrations of metals in Calumet Harbor sediments were compared to the IEPA background soil concentrations presented in the TACO tables, as well as to concentrations of metals measured in streambed sediments by the US Geological Survey (USGS 2008), in order to assist in the determination of whether or not metal concentrations are significantly elevated in the Harbor sediments. Sediment concentrations of polyaromatic hydrocarbons, common organic contaminants from the incomplete combustion of fossil fuels, were also compared to Illinois soil background concentrations.

The results of this screening indicate that concentrations of most constituents measured in sediment and SPLP aqueous phases are below these risk and regulatory-based screening levels for protection of human health from exposure to soil and potential leaching of soil constituents to groundwater. A few of the sediment or aqueous phase SPLP results exceed the screening levels, and these are discussed below.

In conclusion, none of the constituents detected in Calumet Harbor sediments were as constituents of potential concern for upland beneficial use placement of dredged material from Calumet Harbor.

The screening results are presented and discussed below.

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Summary of exceedances of screening levels

As seen in Table 1, the following constituents fail the risk-based screening based on their sediment concentrations.

- 2 metals: arsenic and mercury
- 5 polyaromatic hydrocarbons (PAHs): benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene.
- 3 polychlorinated biphenyls (PCBs) fractions: Aroclors 1232, 1254, and total PCBs.

As seen in Table 2, the following constituents fail the risk-based screening levels based on their potential to partition to the aqueous phase (based on the synthetic precipitation leaching procedure SPLP).

- 4 metals: arsenic, iron, lead and manganese

Discussion of exceedances of screening levels and relevance for beneficial use determination

Arsenic sediment concentrations

All of the concentrations of arsenic measured in the Calumet Harbor sediment samples exceed the USEPA's risk based screening level of 0.39 mg/kg (Table 1). This USEPA regional screening level is a theoretically calculated value and does not take into account the naturally occurring concentrations of arsenic found in all soils and sediments. The Illinois TACO soil cleanup objectives for residential setting refers to the background concentrations of arsenic found in Illinois soil samples. This comparison was made in Table 3. The maximum sediment concentration of arsenic (10 mg/kg) is below both the metropolitan and non-metropolitan soil background concentrations (13 and 11.3 mg/kg, respectively) established by Illinois in the TACO.

Arsenic SPLP concentrations

Arsenic was detected in 9 of 13 aqueous phase SPLP samples analyzed from sediment samples (Table 2). The SPLP aqueous phase arsenic concentration from one of the discrete sediment samples (MU1-GNL) exceeds the USEPA's MCL of arsenic in drinking water. However, none of the SPLP aqueous phase concentrations from the 3 composite sediment samples exceed the MCL for arsenic (Table 4). In addition, the 95th upper confidence limit on the mean (UCL95) of the SPLP arsenic concentrations from these 9 samples was 0.008 mg/L (Table 5a), which is below the MCL. None of the arsenic SPLP aqueous phase concentrations is greater than the TACO Class I groundwater objective.

Therefore, arsenic is not considered a constituent of potential concern for upland beneficial use placement of dredged material from Calumet Harbor, from either direct contact with sediment or potential leaching to groundwater.

Mercury sediment concentrations

The concentrations of mercury in Calumet Harbor sediments range from 0.045 to 0.16 mg/kg. The 5 greatest sediment concentrations of mercury exceed the TACO construction worker inhalation objective of 0.1 mg/kg. None of the other screening levels for mercury are exceeded.

In explaining the mercury soil inhalation exposure objective, the Illinois included footnote "s" in Table B of Appendix B of the TACO which states that, "Value for Ingestion based on Reference Dose for Mercuric chloride (CAS No. 7487-94-7); value for Inhalation based on Reference Concentration for elemental Mercury (CAS No. 7439-97-6). Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern."

Although mercury speciation analysis was not performed on the sediment samples, the mercury measured in sediments is not likely elemental mercury, but rather mercuric or mercurous forms of mercury. This is because elemental mercury is highly volatile and would be expected to partition to the water and ultimately the air from the sediments if it were released in this form to sediments. According to the ATSDR Toxicological Profile for mercury (ATSDR 1999, Section 5.3, Environmental Fate),

> Section 5.3.2.2, Water: "[In surface water], at a pH of 4–9 and a normal sulfide concentration, mercury will form mercuric sulfide. This compound is relatively insoluble in aqueous solution (11×10^{-17} ppb), and therefore it will precipitate out and remove mercury ions from the water."
>
> Section 5.3.1, Transport and Partitioning: "In soils and surface waters, mercury can exist in the mercuric (Hg^{+2}) and mercurous (Hg^{+1}) states as a number of complex ions with varying water solubilities. Mercuric mercury, present as complexes and chelates with ligands, is probably the predominant form of mercury present in surface waters. The transport and partitioning of mercury in surface waters and soils is influenced by the particular form of the compound. More than 97% of the dissolved gaseous mercury found in water consists of elemental mercury (Vandal et al 1991). Volatile forms (e.g., metallic mercury

> and dimethylmercury) are expected to evaporate to the atmosphere, whereas solid forms partition to particulates in the soil or water column and are transported downward in the water column to the sediments (Hurley et al 1991). Vaporization of mercury from soils may be controlled by temperature, with emissions from contaminated soils being greater in warmer weather when soil microbial reduction of Hg^{+2} to the more volatile elemental mercury is greatest (Lindberg et al 1991). Vapor-phase mercury volatilized from surface waters has been measured (Schroeder and Fanaki 1988); however, the dominant process controlling the distribution of mercury compounds in the environment appears to be the sorption of nonvolatile forms to soil and sediment particulates, with little resuspension from the sediments back into the water column (Byran and Langston 1992).… Inorganic mercury sorbed to particulate material is not readily desorbed. Thus, freshwater and marine sediments are important repositories for inorganic forms of the element, and leaching is a relatively insignificant transport process in soils… Mobilization of sorbed mercury from particulates can occur through chemical or biological reduction to elemental mercury and bioconversion to volatile organic forms (Andersson 1979; Callahan et al 1979; USEPA 1984)."

Furthermore, although the concentrations of mercury in these sediment samples slightly exceed Illinois metropolitan and non-metropolitan background soil concentrations of mercury (Table 3), they do not exceed concentrations of mercury measured in streambed sediments throughout Cook County, as presented in Table 6a (USGS 2008). Outside of Cook County, average streambed sediment concentrations of mercury vary from 0.01 to 0.32 mg/kg (Table 6b). The 16 sediment sampling results were evaluated using the USEPA's ProUCL computer program (USEPA 2010). The data appears to be distributed normally, and so the program recommended use of the Student T's test for computing the 95UCL (Table 5b). This value was calculated as 0.102 mg/kg, which is within the range of county-wide average concentration of mercury in Illinois streambed sediments outside of Cook County. This UCL95 concentration of mercury is also essentially comparable to the TACO construction worker inhalation objective.

For all of these reasons, mercury is not considered a constituent of potential concern for upland beneficial use placement of dredged material from Calumet Harbor.

- The use of the inhalation exposure objective for the construction worker is not appropriate, as mercury in the sediments is not likely in the elemental (volatile) form. The USEPA RSL and TACO objectives based on the ingestion pathway are not exceeded.
- If the TACO construction worker inhalation soil remediation objective were appropriate to use, it is essentially equivalent to the UCL95 sediment concentration of mercury.

PAH sediment concentrations

Five PAHs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] were measured at concentrations that exceed the USEPA residential soil RSL (Table 1). In addition, the concentrations of benzo(a)pyrene and dibenz(a,h)anthracene exceed the TACO residential soil objectives as well. However, only a single sample result of any of these 5 PAHs exceeds any of the Illinois TACO background concentrations (Table 3). The maximum concentration of benzo(b)fluoranthene (0.81 mg/kg), detected from sample MU1-GNU, is slightly above the non-metropolitan background concentration (0.7 mg/kg) but is still below the background concentrations measure in Chicago and other metropolitan areas for this constituent. The 95UCL of benzo(b)fluoranthene concentrations is 0.539 mg/kg (Table 5c), which is below all Illinois soil background concentrations.

Because the 95UCL concentration is below all background values for benzo(b)fluoranthene, and all other PAH concentrations are below Illinois soil background concentrations, PAHs are not considered constituents of potential concern for upland beneficial use placement of dredged material from Calumet Harbor.

PCB sediment concentrations

Four different Aroclor mixtures (PCB-1016, PCB -1232, PCB-1248, and PCB-1254) were detected in sediments from the Calumet Harbor (Table 1). Aroclor 1254 was the only PCB detected in every sediment sample.

The concentrations of PCB-1016 and PCB-1248 were below the EPA RSL for these Aroclors.

The maximum concentrations of Aroclors 1232 and 1254 (0.29 mg/kg and 0.25 mg/kg respectively, both from sample MU1-GNU) exceed the USEPA regional screening level of 0.14 mg/kg and 0.22 mg/kg for these PCB Aroclor mixtures, respectively. Only 3 samples had detectable concentrations of Aroclor 1232. The average of these 3 detections of Aroclor 1232 (0.13 mg/kg) is below the USEPA RSL. Because of its low frequency of detection and because the average detected concentration of Aroclor 1232 is below the EPA RSL, it is not considered a contaminant of potential concern. The 95th upper confidence limit on the mean of Aroclor 1254 concentration is 0.074 mg/kg (Table 5d), which is below the RSL for Aroclor 1254.

Therefore, none of the individual Aroclors were measured in Calumet Harbor sediment at concentrations above their respective EPA residential soil RSLs.

The total detected concentration of PCBs (0.59 mg/kg from MU1-GNU) exceeds the USEPA RSL of 0.22 mg/kg for total PCBs. The UCL95 of total PCBs concentrations measured in Calumet Harbor sediments is 0.248 mg/kg (Table 5e) which is just above the RSL for total PCBs. However, since this UCL95 concentration is only approximately 13% greater than the EPA RSL, it still represents an approximately one in a million excess cancer risk, which is well within the USEPA's acceptable risk range. In addition, the most conservative toxicity criterion for PCBs was used by the USEPA in developing a total PCB RSL.

The toxicity criteria for total PCBs varies based on a range of toxicity criteria for the different PCB congeners and Aroclor mixtures (USEPA 1997). For total PCBs, it was assumed that the PCB congeners present are those that can pose high risk because they represent the more highly chlorinated congeners. The upper bound oral cancer slope factor was used in developing the RSL for total PCBs. A central estimate oral cancer slope factor is given, which is one-half the value of the upper bound slope factor. As seen in Table 6 from Appendix B of the Calumet Harbor Sampling Report (USACE 2011), the lower chlorinated Aroclors (1016 and 1232) make up a considerable fraction of the overall total PCBs measured in the Calumet Harbor sediments. Since the PCB mixtures detected in the Calumet Harbor sediment are on average only just over half Aroclor 1254 (one of the more highly chlorinated and toxic PCB mixtures), it may be more appropriate to use the central estimate oral cancer slope factor, rather than the upper bound oral cancer slope factor in assessing risk from exposure to the total PCB mixtures measured in the Calumet Harbor sediments. Using this central tendency oral cancer slope factor would lower the estimate of risk from exposure to total PCBs in Calumet Harbor sediments.

The Illinois TACO uses a single objective for total PCBs of 1 mg/kg, which is equivalent to the level specified in the Toxic Substances Control Act regulation 40 CFR 761 (USEPA 2001) as the soil cleanup objective for high occupancy areas without further conditions. This is considered a safe exposure level in terrestrial systems. The maximum detected total PCB concentration of 0.59 mg/kg is well below this level. No Aroclor-specific objectives are included in the Illinois TACO.

In conclusion, PCBs are not considered constituents of potential concern for upland beneficial use placement of dredged material from Calumet Harbor for the following 4 reasons:

- The UCL95 concentrations of the individual Aroclor mixtures are below their respective USEPA RSL for the individual Aroclors.
- The UCL95 concentration of total PCBs represents an acceptable cancer risk even when using the upper bound oral cancer slope factor.
- Use of the central estimate oral cancer slope factor for high risk and high persistent PCB mixtures may be more appropriate given that on average almost half the total PCBs measured in the Calumet Harbor are Aroclor mixtures with fewer chlorines and lower toxicity.
- The maximum total PCB concentration is well below the Illinois TACO value for total PCBs.

Iron SPLP concentrations

Iron was detected in the aqueous phase from all 12 of the samples for which SPLP analysis was conducted, all at concentrations greater than the USEPA's secondary MCL of 0.3 mg/L. National Secondary Drinking Water Regulations are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. USEPA recommends secondary standards to water systems but does not require systems to comply. The USEPA also sets RSL for tapwater, which represent levels of constituents that would not pose unacceptable health risks in potable water sources. The EPA RSL for tapwater for iron is 11 mg/L. None of the SPLP iron concentrations is above this health based value.

Illinois has not adopted the USEPA's secondary MCL as an enforceable standard. The Illinois TACO Class I Groundwater objective for iron is 5 mg/L. The maximum SPLP concentration of iron of 7.3 mg/L, from discrete sample MU1-GNL, is the only SPLP result that exceeds this TACO Class I Groundwater objective. None of the SPLP iron concentrations from the three composite samples exceeded the Illinois TACO Groundwater objective. The 95th upper confidence limit on the mean of iron SPLP concentrations from the 9 discrete samples is 3.5 mg/L (Table 5f), which is below the Illinois TACO Groundwater objective.

Iron is not considered a constituent of potential concern for groundwater impacts from upland beneficial use placement of dredged material from Calumet Harbor because the UCL95 of the SPLP iron concentrations across samples, as well as the SPLP concentrations from each of the composite samples, are all below the TACO Class I groundwater objective. In addition, none of the SPLP iron concentrations are above the EPA RSL for tapwater, which is a health-based screening level.

Lead SPLP concentrations

Lead was detected in the aqueous phase from all 12 of the samples for which SPLP analysis was conducted. The two greatest detections (from MU1-GNL and MU1-GNU) exceed the TACO Class 1 Groundwater objective, and the greatest detection (MU1-GNL) also exceeds the USEPA's Treatment Technique MCL for lead in drinking water. The USEPA explains that, "Lead is regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For lead, the action level is 0.015 mg/L." This lead MCL treatment technique action level is only exceeded in 1 of 12 total samples, or 1 of 9 discrete samples. None of the SPLP lead concentrations from the three composite samples exceeded the lead MCL (Table 4). The 95th upper confidence limit on the mean of lead SPLP concentrations from the 9 discrete samples is 0.037 mg/L (Table 5g), which is above both the USEPA MCL Treatment Technique Action Level and the Illinois TACO Class I Groundwater objective.

Because of these SPLP aqueous phase lead exceedances, the sediment concentrations of lead were re-evaluated. As indicated in Table 1, none of the sediment lead concentrations exceed any of the direct contact risk based concentrations. However, the average concentration of lead (37 mg/kg) and several of the individual lead sample concentrations (maximum concentration of 85 mg/kg) exceed TACO soil background concentrations for lead in both metropolitan (36 mg/kg) and non-metropolitan areas (20.9 mg/kg) (Table 3). Although the concentrations of lead in these sediment samples is commensurate with sediment lead concentrations measured by the USGS throughout Cook County streambeds, (maximum of 182 mg/kg, Tables 6a and 6b), Cook County lead sediment concentrations are the greatest throughout Illinois (Table 6b). Therefore lead concentrations are ubiquitously elevated in Cook County sediments above typical soil concentrations of lead from unimpacted sites in Illinois, although not to a degree that would pose a direct contact human health risk.

Although there are some discrete sample results and UCL95 concentrations of SPLP aqueous phase concentrations that exceed groundwater drinking water standards, the composite sediment samples do not result in SPLP concentrations above either the TACO Class 1 Groundwater objective nor the MCL Treatment Technique Action Level. The composite sediment samples would be the most representative of the average bulk sediment concentrations resulting from placement of dredged material. In addition,

these possible lead impacts to a drinking water source would be greatly diminished if the potential for the leachate concentrations to be diluted prior to reaching any drinking water source were also considered. Therefore lead should not be considered a constituent of potential concern for groundwater impacts from upland beneficial use placement of dredged material from Calumet Harbor.

Manganese SPLP concentrations

Manganese was detected in the aqueous phase from all 12 of the samples for which SPLP analysis was conducted. The maximum detected aqueous phase concentration of 0.15 mg/L (from MU1-GNL) is greater than the USEPA's secondary MCL of 0.05 mg/L. None of the SPLP manganese concentrations from the three composite samples exceeded the manganese Secondary MCL. None of the aqueous phase samples (from either composite or discrete sediment samples) exceed the Illinois TACO Class I Groundwater objective of 0.15 mg/L. The 95UCL of manganese SPLP concentrations from the 9 discrete samples is 0.097 mg/L (Table 5h), which is below the Illinois TACO Class I Groundwater objective, although it is above the USEPA's secondary MCL. The USEPA's secondary MCL for manganese was developed based on the potential for manganese to produce water that is has a black to brown color, a bitter metallic taste, and/or produce a black staining. The USEPA also sets RSL for tapwater, which represent levels of constituents that would not pose unacceptable health risks in potable water sources. The EPA RSL for tapwater for manganese is 0.32 mg/L. None of the SPLP manganese concentrations are above this health based value.

For the following 3 reasons, manganese is not considered a constituent of potential concern for groundwater impacts from upland beneficial use placement of dredged material from Calumet Harbor.

- None of the SPLP manganese concentrations from the 3 composite sediment samples, which represent average sediment concentrations across the 3 different dredged material management units exceeds any of the screening levels, including the secondary USEPA MCL and the Illinois TACO value.
- The maximum SPLP manganese concentration does not exceed the Illinois TACO Class I groundwater objective.
- None of the SPLP manganese concentrations are above the EPA RSL for tapwater, which is a health based screening level.

Conclusion

In summary, some of the individual sediment or aqueous phase SPLP concentrations exceed either the IEPA TACO or the EPA RSLs, developed to be protective of human health in various industrial or residential settings. However, some of the constituents are either naturally occurring (metals) or are found at low ambient levels throughout most soils (PAHs), and so should not be considered a health threat when compared to background soil and/or streambed sediments concentrations of these constituents measured across Illinois. In addition, when results from composite samples or UCL95 concentrations are considered, these estimates of the average sediment or SPLP concentrations are generally below the most appropriate risk and regulatory based screening levels for protection of human health in Illinois. Therefore, no constituents of potential concern are identified that would

preclude placement of sediments dredged from the Calumet Harbor to be used beneficially in an upland setting in Illinois.

If the dredged sediments are to be placed in settings where environmental exposures are a concern, i.e., a wildlife refuge, wetlands, or ecosystem restoration project, then additional evaluation of potential environmental effects of these levels of sediment constituents should be made.

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Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Anions																						
Chloride	mg/kg	16	0	1.40E+01	2.60E+01	1.89E+01	MU1-G2	3-4.6	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Cyanide, Non-amenable	mg/kg	7	0	8.30E-01	2.10E+00	1.33E+00	MU2-GN	0.14-0.21	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E+01
FLUORIDE	mg/kg	16	1	6.60E-01	7.30E+00	2.75E+00	MU3-G1	0.21-0.31	0	-	-	0	-	-	0	4.70E+03	NS	NS	1.20E+04	NS	NS	3.10E+03
Nitrate as N	mg/kg	16	6	4.70E-01	9.40E-01	6.35E-01	MU1-GS	0.086-0.13	0	-	-	0	-	-	0	1.30E+05	NS	NS	3.30E+05	NS	NS	1.30E+05
SULFATE	mg/kg	16	0	1.70E+01	2.40E+02	1.01E+02	MU1-GS	1.6-2.5	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Total Phosphate	mg/kg	16	0	1.40E+02	4.30E+02	3.16E+02	MU1-GNU	0.7-1.1	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Herbicides, Acide																						
2,4,5-T	mg/kg	19	19	-	-	-	-	0.0035-0.034	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+02
2,4-D	mg/kg	19	19	-	-	-	-	0.0077-0.027	0	-	0	0	-	0	0	7.80E+02	NS	1.50E+00	2.00E+03	NS	1.50E+00	6.90E+02
2,4-DB	mg/kg	3	3	-	-	-	-	0.022-0.027	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	4.90E+02
Acifluorfen	mg/kg	3	3	-	-	-	-	0.029-0.036	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Bentazon	mg/kg	3	3	-	-	-	-	0.009-0.011	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.80E+03
Bromoxynil	mg/kg	3	3	-	-	-	-	0.0053-0.0065	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.20E+03
Dacthal	mg/kg	3	3	-	-	-	-	0.0067-0.0082	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+02
Dalapon	mg/kg	19	19	-	-	-	-	0.01-0.086	0	-	0	0	-	0	0	2.30E+03	NS	8.50E-01	6.10E+03	NS	8.50E-01	1.80E+03
Dicamba	mg/kg	3	3	-	-	-	-	0.012-0.015	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.80E+03
Dichlorprop	mg/kg	3	3	-	-	-	-	0.012-0.015	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Dinoseb	mg/kg	19	19	-	-	-	-	0.0064-0.013	0	-	0	0	-	0	0	7.80E+01	NS	3.40E-01	2.00E+02	NS	3.40E-01	6.10E+01
MCPA	mg/kg	3	3	-	-	-	-	0.0079-0.0098	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.10E+01
MCPP	mg/kg	3	3	-	-	-	-	0.014-0.018	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+01
Pentachlorophenol	mg/kg	19	19	-	-	-	-	**0.0084-0.061**	0	-	0	0	-	0	0	3.00E+00	NS	3.00E-02	5.20E+02	NS	3.00E-02	8.90E-01
Picloram	mg/kg	3	3	-	-	-	-	0.0098-0.012	0	-	0	0	-	0	0	5.50E+03	NS	2.00E+00	1.40E+04	NS	2.00E+00	4.30E+03
SILVEX (2,4,5-TP)	mg/kg	19	19	-	-	-	-	0.003-0.011	0	-	0	0	-	0	0	6.30E+02	NS	1.10E+01	1.60E+03	NS	1.10E+01	4.90E+02
Triclopyr	mg/kg	3	3	-	-	-	-	0.01-0.013	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Herbicides, Base Neutral																						
Acetochlor	mg/kg	3	3	-	-	-	-	0.015-0.019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.20E+03
Alachlor	mg/kg	3	3	-	-	-	-	0.015-0.019	0	-	0	0	-	0	0	8.00E+00	NS	4.00E-02	1.60E+03	NS	4.00E-02	8.70E+00
Butylate	mg/kg	3	3	-	-	-	-	0.015-0.019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.10E+03
Chlorpyrifos	mg/kg	3	3	-	-	-	-	0.0062-0.0077	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+01
Cyanazine	mg/kg	3	3	-	-	-	-	0.023-0.029	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.80E-01
Deisopropylatrazine	mg/kg	3	3	-	-	-	-	0.02-0.025	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS

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Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
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Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Herbicides, Base Neutral																						
Desethylatrazine	mg/kg	3	3	-	-	-	-	0.011-0.014	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Dimethenamid	mg/kg	3	3	-	-	-	-	0.0065-0.008	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
EPTC	mg/kg	3	3	-	-	-	-	0.0081-0.0099	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.00E+03
Metolachlor	mg/kg	3	3	-	-	-	-	0.0046-0.0057	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	9.20E+03
Metribuzin	mg/kg	3	3	-	-	-	-	0.0088-0.011	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E+03
Pendimethalin	mg/kg	3	3	-	-	-	-	0.006-0.0075	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.40E+03
Prometon	mg/kg	3	3	-	-	-	-	0.019-0.023	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	9.20E+02
Propazine	mg/kg	3	3	-	-	-	-	0.0088-0.011	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.20E+03
Simazine	mg/kg	3	3	-	-	-	-	0.012-0.015	0	-	0	0	-	0	0	3.90E+02	NS	4.00E-02	1.00E+03	NS	4.00E-02	4.10E+00
Trifluralin	mg/kg	3	3	-	-	-	-	0.0062-0.0077	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.30E+01
Metals																						
ANTIMONY	mg/kg	16	0	1.40E-01	5.40E-01	2.93E-01	MU1-GNL	0.0018-0.0027	0	-	-	0	-	-	0	3.10E+01	NS	NS	8.20E+01	NS	NS	3.10E+01
ARSENIC	mg/kg	16	0	3.70E+00	1.00E+01	6.12E+00	MU1-GNL	0.012-0.019	-	0	-	0	0	-	16	NS	7.50E+02	NS	6.10E+01	2.50E+04	NS	3.90E-01
BARIUM	mg/kg	16	0	1.50E+01	3.80E+01	2.66E+01	MU2-GN	0.0074-0.011	0	0	-	0	0	-	0	5.50E+03	6.90E+05	NS	1.40E+04	8.70E+05	NS	1.50E+04
BERYLLIUM	mg/kg	16	0	2.50E-01	5.90E-01	4.06E-01	MU2-GN	0.0052-0.0079	0	0	-	0	0	-	0	1.60E+02	1.30E+03	NS	4.10E+02	4.40E+04	NS	1.60E+02
BORON	mg/kg	16	0	9.10E+00	1.60E+01	1.27E+01	3 Locations	0.026-0.039	0	-	-	0	-	-	0	1.60E+04	NS	NS	4.10E+04	NS	NS	1.60E+04
CADMIUM	mg/kg	16	0	2.40E-01	8.00E-01	4.67E-01	2 Locations	0.0048-0.0074	0	0	-	0	0	-	0	7.80E+01	1.80E+03	NS	2.00E+02	5.90E+04	NS	7.00E+01
CALCIUM	mg/kg	16	0	5.70E+04	8.90E+04	7.43E+04	MU2-GS	0.92-1.4	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Chromium, Total	mg/kg	16	0	1.10E+01	3.20E+01	1.87E+01	MU2-GN	0.0042-0.0064	0	0	-	0	0	-	-	2.30E+02	2.70E+02	NS	4.10E+03	6.90E+02	NS	NS
Chromium, VI	mg/kg	16	16	-	-	-	-	0.14-0.21	0	0	-	0	0	-	0	2.30E+02	2.70E+02	NS	4.10E+03	6.90E+02	NS	2.90E-01
COBALT	mg/kg	16	0	4.60E+00	8.50E+00	6.39E+00	MU2-GN	0.001-0.0016	0	-	-	0	-	-	0	4.70E+03	NS	NS	1.20E+04	NS	NS	2.30E+01
COPPER	mg/kg	16	0	1.20E+01	3.40E+01	2.19E+01	MU2-GN	0.023-0.035	0	-	-	0	-	-	0	2.90E+03	NS	NS	8.20E+03	NS	NS	3.10E+03
Cyanide, Amenable	mg/kg	16	16	-	-	-	-	0.5-0.5	0	-	-	0	-	-	0	1.60E+03	NS	NS	4.10E+03	NS	NS	2.20E+01
IRON	mg/kg	16	0	1.10E+04	4.30E+04	2.04E+04	MU1-GNU	0.25-3	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.50E+04
LEAD	mg/kg	16	0	1.70E+01	8.50E+01	3.73E+01	MU1-GNU	0.0026-0.004	0	-	-	0	-	-	0	4.00E+02	NS	NS	7.00E+02	NS	NS	4.00E+02
MAGNESIUM	mg/kg	16	0	2.70E+04	4.40E+04	3.59E+04	MU3-G2	0.13-0.2	0	-	-	0	-	-	-	3.25E+05	NS	NS	7.30E+05	NS	NS	NS
MANGANESE	mg/kg	16	0	3.60E+02	7.30E+02	5.39E+02	MU2-GN	0.0071-0.011	0	0	-	0	0	-	0	1.60E+03	6.90E+04	NS	4.10E+03	8.70E+03	NS	1.80E+03
MERCURY	mg/kg	16	0	4.50E-02	1.60E-01	8.68E-02	MU1-GNL	0.0076-0.011	0	0	-	0	5	-	0	2.30E+01	1.00E+01	NS	6.10E+01	1.00E-01	NS	1.00E+01
NICKEL	mg/kg	16	0	9.20E+00	2.20E+01	1.45E+01	MU2-GN	0.0078-0.012	0	0	-	0	0	-	0	1.60E+03	1.30E+04	NS	4.10E+03	4.40E+05	NS	1.50E+03
POTASSIUM	mg/kg	16	0	9.90E+02	1.90E+03	1.43E+03	MU1-G1	0.94-1.4	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
SELENIUM	mg/kg	16	0	2.70E-01	6.30E-01	4.49E-01	MU2-GN	0.035-0.053	0	-	-	0	-	-	0	3.90E+02	NS	NS	1.00E+03	NS	NS	3.90E+02

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Metals																						
SILVER	mg/kg	16	0	5.20E-02	2.50E-01	1.19E-01	MU1-GNU	0.0027-0.0041	0	-	-	0	-	-	0	3.90E+02	NS	NS	1.00E+03	NS	NS	3.90E+02
SODIUM	mg/kg	16	0	1.20E+02	1.80E+02	1.57E+02	2 Locations	0.94-1.4	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
THALLIUM	mg/kg	16	0	1.80E-01	5.30E-01	3.09E-01	MU1-GNL	0.0014-0.0021	0	-	-	0	-	-	0	6.30E+00	NS	NS	1.60E+02	NS	NS	7.80E-01
VANADIUM	mg/kg	16	0	1.40E+01	2.50E+01	1.89E+01	MU2-GN	0.0055-0.0083	0	-	-	0	-	-	0	5.50E+02	NS	NS	1.40E+03	NS	NS	3.90E+02
ZINC	mg/kg	16	0	5.20E+01	1.90E+02	9.39E+01	MU1-GNU	0.045-0.068	0	-	-	0	-	-	0	2.30E+04	NS	NS	6.10E+04	NS	NS	2.30E+04
Organic, Semi-Volatile																						
2,2'-oxybis[1-chloropropane]	mg/kg	16	16	-	-	-	-	0.002-0.015	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	4.60E+00
2,4,5-TRICHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.01-0.073	0	-	0	0	-	0	0	7.80E+03	NS	2.70E+02	2.00E+05	NS	2.70E+02	6.10E+03
2,4,6-TRICHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.014-0.1	0	0	0	0	0	0	0	5.80E+01	2.00E+02	2.00E-01	1.10E+04	5.40E+02	2.00E-01	4.40E+01
2,4-DICHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.0019-0.014	0	-	0	0	-	0	0	2.30E+02	NS	1.00E+00	6.10E+02	NS	1.00E+00	1.80E+02
2,4-DIMETHYLPHENOL	mg/kg	16	16	-	-	-	-	0.015-0.11	0	-	0	0	-	0	0	1.60E+03	NS	9.00E+00	4.10E+04	NS	9.00E+00	1.20E+03
2,4-DINITROPHENOL	mg/kg	16	16	-	-	-	-	**0.11-0.82**	0	-	0	0	-	0	0	1.60E+02	NS	2.00E-01	4.10E+02	NS	2.00E-01	1.20E+02
2,4-DINITROTOLUENE	mg/kg	16	16	-	-	-	-	**0.0076-0.055**	0	-	0	0	-	0	0	9.00E-01	NS	8.00E-04	1.80E+02	NS	8.00E-04	1.60E+00
2,6-DINITROTOLUENE	mg/kg	16	16	-	-	-	-	**0.0097-0.071**	0	-	0	0	-	0	0	9.00E-01	NS	7.00E-04	1.80E+02	NS	7.00E-04	6.10E+01
2-CHLORONAPHTHALENE	mg/kg	16	16	-	-	-	-	0.002-0.014	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.30E+03
2-CHLOROPHENOL	mg/kg	16	16	-	-	-	-	0.0077-0.056	0	0	0	0	0	0	0	3.90E+02	5.30E+04	4.00E+00	1.00E+04	5.30E+04	4.00E+00	3.90E+02
2-METHYLNAPHTHALENE	mg/kg	16	0	1.80E-02	1.30E-01	5.04E-02	MU1-GNL	0.0017-0.012	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.30E+02
2-Methylphenol	mg/kg	16	16	-	-	-	-	0.0066-0.048	0	-	0	0	-	0	0	3.90E+03	NS	1.50E+01	1.00E+05	NS	1.50E+01	3.10E+03
2-NITROANILINE	mg/kg	16	16	-	-	-	-	0.042-0.31	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+02
3,3'-DICHLOROBENZIDINE	mg/kg	16	16	-	-	-	-	**0.0099-0.072**	0	-	0	0	-	0	0	1.00E+00	NS	7.00E-03	2.80E+02	NS	7.00E-03	1.10E+00
4-CHLOROANILINE	mg/kg	16	16	-	-	-	-	0.0075-0.055	0	-	0	0	-	0	0	3.10E+02	NS	7.00E-01	8.20E+02	NS	7.00E-01	2.40E+00
ACENAPHTHENE	mg/kg	16	0	3.60E-02	9.50E-02	6.29E-02	MU1-GNU	0.0018-0.013	0	-	0	0	-	0	0	4.70E+03	NS	5.70E+02	1.20E+05	NS	5.70E+02	3.40E+03
ACENAPHTHYLENE	mg/kg	16	0	2.00E-02	8.80E-02	4.26E-02	MU1-GNL	0.0021-0.016	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
ANTHRACENE	mg/kg	16	0	7.80E-02	2.90E-01	1.48E-01	MU1-GNL	0.0018-0.013	0	-	0	0	-	0	0	2.30E+04	NS	1.20E+04	6.10E+05	NS	1.20E+04	1.70E+04
Atrazine	mg/kg	19	19	-	-	-	-	**0.0081-0.067**	0	-	0	0	-	0	0	2.70E+03	NS	6.60E-02	7.10E+03	NS	6.60E-02	2.10E+00
Benzo[a]anthracene	mg/kg	16	0	1.90E-01	5.70E-01	3.84E-01	MU1-GNL	0.0024-0.017	0	-	0	0	-	0	16	9.00E-01	NS	2.00E+00	1.70E+02	NS	2.00E+00	1.50E-01
Benzo[a]pyrene	mg/kg	16	0	2.10E-01	6.10E-01	4.08E-01	MU1-GNU	0.0019-0.014	16	-	0	0	-	0	16	9.00E-02	NS	8.00E+00	1.70E+01	NS	8.00E+00	1.50E-02
Benzo[b]fluoranthene	mg/kg	16	0	2.00E-01	8.10E-01	4.71E-01	MU1-GNU	0.0029-0.022	0	-	0	0	-	0	16	9.00E-01	NS	5.00E+00	1.70E+02	NS	5.00E+00	1.50E-01
Benzo[k]fluoranthene	mg/kg	16	8	9.00E-02	2.60E-01	1.74E-01	MU1-G3	0.0038-0.028	0	-	0	0	-	0	0	9.00E+00	NS	4.90E+01	1.70E+03	NS	4.90E+01	1.50E+00
BENZOIC ACID	mg/kg	16	16	-	-	-	-	0.039-0.28	0	-	0	0	-	0	0	3.10E+05	NS	4.00E+02	8.20E+05	NS	4.00E+02	2.40E+05
BENZYL ALCOHOL	mg/kg	16	16	-	-	-	-	0.011-0.083	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03

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US Army Corps of Engineers ®

Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Organic, Semi-Volatile																						
Bis(2-chloroethyl)ether	mg/kg	16	16	-	-	-	-	0.0025-0.018	0	0	0	0	0	0	0	6.00E-01	2.00E-01	4.00E-04	7.50E+01	6.60E-01	4.00E-04	2.10E-01
BIS(2-ETHYLHEXYL) PHTHALATE	mg/kg	16	0	2.40E-02	2.40E-01	1.12E-01	MU3-G1	0.015-0.11	0	0	0	0	0	0	0	4.60E+01	3.10E+04	3.60E+03	4.10E+03	3.10E+04	3.60E+03	3.50E+01
Butyl benzyl phthalate	mg/kg	16	16	-	-	-	-	0.013-0.094	0	0	0	0	0	0	0	1.60E+04	9.30E+02	9.30E+02	4.10E+05	9.30E+02	9.30E+02	2.60E+02
CARBAZOLE	mg/kg	16	0	1.70E-02	4.50E-02	3.00E-02	MU3-G1	0.0017-0.013	0	-	0	0	-	0	-	3.20E+01	NS	6.00E-01	6.20E+03	NS	6.00E-01	NS
CHRYSENE	mg/kg	16	0	2.40E-01	6.40E-01	4.26E-01	MU1-GNU	0.0022-0.016	0	-	0	0	-	0	0	8.80E+01	NS	1.60E+02	1.70E+04	NS	1.60E+02	1.50E+01
DIBENZ(A,H)ANTHRACENE	mg/kg	16	0	1.50E-02	1.10E-01	6.63E-02	MU1-GNU	0.0021-0.015	2	-	0	0	-	0	15	9.00E-02	NS	2.00E+00	1.70E+01	NS	2.00E+00	1.50E-02
DIBENZOFURAN	mg/kg	16	2	1.90E-02	7.10E-02	4.01E-02	MU1-GNU	0.0092-0.067	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.80E+01
DIETHYL PHTHALATE	mg/kg	16	16	-	-	-	-	0.01-0.075	0	0	0	0	0	0	0	6.30E+04	2.00E+03	4.70E+02	1.00E+06	2.00E+03	4.70E+02	4.90E+04
DIMETHYL PHTHALATE	mg/kg	16	16	-	-	-	-	0.01-0.075	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
DI-N-BUTYL PHTHALATE	mg/kg	16	16	-	-	-	-	0.012-0.086	0	0	0	0	0	0	0	7.80E+03	2.30E+03	2.30E+03	2.00E+05	2.30E+03	2.30E+03	6.10E+03
Di-n-octyl phthalate	mg/kg	16	16	-	-	-	-	0.0099-0.072	0	0	0	0	0	0	0	1.60E+03	1.00E+04	1.00E+04	4.10E+03	1.00E+04	1.00E+04	7.30E+02
DMF	mg/kg	13	0	0.00E+00	0.00E+00	0.00E+00	13 Locations	-	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03
FLUORANTHENE	mg/kg	16	0	3.80E-01	8.60E-01	6.44E-01	MU3-G1	0.002-0.015	0	-	0	0	-	0	0	3.10E+03	NS	4.30E+03	8.20E+04	NS	4.30E+03	2.30E+03
FLUORENE	mg/kg	16	0	3.70E-02	1.50E-01	7.86E-02	MU1-GNL	0.0025-0.018	0	-	0	0	-	0	0	3.10E+03	NS	5.60E+02	8.20E+04	NS	5.60E+02	2.30E+03
HEXACHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.002-0.015	0	0	0	0	0	0	0	4.00E-01	1.00E+00	2.00E+00	7.80E+01	2.60E+00	2.00E+00	3.00E-01
HEXACHLOROCYCLOPENTADIENE	mg/kg	16	16	-	-	-	-	0.01-0.074	0	0	0	0	0	0	0	5.50E+02	1.00E+01	4.00E+02	1.40E+04	1.10E+00	4.00E+02	3.70E+02
HEXACHLOROETHANE	mg/kg	16	16	-	-	-	-	0.0067-0.049	0	-	0	0	-	0	0	7.80E+01	NS	5.00E-01	2.00E+03	NS	5.00E-01	1.20E+01
Indeno[1,2,3-cd]pyrene	mg/kg	16	0	1.20E-01	3.20E-01	2.17E-01	MU2-GN	0.0019-0.014	0	-	0	0	-	0	13	9.00E-01	NS	1.40E+01	1.70E+02	NS	1.40E+01	1.50E-01
ISOPHORONE	mg/kg	16	16	-	-	-	-	0.0071-0.052	0	0	0	0	0	0	0	1.56E+04	4.60E+03	8.00E+00	4.10E+05	4.60E+03	8.00E+00	5.10E+02
Methylphenol, 3 & 4	mg/kg	16	5	1.30E-02	1.70E-01	8.14E-02	MU1-GNU	0.0092-0.067	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03
NAPHTHALENE	mg/kg	16	0	1.70E-02	1.90E-01	6.43E-02	MU1-GNL	0.0016-0.012	0	0	0	0	0	0	0	1.60E+03	1.70E+02	1.20E+01	4.10E+03	1.80E+00	1.20E+01	3.60E+00
NITROBENZENE	mg/kg	16	16	-	-	-	-	0.0078-0.057	0	0	0	0	0	0	0	3.90E+01	9.20E+01	1.00E-01	1.00E+03	9.40E+00	1.00E-01	4.80E+00
N-NITROSODI-N-PROPYLAMINE	mg/kg	16	16	-	-	-	-	0.0022-0.016	0	-	0	0	-	0	0	9.00E-02	NS	5.00E-05	1.80E+01	NS	5.00E-05	6.90E-02
N-NITROSODIPHENYLAMINE	mg/kg	16	16	-	-	-	-	0.0087-0.063	0	-	0	0	-	0	0	1.30E+02	NS	1.00E+00	2.50E+04	NS	1.00E+00	9.90E+01
PHENANTHRENE	mg/kg	16	0	2.70E-01	8.00E-01	5.07E-01	MU1-GNL	0.003-0.022	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
PHENOL	mg/kg	16	16	-	-	-	-	0.0022-0.016	0	-	0	0	-	0	0	2.30E+04	NS	1.00E+02	6.10E+04	NS	1.00E+02	1.80E+04
PYRENE	mg/kg	16	0	3.40E-01	1.00E+00	6.89E-01	MU1-GNU	0.0019-0.014	0	-	0	0	-	0	0	2.30E+03	NS	4.20E+03	6.10E+04	NS	4.20E+03	1.70E+03
Organic, Volatile																						
1,1,1,2-TETRACHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00081-0.0019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.90E+00
1,1,1-Trichloroethane	mg/kg	16	16	-	-	-	-	0.00053-0.0012	-	0	0	-	0	0	0	NS	1.20E+03	2.00E+00	NS	1.20E+03	2.00E+00	8.70E+03
1,1,2,2-TETRACHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00078-0.0018	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.60E-01

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Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Organic, Volatile																						
1,1,2-TRICHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00091-0.0021	0	0	0	0	0	0	0	3.10E+02	1.80E+03	2.00E-02	8.20E+03	1.80E+03	2.00E-02	1.10E+00
1,1-DICHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00063-0.0015	0	0	0	0	0	0	0	7.80E+03	1.30E+03	2.30E+01	2.00E+05	1.30E+02	2.30E+01	3.30E+00
1,1-DICHLOROETHENE	mg/kg	16	16	-	-	-	-	0.00092-0.0022	0	0	0	0	0	0	0	3.90E+03	2.90E+02	6.00E-02	1.00E+04	3.00E+00	6.00E-02	2.40E+02
1,2,4-TRICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00096-0.0022	0	0	0	0	0	0	0	7.80E+02	3.20E+03	5.00E+00	2.00E+03	9.20E+02	5.00E+00	2.20E+01
1,2,4-TRIMETHYLBENZENE	mg/kg	16	16	-	-	-	-	0.00071-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.20E+01
1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	16	16	-	-	-	-	0.00082-0.0019	0	0	0	0	0	0	0	4.60E-01	1.10E+01	2.00E-03	8.90E+01	1.10E-01	2.00E-03	5.40E-03
1,2-Dibromoethane	mg/kg	16	16	-	-	-	-	**0.00094-0.0022**	0	0	0	0	0	0	0	3.20E-01	6.00E-02	4.00E-04	6.20E+01	1.60E-01	4.00E-04	3.40E-02
1,2-DICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00087-0.002	0	0	0	0	0	0	0	7.00E+03	5.60E+02	1.70E+01	1.80E+04	3.10E+02	1.70E+01	1.90E+03
1,2-DICHLOROETHANE	mg/kg	16	16	-	-	-	-	0.00067-0.0016	0	0	0	0	0	0	0	7.00E+00	4.00E-01	2.00E-02	1.40E+03	9.90E-01	2.00E-02	4.30E-01
1,2-DICHLOROPROPANE	mg/kg	16	16	-	-	-	-	0.00059-0.0014	0	0	0	0	0	0	0	9.00E+00	1.50E+01	3.00E-02	1.80E+03	5.00E-01	3.00E-02	9.40E-01
1,3,5-Trimethylbenzene	mg/kg	16	16	-	-	-	-	0.00073-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.80E+02
1,3-DICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00071-0.0017	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
1,4-DICHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00069-0.0016	-	0	0	-	0	0	0	NS	1.10E+04	2.00E+00	NS	3.40E+02	2.00E+00	2.40E+00
2-Butanone (MEK)	mg/kg	16	16	-	-	-	-	0.00096-0.0022	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.80E+04
4-Methyl-2-pentanone (MIBK)	mg/kg	16	16	-	-	-	-	0.00071-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.30E+03
ACETONE	mg/kg	16	6	1.30E-02	2.80E-02	1.99E-02	MU1-GNU	0.0054-0.013	0	0	0	-	0	0	0	7.00E+04	1.00E+05	2.50E+01	NS	1.00E+05	2.50E+01	6.10E+04
ACROLEIN	mg/kg	16	16	-	-	-	-	0.0077-0.018	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E-01
BENZENE	mg/kg	16	16	-	-	-	-	0.00074-0.0017	0	0	0	0	0	0	0	1.20E+01	8.00E-01	3.00E-02	2.30E+03	2.20E+00	3.00E-02	1.10E+00
BROMODICHLOROMETHANE	mg/kg	16	16	-	-	-	-	0.00061-0.0014	0	0	0	0	0	0	0	1.00E+01	3.00E+03	6.00E-01	2.00E+03	3.00E+03	6.00E-01	2.70E-01
BROMOFORM	mg/kg	16	16	-	-	-	-	0.00048-0.0011	0	0	0	0	0	0	0	8.10E+01	5.30E+01	8.00E-01	1.60E+04	1.40E+02	8.00E-01	6.20E+01
BROMOMETHANE	mg/kg	16	16	-	-	-	-	0.0008-0.0019	0	0	0	0	0	0	0	1.10E+02	1.00E+01	2.00E-01	1.00E+03	3.90E+00	2.00E-01	7.30E+00
CARBON DISULFIDE	mg/kg	16	16	-	-	-	-	0.00056-0.0013	0	0	0	0	0	0	0	7.80E+03	7.20E+02	3.20E+01	2.00E+04	9.00E+00	3.20E+01	8.20E+02
CARBON TETRACHLORIDE	mg/kg	16	16	-	-	-	-	0.00049-0.0011	0	0	0	0	0	0	0	5.00E+00	3.00E-01	7.00E-02	4.10E+02	9.00E-01	7.00E-02	6.10E-01
CHLOROBENZENE	mg/kg	16	16	-	-	-	-	0.00083-0.0019	0	0	0	0	0	0	0	1.60E+03	1.30E+02	1.00E+00	4.10E+03	1.30E+00	1.00E+00	2.90E+02
CHLOROETHANE	mg/kg	16	16	-	-	-	-	0.0017-0.0039	0	0	0	0	0	0	0	1.60E+03	1.30E+02	1.00E+00	4.10E+03	1.30E+00	1.00E+00	1.50E+04
CHLOROFORM	mg/kg	16	16	-	-	-	-	0.00064-0.0015	0	0	0	0	0	0	0	1.00E+02	3.00E-01	6.00E-01	2.00E+03	7.60E-01	6.00E-01	2.90E-01
cis-1,2-Dichloroethene	mg/kg	16	16	-	-	-	-	0.00077-0.0018	0	0	0	0	0	0	0	7.80E+02	1.20E+03	4.00E-01	2.00E+04	1.20E+03	4.00E-01	1.60E+02
CIS-1,3-DICHLOROPROPENE	mg/kg	16	16	-	-	-	-	0.00074-0.0017	0	0	0	0	0	0	0	6.40E+00	1.10E+00	4.00E-03	1.20E+03	3.90E-01	4.00E-03	1.70E+00
CYCLOHEXANE	mg/kg	16	16	-	-	-	-	0.0004-0.00095	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.00E+03
DIBROMOCHLOROMETHANE	mg/kg	16	16	-	-	-	-	0.00077-0.0018	0	0	0	0	0	0	0	1.60E+03	1.30E+03	4.00E-01	4.10E+04	1.30E+03	4.00E-01	6.80E-01
ETHYLBENZENE	mg/kg	16	16	-	-	-	-	0.0007-0.0016	0	0	0	0	0	0	0	7.80E+03	4.00E+02	1.30E+01	2.00E+04	5.80E+01	1.30E+01	5.40E+00
HEXACHLOROBUTADIENE	mg/kg	16	16	-	-	-	-	0.0012-0.0029	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.20E+00

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Organic, Volatile																						
Hexane	mg/kg	16	13	1.10E-03	3.20E-03	2.30E-03	MU1-G1	0.0011-0.0026	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	5.70E+02
Isopropylbenzene	mg/kg	16	16	-	-	-	-	0.00074-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.10E+03
Methyl tert-butyl ether	mg/kg	16	16	-	-	-	-	0.00081-0.0019	0	0	0	0	0	0	0	7.80E+02	8.80E+03	3.20E-01	2.00E+03	1.40E+02	3.20E-01	4.30E+01
METHYLENE CHLORIDE	mg/kg	16	11	1.60E-03	4.50E-03	2.90E-03	MU3-G2	0.00073-0.0017	0	0	0	0	0	0	0	8.50E+01	1.30E+01	2.00E-02	1.20E+04	3.40E+01	2.00E-02	5.60E+01
m-Xylene & p-Xylene	mg/kg	16	16	-	-	-	-	0.0016-0.0037	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
n-Butyl alcohol	mg/kg	16	16	-	-	-	-	0.036-0.084	0	0	0	0	0	0	0	7.80E+03	1.00E+04	1.70E+01	2.00E+05	1.00E+04	1.70E+01	6.10E+03
N-PROPYLBENZENE	mg/kg	16	16	-	-	-	-	0.00083-0.0019	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.40E+03
o-Xylene	mg/kg	16	16	-	-	-	-	0.00085-0.002	0	0	0	0	0	0	0	1.60E+04	4.10E+02	1.90E+02	4.10E+04	6.50E+00	1.90E+02	6.90E+02
STYRENE	mg/kg	16	16	-	-	-	-	0.00077-0.0018	0	0	0	0	0	0	0	1.60E+04	1.50E+03	4.00E+00	4.10E+04	4.30E+02	4.00E+00	6.30E+03
Tetrachloroethene	mg/kg	16	16	-	-	-	-	0.00074-0.0017	0	0	0	0	0	0	0	1.20E+01	1.10E+01	6.00E-02	2.40E+03	2.80E+01	6.00E-02	2.20E+01
TOLUENE	mg/kg	16	16	-	-	-	-	0.00079-0.0019	0	0	0	0	0	0	0	1.60E+04	6.50E+02	1.20E+01	4.10E+05	4.20E+01	1.20E+01	5.00E+03
TRANS-1,2-DICHLOROETHENE	mg/kg	16	16	-	-	-	-	0.00065-0.0015	0	0	0	0	0	0	0	1.60E+03	3.10E+03	7.00E-01	4.10E+04	3.10E+03	7.00E-01	1.50E+02
TRANS-1,3-DICHLOROPROPENE	mg/kg	16	16	-	-	-	-	0.00065-0.0015	0	0	0	0	0	0	0	6.40E+00	1.10E+00	4.00E-03	1.20E+03	3.90E-01	4.00E-03	1.70E+00
Trichloroethene	mg/kg	16	16	-	-	-	-	0.00072-0.0017	0	0	0	0	0	0	0	5.80E+01	5.00E+00	6.00E-02	1.20E+03	1.20E+01	6.00E-02	9.10E-01
TRICHLOROFLUOROMETHANE	mg/kg	16	16	-	-	-	-	0.001-0.0023	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	7.90E+02
VINYL ACETATE	mg/kg	16	16	-	-	-	-	0.00039-0.0009	0	0	0	0	0	0	0	7.80E+04	1.00E+03	1.70E+02	2.00E+05	1.00E+01	1.70E+02	9.70E+02
VINYL CHLORIDE	mg/kg	16	16	-	-	-	-	0.00051-0.0012	0	0	0	0	0	0	0	4.60E-01	2.80E-01	1.00E-02	1.70E+02	1.10E+00	1.00E-02	6.00E-02
XYLENES, TOTAL	mg/kg	16	16	-	-	-	-	0.0024-0.0057	0	0	0	0	0	0	0	1.60E+04	3.20E+02	1.50E+02	4.10E+04	5.60E+00	1.50E+02	6.30E+02
Pesticides																						
2,4'-DDD	mg/kg	16	2	1.20E-03	2.10E-02	4.92E-03	MU1-GNU	0.00007-0.00011	0	-	0	0	-	0	0	3.00E+00	NS	1.60E+01	5.20E+02	NS	1.60E+01	2.00E+00
2,4'-DDE	mg/kg	16	16	-	-	-	-	0.00011-0.00016	0	-	0	0	-	0	0	2.00E+00	NS	5.40E+01	3.70E+02	NS	5.40E+01	1.40E+00
2,4'-DDT	mg/kg	16	16	-	-	-	-	0.0001-0.00015	0	-	0	0	0	0	0	2.00E+00	NS	3.20E+01	1.00E+02	2.10E+03	3.20E+01	1.70E+00
Chlordane (technical)	mg/kg	16	16	-	-	-	-	0.00051-0.00078	0	0	0	0	0	0	0	1.80E+00	7.20E+01	1.00E+01	1.00E+02	2.20E+01	1.00E+01	1.60E+00
Pesticides, N-Methyl Carbmate																						
3-Hydroxycarbofuran	mg/kg	6	6	-	-	-	-	0.0067-0.0082	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Aldicarb	mg/kg	6	6	-	-	-	-	0.0062-0.0077	0	-	0	0	-	0	0	7.80E+01	NS	1.30E-02	2.00E+02	NS	1.30E-02	6.10E+01
Aldicarb sulfone	mg/kg	6	6	-	-	-	-	0.006-0.0075	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+01
Aldicarb sulfoxide	mg/kg	6	6	-	-	-	-	0.0059-0.0073	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Carbaryl	mg/kg	6	6	-	-	-	-	0.0059-0.0073	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	6.10E+03
Carbofuran	mg/kg	6	6	-	-	-	-	0.0065-0.008	0	-	0	0	-	0	0	3.90E+02	NS	2.20E-01	1.00E+03	NS	2.20E-01	3.10E+02
Methiocarb	mg/kg	6	6	-	-	-	-	0.0068-0.0084	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS

1 - TACO Table A Resident Ingestion
2 - TACO Table A Resident Inhalation
3 - TACO Table A Groundwater Ingestion Exposure Route Class I
4 - TACO Table B Construction Worker Ingestion
5 - TACO Table B Construction Worker Inhalation
6 - TACO Table B Groundwater Ingestion Exposure Route Class I
7 - USEPA Residential Soil

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

US Army Corps of Engineers ®

Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Pesticides, N-Methyl Carbmate																						
Methomyl	mg/kg	6	6	-	-	-	-	0.0057-0.0071	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E+03
Oxamyl	mg/kg	6	6	-	-	-	-	0.0057-0.0071	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.50E+03
Propoxur	mg/kg	6	6	-	-	-	-	0.0057-0.0071	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.40E+02
Pesticides, Organochlorine																						
4,4'-DDD	mg/kg	19	1	1.40E-03	1.10E-02	3.81E-03	MU1-COMP	0.00015-0.00096	0	-	0	0	-	0	0	3.00E+00	NS	1.60E+01	5.20E+02	NS	1.60E+01	2.00E+00
4,4'-DDE	mg/kg	19	1	6.90E-04	1.90E-02	4.46E-03	MU3-GS	0.00018-0.00075	0	-	0	0	-	0	0	2.00E+00	NS	5.40E+01	3.70E+02	NS	5.40E+01	1.40E+00
4,4'-DDT	mg/kg	19	4	5.70E-04	3.80E-02	6.38E-03	MU3-GS	0.00017-0.0012	0	-	0	0	0	0	0	2.00E+00	NS	3.20E+01	1.00E+02	2.10E+03	3.20E+01	1.70E+00
Aldrin	mg/kg	19	18	5.10E-04	5.10E-04	5.10E-04	MU1-GS	0.00021-0.00042	0	0	0	0	0	0	0	4.00E-02	3.00E+00	5.00E-01	6.10E+00	9.30E+00	5.00E-01	2.90E-02
alpha-BHC	mg/kg	19	19	-	-	-	-	0.00019-0.00042	0	0	0	0	0	0	0	1.00E-01	8.00E-01	5.00E-04	2.00E+01	2.10E+00	5.00E-04	7.70E-02
alpha-Chlordane	mg/kg	19	19	-	-	-	-	0.00023-0.00035	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
beta-BHC	mg/kg	19	19	-	-	-	-	0.0003-0.00048	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.70E-01
Chlordane (tech)	mg/kg	3	3	-	-	-	-	0.0068-0.0084	0	0	0	0	0	0	0	1.80E+00	7.20E+01	1.00E+01	1.00E+02	2.20E+01	1.00E+01	1.60E+00
delta-BHC	mg/kg	3	3	-	-	-	-	0.0012-0.0015	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Dieldrin	mg/kg	19	18	3.50E-04	3.50E-04	3.50E-04	MU3-G2	0.00019-0.00096	0	0	0	0	0	0	0	4.00E-02	1.00E+00	4.00E-03	7.80E+00	3.10E+00	4.00E-03	3.00E-02
Endosulfan I	mg/kg	19	17	4.50E-04	1.20E-03	8.25E-04	MU1-GNU	0.00022-0.00038	0	-	0	0	-	0	0	4.70E+02	NS	1.80E+01	1.20E+03	NS	1.80E+01	3.70E+02
Endosulfan II	mg/kg	19	19	-	-	-	-	0.00021-0.00075	0	-	0	0	-	0	0	4.70E+02	NS	1.80E+01	1.20E+03	NS	1.80E+01	3.70E+02
Endosulfan sulfate	mg/kg	19	18	6.40E-04	6.40E-04	6.40E-04	MU1-GNU	0.00012-0.0013	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Endrin	mg/kg	19	19	-	-	-	-	0.00023-0.0011	0	-	0	0	-	0	0	2.30E+01	NS	1.00E+00	6.10E+01	NS	1.00E+00	1.80E+01
Endrin aldehyde	mg/kg	19	19	-	-	-	-	0.00023-0.0017	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Endrin ketone	mg/kg	19	19	-	-	-	-	0.00018-0.00086	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
gamma-BHC (Lindane)	mg/kg	19	6	5.70E-04	3.80E-03	2.30E-03	MU1-G3	0.0002-0.00038	0	-	0	0	-	0	0	5.00E-01	NS	9.00E-03	9.60E+01	NS	9.00E-03	5.20E-01
gamma-Chlordane	mg/kg	19	19	-	-	-	-	0.00023-0.00036	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS
Heptachlor	mg/kg	19	19	-	-	-	-	0.00026-0.0025	0	0	0	0	0	0	0	1.00E-01	1.00E-01	2.30E+01	2.80E+01	1.60E+01	2.30E+01	1.10E-01
Heptachlor epoxide	mg/kg	19	17	3.80E-04	4.90E-04	4.35E-04	MU1-G3	0.00023-0.00042	0	0	0	0	0	0	0	7.00E-02	5.00E+00	7.00E-01	2.70E+00	1.30E+01	7.00E-01	5.30E-02
Methoxychlor	mg/kg	19	16	1.60E-03	2.80E-03	2.23E-03	MU3-GS	0.00024-0.0046	0	-	0	0	-	0	0	3.90E+02	NS	1.60E+02	1.00E+03	NS	1.60E+02	3.10E+02
Toxaphene	mg/kg	19	19	-	-	-	-	0.000077-0.012	0	0	0	0	0	0	0	6.00E-01	8.90E+01	3.10E+01	1.10E+02	2.40E+02	3.10E+01	4.40E-01
Polychlorinated Biphenyl																						
PCB-1016	mg/kg	16	1	9.30E-03	4.80E-02	2.20E-02	MU1-GNU	0.0017-0.0026	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	3.90E+00
PCB-1221	mg/kg	16	16	-	-	-	-	0.0022-0.0034	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	1.40E-01
PCB-1232	mg/kg	16	13	2.70E-02	2.90E-01	1.31E-01	MU1-GNU	0.002-0.003	-	-	-	-	-	-	1	NS	NS	NS	NS	NS	NS	1.40E-01
PCB-1242	mg/kg	16	16	-	-	-	-	0.0019-0.0029	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E-01

1 - TACO Table A Resident Ingestion
2 - TACO Table A Resident Inhalation
3 - TACO Table A Groundwater Ingestion Exposure Route Class I
4 - TACO Table B Construction Worker Ingestion
5 - TACO Table B Construction Worker Inhalation
6 - TACO Table B Groundwater Ingestion Exposure Route Class I
7 - USEPA Residential Soil

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

US Army Corps of Engineers ®

Calumet Harbor

Table 1: Summary of Sediment Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	# Excced 3	# Excced 4	# Excced 5	# Excced 6	# Excced 7	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7
Polychlorinated Biphenyl																						
PCB-1248	mg/kg	16	14	4.00E-02	4.90E-02	4.45E-02	MU3-GN	0.0011-0.0017	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E-01
PCB-1254	mg/kg	16	0	1.40E-02	2.50E-01	5.09E-02	MU1-GNU	0.0017-0.0025	-	-	-	-	-	-	1	NS	NS	NS	NS	NS	NS	2.20E-01
PCB-1260	mg/kg	16	16	-	-	-	-	0.0017-0.0025	-	-	-	-	-	-	0	NS	NS	NS	NS	NS	NS	2.20E-01
Polychlorinated biphenyls, Total	mg/kg	16	0	2.30E-02	5.90E-01	1.02E-01	MU1-GNU	0.0025-0.0039	0	-	-	0	-	-	1	1.00E+00	NS	NS	1.00E+00	NS	NS	2.20E-01

1 - TACO Table A Resident Ingestion
2 - TACO Table A Resident Inhalation
3 - TACO Table A Groundwater Ingestion Exposure Route Class I
4 - TACO Table B Construction Worker Ingestion
5 - TACO Table B Construction Worker Inhalation
6 - TACO Table B Groundwater Ingestion Exposure Route Class I
7 - USEPA Residential Soil

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

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Calumet Harbor

Table 2: Summary of SPLP Results and Risk Based Screening Level Exceedances

Parameter	Units	# observ	# ND	Min	Max	Mean (Det)	Location of Max Det	Range of MDL	# Excced 1	# Excced 2	Value 1	Value 2
Metals												
ANTIMONY	mg/L	12	11	3.40E-03	3.40E-03	3.40E-03	MU1-GNL	0.0013-0.0013	0	0	6.00E-03	6.00E-03
ARSENIC	mg/L	12	3	2.70E-03	2.30E-02	5.60E-03	MU1-GNL	0.0027-0.0027	0	1	5.00E-02	1.00E-02
BARIUM	mg/L	12	0	9.20E-03	2.40E-02	1.35E-02	MU1-GNL	0.00062-0.00062	0	0	2.00E+00	2.00E+00
BERYLLIUM	mg/L	12	12	-	-	-	-	0.00023-0.00023	0	0	4.00E-03	4.00E-03
BORON	mg/L	12	0	2.30E-01	5.10E-01	3.00E-01	MU1-GNL	0.0013-0.0013	0	-	2.00E+00	NS
CADMIUM	mg/L	12	10	2.10E-04	4.30E-04	3.20E-04	MU1-GNL	0.00013-0.00013	0	0	5.00E-03	5.00E-03
CALCIUM	mg/L	12	0	1.60E+01	2.20E+01	1.93E+01	2 Locations	0.0097-0.0097	-	-	NS	NS
Chromium, Total	mg/L	12	0	2.50E-03	7.40E-03	4.41E-03	MU1-GNL	0.00057-0.00057	0	0	1.00E-01	1.00E-01
Chromium, VI	mg/L	12	12	-	-	-	-	0.0017-0.0017	-	-	NS	NS
COBALT	mg/L	12	0	4.70E-04	2.40E-03	1.25E-03	MU1-GNL	0.0004-0.0004	0	-	1.00E+00	NS
COPPER	mg/L	12	2	2.70E-03	1.10E-02	4.83E-03	MU1-GNL	0.0027-0.0027	0	0	6.50E-01	1.30E+00
Cyanide, Amenable	mg/L	12	12	-	-	-	-	0.01-0.01	0	0	2.00E-01	2.00E-01
IRON	mg/L	12	0	8.20E-01	7.30E+00	1.91E+00	MU1-GNL	0.012-0.012	1	12	5.00E+00	3.00E-01
LEAD	mg/L	12	0	2.60E-03	5.70E-02	9.63E-03	MU1-GNL	0.0013-0.0013	2	1	7.50E-03	1.50E-02
MAGNESIUM	mg/L	12	0	2.00E+00	3.00E+00	2.47E+00	2 Locations	0.021-0.021	-	-	NS	NS
MANGANESE	mg/L	12	0	8.10E-03	1.50E-01	2.78E-02	MU1-GNL	0.00068-0.00068	0	1	1.50E-01	5.00E-02
MERCURY	mg/L	12	12	-	-	-	-	0.000038-0.000038	0	0	2.00E-03	2.00E-03
NICKEL	mg/L	12	3	1.70E-03	4.90E-03	2.54E-03	MU1-GNL	0.0016-0.0016	0	-	1.00E-01	NS
POTASSIUM	mg/L	12	1	8.50E-01	2.60E+00	1.27E+00	MU1-GNL	0.75-0.75	-	-	NS	NS
SELENIUM	mg/L	12	12	-	-	-	-	0.003-0.003	0	0	5.00E-02	5.00E-02
SILVER	mg/L	12	12	-	-	-	-	0.00068-0.00068	0	-	5.00E-02	NS
SODIUM	mg/L	12	0	1.80E+01	2.20E+01	1.88E+01	MU1-GNL	0.22-0.22	-	-	NS	NS
THALLIUM	mg/L	12	12	-	-	-	-	**0.0024-0.0024**	0	0	2.00E-03	2.00E-03
VANADIUM	mg/L	12	0	3.00E-03	8.60E-03	5.21E-03	MU1-GNL	0.0019-0.0019	0	-	4.90E-02	NS
ZINC	mg/L	12	0	7.30E-03	1.10E-01	2.11E-02	MU1-GNL	0.0025-0.0025	0	-	5.00E+00	NS

1 - TACO Table E - Groundwater Ingestion Route - Class I
2 - USEPA MCLs

Notes:
MDLs shown in red indicate the MDL exceeds one or more screening values.
NS - No Screening Level
Purple Highlight - Minimum Screening Level

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Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Anions						
Cyanide, Non-amenable						
MU1-GNL	mg/kg	335.1	1.70E+00	_	5.10E-01	5.00E-01
MU1-GNU	mg/kg	335.1	2.00E+00	_	5.10E-01	5.00E-01
MU1-GS	mg/kg	335.1	8.50E-01	_	5.10E-01	5.00E-01
MU2-GN	mg/kg	335.1	2.10E+00	_	5.10E-01	5.00E-01
MU2-GS	mg/kg	335.1	8.30E-01	_	5.10E-01	5.00E-01
MU3-GN	mg/kg	335.1	9.60E-01	_	5.10E-01	5.00E-01
MU3-GS	mg/kg	335.1	8.60E-01	_	5.10E-01	5.00E-01
SULFATE						
MU1-G1	mg/kg	300	1.90E+02	_	8.55E+01	1.10E+02
MU1-G2	mg/kg	300	4.00E+01	_	8.55E+01	1.10E+02
MU1-G3	mg/kg	300	5.50E+01	_	8.55E+01	1.10E+02
MU1-GNL	mg/kg	300	1.70E+01	_	8.55E+01	1.10E+02
MU1-GNU	mg/kg	300	9.70E+01	_	8.55E+01	1.10E+02
MU1-GS	mg/kg	300	2.40E+02	_	8.55E+01	1.10E+02
MU2-G1	mg/kg	300	1.50E+02	_	8.55E+01	1.10E+02
MU2-G2	mg/kg	300	6.90E+01	_	8.55E+01	1.10E+02
MU2-G3	mg/kg	300	2.20E+01	_	8.55E+01	1.10E+02
MU2-GN	mg/kg	300	1.70E+02	_	8.55E+01	1.10E+02
MU2-GS	mg/kg	300	8.80E+01	_	8.55E+01	1.10E+02
MU3-G1	mg/kg	300	5.60E+01	_	8.55E+01	1.10E+02
MU3-G2	mg/kg	300	3.50E+01	_	8.55E+01	1.10E+02
MU3-G3	mg/kg	300	4.10E+01	_	8.55E+01	1.10E+02
MU3-GN	mg/kg	300	1.40E+02	_	8.55E+01	1.10E+02
MU3-GS	mg/kg	300	2.00E+02	_	8.55E+01	1.10E+02
Metals						
ANTIMONY						
MU1-G1	mg/kg	6020	2.80E-01	_	4.00E+00	3.30E+00
MU1-G2	mg/kg	6020	2.50E-01	_	4.00E+00	3.30E+00
MU1-G3	mg/kg	6020	3.80E-01	_	4.00E+00	3.30E+00
MU1-GNL	mg/kg	6020	5.40E-01	_	4.00E+00	3.30E+00
MU1-GNU	mg/kg	6020	5.00E-01	_	4.00E+00	3.30E+00
MU1-GS	mg/kg	6020	1.60E-01	_	4.00E+00	3.30E+00
MU2-G1	mg/kg	6020	2.60E-01	_	4.00E+00	3.30E+00
MU2-G2	mg/kg	6020	1.70E-01	_	4.00E+00	3.30E+00
MU2-G3	mg/kg	6020	1.40E-01	_	4.00E+00	3.30E+00
MU2-GN	mg/kg	6020	5.00E-01	_	4.00E+00	3.30E+00
MU2-GS	mg/kg	6020	1.70E-01	_	4.00E+00	3.30E+00
MU3-G1	mg/kg	6020	3.30E-01	_	4.00E+00	3.30E+00
MU3-G2	mg/kg	6020	2.70E-01	_	4.00E+00	3.30E+00
MU3-G3	mg/kg	6020	3.10E-01	_	4.00E+00	3.30E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
ANTIMONY						
MU3-GN	mg/kg	6020	2.10E-01	_	4.00E+00	**3.30E+00**
MU3-GS	mg/kg	6020	2.10E-01	_	4.00E+00	**3.30E+00**
ARSENIC						
MU1-G1	mg/kg	6020	7.10E+00	_	1.30E+01	**1.13E+01**
MU1-G2	mg/kg	6020	6.20E+00	_	1.30E+01	**1.13E+01**
MU1-G3	mg/kg	6020	6.80E+00	_	1.30E+01	**1.13E+01**
MU1-GNL	mg/kg	6020	1.00E+01	_	1.30E+01	**1.13E+01**
MU1-GNU	mg/kg	6020	9.80E+00	_	1.30E+01	**1.13E+01**
MU1-GS	mg/kg	6020	4.00E+00	_	1.30E+01	**1.13E+01**
MU2-G1	mg/kg	6020	5.20E+00	_	1.30E+01	**1.13E+01**
MU2-G2	mg/kg	6020	3.70E+00	_	1.30E+01	**1.13E+01**
MU2-G3	mg/kg	6020	3.90E+00	_	1.30E+01	**1.13E+01**
MU2-GN	mg/kg	6020	9.20E+00	_	1.30E+01	**1.13E+01**
MU2-GS	mg/kg	6020	3.90E+00	_	1.30E+01	**1.13E+01**
MU3-G1	mg/kg	6020	5.80E+00	_	1.30E+01	**1.13E+01**
MU3-G2	mg/kg	6020	5.70E+00	_	1.30E+01	**1.13E+01**
MU3-G3	mg/kg	6020	5.80E+00	_	1.30E+01	**1.13E+01**
MU3-GN	mg/kg	6020	5.50E+00	_	1.30E+01	**1.13E+01**
MU3-GS	mg/kg	6020	5.30E+00	_	1.30E+01	**1.13E+01**
BARIUM						
MU1-G1	mg/kg	6020	3.30E+01	_	**1.10E+02**	1.22E+02
MU1-G2	mg/kg	6020	2.80E+01	_	**1.10E+02**	1.22E+02
MU1-G3	mg/kg	6020	3.00E+01	_	**1.10E+02**	1.22E+02
MU1-GNL	mg/kg	6020	3.70E+01	_	**1.10E+02**	1.22E+02
MU1-GNU	mg/kg	6020	3.50E+01	_	**1.10E+02**	1.22E+02
MU1-GS	mg/kg	6020	1.90E+01	_	**1.10E+02**	1.22E+02
MU2-G1	mg/kg	6020	2.40E+01	_	**1.10E+02**	1.22E+02
MU2-G2	mg/kg	6020	1.50E+01	_	**1.10E+02**	1.22E+02
MU2-G3	mg/kg	6020	1.70E+01	_	**1.10E+02**	1.22E+02
MU2-GN	mg/kg	6020	3.80E+01	_	**1.10E+02**	1.22E+02
MU2-GS	mg/kg	6020	2.00E+01	_	**1.10E+02**	1.22E+02
MU3-G1	mg/kg	6020	2.70E+01	_	**1.10E+02**	1.22E+02
MU3-G2	mg/kg	6020	2.60E+01	_	**1.10E+02**	1.22E+02
MU3-G3	mg/kg	6020	2.90E+01	_	**1.10E+02**	1.22E+02
MU3-GN	mg/kg	6020	2.50E+01	_	**1.10E+02**	1.22E+02
MU3-GS	mg/kg	6020	2.20E+01	_	**1.10E+02**	1.22E+02
BERYLLIUM						
MU1-G1	mg/kg	6020	4.90E-01	_	5.90E-01	**5.60E-01**
MU1-G2	mg/kg	6020	4.30E-01	_	5.90E-01	**5.60E-01**
MU1-G3	mg/kg	6020	4.60E-01	_	5.90E-01	**5.60E-01**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
BERYLLIUM						
MU1-GNL	mg/kg	6020	5.30E-01	_	5.90E-01	5.60E-01
MU1-GNU	mg/kg	6020	5.70E-01	_	5.90E-01	5.60E-01
MU1-GS	mg/kg	6020	2.70E-01	_	5.90E-01	5.60E-01
MU2-G1	mg/kg	6020	3.70E-01	_	5.90E-01	5.60E-01
MU2-G2	mg/kg	6020	2.50E-01	_	5.90E-01	5.60E-01
MU2-G3	mg/kg	6020	2.70E-01	_	5.90E-01	5.60E-01
MU2-GN	mg/kg	6020	5.90E-01	_	5.90E-01	5.60E-01
MU2-GS	mg/kg	6020	2.90E-01	_	5.90E-01	5.60E-01
MU3-G1	mg/kg	6020	4.10E-01	_	5.90E-01	5.60E-01
MU3-G2	mg/kg	6020	4.00E-01	_	5.90E-01	5.60E-01
MU3-G3	mg/kg	6020	4.00E-01	_	5.90E-01	5.60E-01
MU3-GN	mg/kg	6020	4.10E-01	_	5.90E-01	5.60E-01
MU3-GS	mg/kg	6020	3.60E-01	_	5.90E-01	5.60E-01
CADMIUM						
MU1-G1	mg/kg	6020	5.20E-01	_	6.00E-01	5.00E-01
MU1-G2	mg/kg	6020	4.40E-01	_	6.00E-01	5.00E-01
MU1-G3	mg/kg	6020	5.30E-01	_	6.00E-01	5.00E-01
MU1-GNL	mg/kg	6020	4.40E-01	_	6.00E-01	5.00E-01
MU1-GNU	mg/kg	6020	8.00E-01	_	6.00E-01	5.00E-01
MU1-GS	mg/kg	6020	3.00E-01	_	6.00E-01	5.00E-01
MU2-G1	mg/kg	6020	4.30E-01	_	6.00E-01	5.00E-01
MU2-G2	mg/kg	6020	3.20E-01	_	6.00E-01	5.00E-01
MU2-G3	mg/kg	6020	2.40E-01	_	6.00E-01	5.00E-01
MU2-GN	mg/kg	6020	8.00E-01	_	6.00E-01	5.00E-01
MU2-GS	mg/kg	6020	3.60E-01	_	6.00E-01	5.00E-01
MU3-G1	mg/kg	6020	5.40E-01	_	6.00E-01	5.00E-01
MU3-G2	mg/kg	6020	4.90E-01	_	6.00E-01	5.00E-01
MU3-G3	mg/kg	6020	4.60E-01	_	6.00E-01	5.00E-01
MU3-GN	mg/kg	6020	3.70E-01	_	6.00E-01	5.00E-01
MU3-GS	mg/kg	6020	4.30E-01	_	6.00E-01	5.00E-01
CALCIUM						
MU1-G1	mg/kg	6020	7.00E+04	_	9.30E+03	5.53E+03
MU1-G2	mg/kg	6020	6.60E+04	_	9.30E+03	5.53E+03
MU1-G3	mg/kg	6020	7.50E+04	_	9.30E+03	5.53E+03
MU1-GNL	mg/kg	6020	6.90E+04	_	9.30E+03	5.53E+03
MU1-GNU	mg/kg	6020	5.70E+04	_	9.30E+03	5.53E+03
MU1-GS	mg/kg	6020	6.20E+04	_	9.30E+03	5.53E+03
MU2-G1	mg/kg	6020	6.90E+04	_	9.30E+03	5.53E+03
MU2-G2	mg/kg	6020	7.80E+04	_	9.30E+03	5.53E+03
MU2-G3	mg/kg	6020	6.60E+04	_	9.30E+03	5.53E+03

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
CALCIUM						
MU2-GN	mg/kg	6020	7.40E+04	_	9.30E+03	5.53E+03
MU2-GS	mg/kg	6020	8.90E+04	_	9.30E+03	5.53E+03
MU3-G1	mg/kg	6020	7.90E+04	_	9.30E+03	5.53E+03
MU3-G2	mg/kg	6020	8.70E+04	_	9.30E+03	5.53E+03
MU3-G3	mg/kg	6020	8.40E+04	_	9.30E+03	5.53E+03
MU3-GN	mg/kg	6020	7.80E+04	_	9.30E+03	5.53E+03
MU3-GS	mg/kg	6020	8.50E+04	_	9.30E+03	5.53E+03
Chromium, Total						
MU1-G1	mg/kg	6020	2.20E+01	_	1.62E+01	1.30E+01
MU1-G2	mg/kg	6020	2.00E+01	_	1.62E+01	1.30E+01
MU1-G3	mg/kg	6020	2.10E+01	_	1.62E+01	1.30E+01
MU1-GNL	mg/kg	6020	1.70E+01	_	1.62E+01	1.30E+01
MU1-GNU	mg/kg	6020	2.90E+01	_	1.62E+01	1.30E+01
MU1-GS	mg/kg	6020	1.20E+01	_	1.62E+01	1.30E+01
MU2-G1	mg/kg	6020	1.70E+01	_	1.62E+01	1.30E+01
MU2-G2	mg/kg	6020	1.20E+01	_	1.62E+01	1.30E+01
MU2-G3	mg/kg	6020	1.10E+01	_	1.62E+01	1.30E+01
MU2-GN	mg/kg	6020	3.20E+01	_	1.62E+01	1.30E+01
MU2-GS	mg/kg	6020	1.20E+01	_	1.62E+01	1.30E+01
MU3-G1	mg/kg	6020	2.10E+01	_	1.62E+01	1.30E+01
MU3-G2	mg/kg	6020	1.90E+01	_	1.62E+01	1.30E+01
MU3-G3	mg/kg	6020	2.10E+01	_	1.62E+01	1.30E+01
MU3-GN	mg/kg	6020	1.70E+01	_	1.62E+01	1.30E+01
MU3-GS	mg/kg	6020	1.60E+01	_	1.62E+01	1.30E+01
COBALT						
MU1-G1	mg/kg	6020	7.50E+00	_	8.90E+00	8.90E+00
MU1-G2	mg/kg	6020	6.70E+00	_	8.90E+00	8.90E+00
MU1-G3	mg/kg	6020	7.40E+00	_	8.90E+00	8.90E+00
MU1-GNL	mg/kg	6020	6.70E+00	_	8.90E+00	8.90E+00
MU1-GNU	mg/kg	6020	6.60E+00	_	8.90E+00	8.90E+00
MU1-GS	mg/kg	6020	4.90E+00	_	8.90E+00	8.90E+00
MU2-G1	mg/kg	6020	6.00E+00	_	8.90E+00	8.90E+00
MU2-G2	mg/kg	6020	4.60E+00	_	8.90E+00	8.90E+00
MU2-G3	mg/kg	6020	4.60E+00	_	8.90E+00	8.90E+00
MU2-GN	mg/kg	6020	8.50E+00	_	8.90E+00	8.90E+00
MU2-GS	mg/kg	6020	5.60E+00	_	8.90E+00	8.90E+00
MU3-G1	mg/kg	6020	7.20E+00	_	8.90E+00	8.90E+00
MU3-G2	mg/kg	6020	6.50E+00	_	8.90E+00	8.90E+00
MU3-G3	mg/kg	6020	7.10E+00	_	8.90E+00	8.90E+00
MU3-GN	mg/kg	6020	6.50E+00	_	8.90E+00	8.90E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
COBALT						
MU3-GS	mg/kg	6020	5.90E+00	_	8.90E+00	8.90E+00
COPPER						
MU1-G1	mg/kg	6020	2.60E+01	_	1.96E+01	1.20E+01
MU1-G2	mg/kg	6020	2.30E+01	_	1.96E+01	1.20E+01
MU1-G3	mg/kg	6020	2.50E+01	_	1.96E+01	1.20E+01
MU1-GNL	mg/kg	6020	1.90E+01	_	1.96E+01	1.20E+01
MU1-GNU	mg/kg	6020	3.10E+01	_	1.96E+01	1.20E+01
MU1-GS	mg/kg	6020	1.50E+01	_	1.96E+01	1.20E+01
MU2-G1	mg/kg	6020	2.10E+01	_	1.96E+01	1.20E+01
MU2-G2	mg/kg	6020	1.30E+01	_	1.96E+01	1.20E+01
MU2-G3	mg/kg	6020	1.20E+01	_	1.96E+01	1.20E+01
MU2-GN	mg/kg	6020	3.40E+01	_	1.96E+01	1.20E+01
MU2-GS	mg/kg	6020	1.30E+01	_	1.96E+01	1.20E+01
MU3-G1	mg/kg	6020	2.60E+01	_	1.96E+01	1.20E+01
MU3-G2	mg/kg	6020	2.40E+01	_	1.96E+01	1.20E+01
MU3-G3	mg/kg	6020	2.80E+01	_	1.96E+01	1.20E+01
MU3-GN	mg/kg	6020	2.00E+01	_	1.96E+01	1.20E+01
MU3-GS	mg/kg	6020	2.10E+01	_	1.96E+01	1.20E+01
Cyanide, Amenable						
MU1-G1	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-G2	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-G3	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-GNL	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-GNU	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU1-GS	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-G1	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-G2	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-G3	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-GN	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU2-GS	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-G1	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-G2	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-G3	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-GN	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
MU3-GS	mg/kg	9012A	ND	_	5.10E-01	5.00E-01
IRON						
MU1-G1	mg/kg	6020	2.10E+04	_	1.59E+04	1.50E+04
MU1-G2	mg/kg	6020	1.90E+04	_	1.59E+04	1.50E+04
MU1-G3	mg/kg	6020	2.00E+04	_	1.59E+04	1.50E+04
MU1-GNL	mg/kg	6020	4.00E+04	_	1.59E+04	1.50E+04

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
IRON						
MU1-GNU	mg/kg	6020	4.30E+04	_	1.59E+04	1.50E+04
MU1-GS	mg/kg	6020	1.20E+04	_	1.59E+04	1.50E+04
MU2-G1	mg/kg	6020	1.60E+04	_	1.59E+04	1.50E+04
MU2-G2	mg/kg	6020	1.20E+04	_	1.59E+04	1.50E+04
MU2-G3	mg/kg	6020	1.10E+04	_	1.59E+04	1.50E+04
MU2-GN	mg/kg	6020	3.50E+04	_	1.59E+04	1.50E+04
MU2-GS	mg/kg	6020	1.30E+04	_	1.59E+04	1.50E+04
MU3-G1	mg/kg	6020	1.80E+04	_	1.59E+04	1.50E+04
MU3-G2	mg/kg	6020	1.70E+04	_	1.59E+04	1.50E+04
MU3-G3	mg/kg	6020	1.90E+04	_	1.59E+04	1.50E+04
MU3-GN	mg/kg	6020	1.60E+04	_	1.59E+04	1.50E+04
MU3-GS	mg/kg	6020	1.50E+04	_	1.59E+04	1.50E+04
LEAD						
MU1-G1	mg/kg	6020	4.10E+01	_	3.60E+01	2.09E+01
MU1-G2	mg/kg	6020	3.90E+01	_	3.60E+01	2.09E+01
MU1-G3	mg/kg	6020	3.80E+01	_	3.60E+01	2.09E+01
MU1-GNL	mg/kg	6020	5.40E+01	_	3.60E+01	2.09E+01
MU1-GNU	mg/kg	6020	8.50E+01	_	3.60E+01	2.09E+01
MU1-GS	mg/kg	6020	1.90E+01	_	3.60E+01	2.09E+01
MU2-G1	mg/kg	6020	3.20E+01	_	3.60E+01	2.09E+01
MU2-G2	mg/kg	6020	1.90E+01	_	3.60E+01	2.09E+01
MU2-G3	mg/kg	6020	1.70E+01	_	3.60E+01	2.09E+01
MU2-GN	mg/kg	6020	7.90E+01	_	3.60E+01	2.09E+01
MU2-GS	mg/kg	6020	2.00E+01	_	3.60E+01	2.09E+01
MU3-G1	mg/kg	6020	3.70E+01	_	3.60E+01	2.09E+01
MU3-G2	mg/kg	6020	3.30E+01	_	3.60E+01	2.09E+01
MU3-G3	mg/kg	6020	3.10E+01	_	3.60E+01	2.09E+01
MU3-GN	mg/kg	6020	2.60E+01	_	3.60E+01	2.09E+01
MU3-GS	mg/kg	6020	2.60E+01	_	3.60E+01	2.09E+01
MAGNESIUM						
MU1-G1	mg/kg	6020	3.30E+04	_	4.82E+03	2.70E+03
MU1-G2	mg/kg	6020	3.10E+04	_	4.82E+03	2.70E+03
MU1-G3	mg/kg	6020	3.70E+04	_	4.82E+03	2.70E+03
MU1-GNL	mg/kg	6020	3.30E+04	_	4.82E+03	2.70E+03
MU1-GNU	mg/kg	6020	2.70E+04	_	4.82E+03	2.70E+03
MU1-GS	mg/kg	6020	2.90E+04	_	4.82E+03	2.70E+03
MU2-G1	mg/kg	6020	3.40E+04	_	4.82E+03	2.70E+03
MU2-G2	mg/kg	6020	3.80E+04	_	4.82E+03	2.70E+03
MU2-G3	mg/kg	6020	3.10E+04	_	4.82E+03	2.70E+03
MU2-GN	mg/kg	6020	3.60E+04	_	4.82E+03	2.70E+03

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

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Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
MAGNESIUM						
MU2-GS	mg/kg	6020	4.10E+04	_	4.82E+03	2.70E+03
MU3-G1	mg/kg	6020	4.00E+04	_	4.82E+03	2.70E+03
MU3-G2	mg/kg	6020	4.40E+04	_	4.82E+03	2.70E+03
MU3-G3	mg/kg	6020	4.20E+04	_	4.82E+03	2.70E+03
MU3-GN	mg/kg	6020	3.80E+04	_	4.82E+03	2.70E+03
MU3-GS	mg/kg	6020	4.10E+04	_	4.82E+03	2.70E+03
MANGANESE						
MU1-G1	mg/kg	6020	5.70E+02	_	6.36E+02	6.30E+02
MU1-G2	mg/kg	6020	5.00E+02	_	6.36E+02	6.30E+02
MU1-G3	mg/kg	6020	5.50E+02	_	6.36E+02	6.30E+02
MU1-GNL	mg/kg	6020	6.80E+02	_	6.36E+02	6.30E+02
MU1-GNU	mg/kg	6020	7.20E+02	_	6.36E+02	6.30E+02
MU1-GS	mg/kg	6020	3.80E+02	_	6.36E+02	6.30E+02
MU2-G1	mg/kg	6020	4.90E+02	_	6.36E+02	6.30E+02
MU2-G2	mg/kg	6020	4.10E+02	_	6.36E+02	6.30E+02
MU2-G3	mg/kg	6020	3.60E+02	_	6.36E+02	6.30E+02
MU2-GN	mg/kg	6020	7.30E+02	_	6.36E+02	6.30E+02
MU2-GS	mg/kg	6020	4.40E+02	_	6.36E+02	6.30E+02
MU3-G1	mg/kg	6020	5.40E+02	_	6.36E+02	6.30E+02
MU3-G2	mg/kg	6020	6.00E+02	_	6.36E+02	6.30E+02
MU3-G3	mg/kg	6020	6.00E+02	_	6.36E+02	6.30E+02
MU3-GN	mg/kg	6020	5.00E+02	_	6.36E+02	6.30E+02
MU3-GS	mg/kg	6020	5.60E+02	_	6.36E+02	6.30E+02
MERCURY						
MU1-G1	mg/kg	7471A	9.50E-02	_	6.00E-02	5.00E-02
MU1-G2	mg/kg	7471A	8.30E-02	_	6.00E-02	5.00E-02
MU1-G3	mg/kg	7471A	1.10E-01	_	6.00E-02	5.00E-02
MU1-GNL	mg/kg	7471A	1.60E-01	_	6.00E-02	5.00E-02
MU1-GNU	mg/kg	7471A	1.40E-01	_	6.00E-02	5.00E-02
MU1-GS	mg/kg	7471A	5.00E-02	_	6.00E-02	5.00E-02
MU2-G1	mg/kg	7471A	1.10E-01	_	6.00E-02	5.00E-02
MU2-G2	mg/kg	7471A	5.10E-02	_	6.00E-02	5.00E-02
MU2-G3	mg/kg	7471A	5.00E-02	_	6.00E-02	5.00E-02
MU2-GN	mg/kg	7471A	1.10E-01	_	6.00E-02	5.00E-02
MU2-GS	mg/kg	7471A	4.50E-02	_	6.00E-02	5.00E-02
MU3-G1	mg/kg	7471A	7.70E-02	_	6.00E-02	5.00E-02
MU3-G2	mg/kg	7471A	8.50E-02	_	6.00E-02	5.00E-02
MU3-G3	mg/kg	7471A	6.90E-02	_	6.00E-02	5.00E-02
MU3-GN	mg/kg	7471A	5.40E-02	_	6.00E-02	5.00E-02
MU3-GS	mg/kg	7471A	1.00E-01	_	6.00E-02	5.00E-02

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
NICKEL						
MU1-G1	mg/kg	6020	1.70E+01	_	1.80E+01	1.30E+01
MU1-G2	mg/kg	6020	1.50E+01	_	1.80E+01	1.30E+01
MU1-G3	mg/kg	6020	1.70E+01	_	1.80E+01	1.30E+01
MU1-GNL	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU1-GNU	mg/kg	6020	1.80E+01	_	1.80E+01	1.30E+01
MU1-GS	mg/kg	6020	1.00E+01	_	1.80E+01	1.30E+01
MU2-G1	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU2-G2	mg/kg	6020	9.20E+00	_	1.80E+01	1.30E+01
MU2-G3	mg/kg	6020	9.30E+00	_	1.80E+01	1.30E+01
MU2-GN	mg/kg	6020	2.20E+01	_	1.80E+01	1.30E+01
MU2-GS	mg/kg	6020	1.20E+01	_	1.80E+01	1.30E+01
MU3-G1	mg/kg	6020	1.60E+01	_	1.80E+01	1.30E+01
MU3-G2	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU3-G3	mg/kg	6020	1.70E+01	_	1.80E+01	1.30E+01
MU3-GN	mg/kg	6020	1.40E+01	_	1.80E+01	1.30E+01
MU3-GS	mg/kg	6020	1.30E+01	_	1.80E+01	1.30E+01
POTASSIUM						
MU1-G1	mg/kg	6020	1.90E+03	_	1.27E+03	1.10E+03
MU1-G2	mg/kg	6020	1.60E+03	_	1.27E+03	1.10E+03
MU1-G3	mg/kg	6020	1.70E+03	_	1.27E+03	1.10E+03
MU1-GNL	mg/kg	6020	1.30E+03	_	1.27E+03	1.10E+03
MU1-GNU	mg/kg	6020	1.30E+03	_	1.27E+03	1.10E+03
MU1-GS	mg/kg	6020	1.00E+03	_	1.27E+03	1.10E+03
MU2-G1	mg/kg	6020	1.40E+03	_	1.27E+03	1.10E+03
MU2-G2	mg/kg	6020	9.90E+02	_	1.27E+03	1.10E+03
MU2-G3	mg/kg	6020	1.10E+03	_	1.27E+03	1.10E+03
MU2-GN	mg/kg	6020	1.80E+03	_	1.27E+03	1.10E+03
MU2-GS	mg/kg	6020	1.10E+03	_	1.27E+03	1.10E+03
MU3-G1	mg/kg	6020	1.50E+03	_	1.27E+03	1.10E+03
MU3-G2	mg/kg	6020	1.50E+03	_	1.27E+03	1.10E+03
MU3-G3	mg/kg	6020	1.80E+03	_	1.27E+03	1.10E+03
MU3-GN	mg/kg	6020	1.50E+03	_	1.27E+03	1.10E+03
MU3-GS	mg/kg	6020	1.40E+03	_	1.27E+03	1.10E+03
SELENIUM						
MU1-G1	mg/kg	6020	5.80E-01	_	4.80E-01	3.70E-01
MU1-G2	mg/kg	6020	4.40E-01	_	4.80E-01	3.70E-01
MU1-G3	mg/kg	6020	5.40E-01	_	4.80E-01	3.70E-01
MU1-GNL	mg/kg	6020	3.40E-01	_	4.80E-01	3.70E-01
MU1-GNU	mg/kg	6020	5.30E-01	_	4.80E-01	3.70E-01
MU1-GS	mg/kg	6020	3.60E-01	_	4.80E-01	3.70E-01

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
SELENIUM						
MU2-G1	mg/kg	6020	4.50E-01	_	4.80E-01	3.70E-01
MU2-G2	mg/kg	6020	3.30E-01	_	4.80E-01	3.70E-01
MU2-G3	mg/kg	6020	2.70E-01	_	4.80E-01	3.70E-01
MU2-GN	mg/kg	6020	6.30E-01	_	4.80E-01	3.70E-01
MU2-GS	mg/kg	6020	2.70E-01	_	4.80E-01	3.70E-01
MU3-G1	mg/kg	6020	5.10E-01	_	4.80E-01	3.70E-01
MU3-G2	mg/kg	6020	4.80E-01	_	4.80E-01	3.70E-01
MU3-G3	mg/kg	6020	5.50E-01	_	4.80E-01	3.70E-01
MU3-GN	mg/kg	6020	4.30E-01	_	4.80E-01	3.70E-01
MU3-GS	mg/kg	6020	4.70E-01	_	4.80E-01	3.70E-01
SILVER						
MU1-G1	mg/kg	6020	1.40E-01	_	5.50E-01	5.00E-01
MU1-G2	mg/kg	6020	1.10E-01	_	5.50E-01	5.00E-01
MU1-G3	mg/kg	6020	1.20E-01	_	5.50E-01	5.00E-01
MU1-GNL	mg/kg	6020	1.70E-01	_	5.50E-01	5.00E-01
MU1-GNU	mg/kg	6020	2.50E-01	_	5.50E-01	5.00E-01
MU1-GS	mg/kg	6020	6.20E-02	_	5.50E-01	5.00E-01
MU2-G1	mg/kg	6020	9.80E-02	_	5.50E-01	5.00E-01
MU2-G2	mg/kg	6020	5.80E-02	_	5.50E-01	5.00E-01
MU2-G3	mg/kg	6020	5.50E-02	_	5.50E-01	5.00E-01
MU2-GN	mg/kg	6020	2.40E-01	_	5.50E-01	5.00E-01
MU2-GS	mg/kg	6020	5.20E-02	_	5.50E-01	5.00E-01
MU3-G1	mg/kg	6020	1.40E-01	_	5.50E-01	5.00E-01
MU3-G2	mg/kg	6020	1.10E-01	_	5.50E-01	5.00E-01
MU3-G3	mg/kg	6020	1.20E-01	_	5.50E-01	5.00E-01
MU3-GN	mg/kg	6020	8.50E-02	_	5.50E-01	5.00E-01
MU3-GS	mg/kg	6020	9.40E-02	_	5.50E-01	5.00E-01
SODIUM						
MU1-G1	mg/kg	6020	1.60E+02	_	1.30E+02	1.30E+02
MU1-G2	mg/kg	6020	1.50E+02	_	1.30E+02	1.30E+02
MU1-G3	mg/kg	6020	1.60E+02	_	1.30E+02	1.30E+02
MU1-GNL	mg/kg	6020	1.60E+02	_	1.30E+02	1.30E+02
MU1-GNU	mg/kg	6020	1.40E+02	_	1.30E+02	1.30E+02
MU1-GS	mg/kg	6020	1.20E+02	_	1.30E+02	1.30E+02
MU2-G1	mg/kg	6020	1.40E+02	_	1.30E+02	1.30E+02
MU2-G2	mg/kg	6020	1.50E+02	_	1.30E+02	1.30E+02
MU2-G3	mg/kg	6020	1.40E+02	_	1.30E+02	1.30E+02
MU2-GN	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02
MU2-GS	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02
MU3-G1	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02

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1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
SODIUM						
MU3-G2	mg/kg	6020	1.70E+02	_	1.30E+02	1.30E+02
MU3-G3	mg/kg	6020	1.80E+02	_	1.30E+02	1.30E+02
MU3-GN	mg/kg	6020	1.50E+02	_	1.30E+02	1.30E+02
MU3-GS	mg/kg	6020	1.80E+02	_	1.30E+02	1.30E+02
THALLIUM						
MU1-G1	mg/kg	6020	3.60E-01	_	3.20E-01	4.20E-01
MU1-G2	mg/kg	6020	3.10E-01	_	3.20E-01	4.20E-01
MU1-G3	mg/kg	6020	3.30E-01	_	3.20E-01	4.20E-01
MU1-GNL	mg/kg	6020	5.30E-01	_	3.20E-01	4.20E-01
MU1-GNU	mg/kg	6020	4.90E-01	_	3.20E-01	4.20E-01
MU1-GS	mg/kg	6020	1.90E-01	_	3.20E-01	4.20E-01
MU2-G1	mg/kg	6020	2.70E-01	_	3.20E-01	4.20E-01
MU2-G2	mg/kg	6020	1.90E-01	_	3.20E-01	4.20E-01
MU2-G3	mg/kg	6020	1.80E-01	_	3.20E-01	4.20E-01
MU2-GN	mg/kg	6020	4.40E-01	_	3.20E-01	4.20E-01
MU2-GS	mg/kg	6020	2.40E-01	_	3.20E-01	4.20E-01
MU3-G1	mg/kg	6020	3.10E-01	_	3.20E-01	4.20E-01
MU3-G2	mg/kg	6020	3.00E-01	_	3.20E-01	4.20E-01
MU3-G3	mg/kg	6020	3.00E-01	_	3.20E-01	4.20E-01
MU3-GN	mg/kg	6020	2.50E-01	_	3.20E-01	4.20E-01
MU3-GS	mg/kg	6020	2.60E-01	_	3.20E-01	4.20E-01
VANADIUM						
MU1-G1	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU1-G2	mg/kg	6020	1.90E+01	_	2.52E+01	2.50E+01
MU1-G3	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU1-GNL	mg/kg	6020	2.00E+01	_	2.52E+01	2.50E+01
MU1-GNU	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU1-GS	mg/kg	6020	1.40E+01	_	2.52E+01	2.50E+01
MU2-G1	mg/kg	6020	1.70E+01	_	2.52E+01	2.50E+01
MU2-G2	mg/kg	6020	1.50E+01	_	2.52E+01	2.50E+01
MU2-G3	mg/kg	6020	1.40E+01	_	2.52E+01	2.50E+01
MU2-GN	mg/kg	6020	2.50E+01	_	2.52E+01	2.50E+01
MU2-GS	mg/kg	6020	1.60E+01	_	2.52E+01	2.50E+01
MU3-G1	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU3-G2	mg/kg	6020	2.00E+01	_	2.52E+01	2.50E+01
MU3-G3	mg/kg	6020	2.10E+01	_	2.52E+01	2.50E+01
MU3-GN	mg/kg	6020	1.90E+01	_	2.52E+01	2.50E+01
MU3-GS	mg/kg	6020	1.80E+01	_	2.52E+01	2.50E+01
ZINC						
MU1-G1	mg/kg	6020	1.00E+02	_	9.50E+01	6.02E+01

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Metals						
ZINC						
MU1-G2	mg/kg	6020	9.20E+01	_	9.50E+01	6.02E+01
MU1-G3	mg/kg	6020	9.80E+01	_	9.50E+01	6.02E+01
MU1-GNL	mg/kg	6020	1.10E+02	_	9.50E+01	6.02E+01
MU1-GNU	mg/kg	6020	1.90E+02	_	9.50E+01	6.02E+01
MU1-GS	mg/kg	6020	6.00E+01	_	9.50E+01	6.02E+01
MU2-G1	mg/kg	6020	8.30E+01	_	9.50E+01	6.02E+01
MU2-G2	mg/kg	6020	6.30E+01	_	9.50E+01	6.02E+01
MU2-G3	mg/kg	6020	5.20E+01	_	9.50E+01	6.02E+01
MU2-GN	mg/kg	6020	1.80E+02	_	9.50E+01	6.02E+01
MU2-GS	mg/kg	6020	6.20E+01	_	9.50E+01	6.02E+01
MU3-G1	mg/kg	6020	9.60E+01	_	9.50E+01	6.02E+01
MU3-G2	mg/kg	6020	8.50E+01	_	9.50E+01	6.02E+01
MU3-G3	mg/kg	6020	8.70E+01	_	9.50E+01	6.02E+01
MU3-GN	mg/kg	6020	6.90E+01	_	9.50E+01	6.02E+01
MU3-GS	mg/kg	6020	7.60E+01	_	9.50E+01	6.02E+01
Organic, Semi-Volatile						
2-METHYLNAPHTHALENE						
MU1-G1	mg/kg	8270C LL	5.20E-02	_	1.40E-01	2.90E-01
MU1-G2	mg/kg	8270C LL	5.70E-02	_	1.40E-01	2.90E-01
MU1-G3	mg/kg	8270C LL	5.40E-02	_	1.40E-01	2.90E-01
MU1-GNL	mg/kg	8270C LL	1.30E-01	_	1.40E-01	2.90E-01
MU1-GNU	mg/kg	8270C LL	1.10E-01	_	1.40E-01	2.90E-01
MU1-GS	mg/kg	8270C LL	1.80E-02	_	1.40E-01	2.90E-01
MU2-G1	mg/kg	8270C LL	5.10E-02	_	1.40E-01	2.90E-01
MU2-G2	mg/kg	8270C LL	3.60E-02	_	1.40E-01	2.90E-01
MU2-G3	mg/kg	8270C LL	2.40E-02	_	1.40E-01	2.90E-01
MU2-GN	mg/kg	8270C LL	5.10E-02	_	1.40E-01	2.90E-01
MU2-GS	mg/kg	8270C LL	3.00E-02	_	1.40E-01	2.90E-01
MU3-G1	mg/kg	8270C LL	5.70E-02	_	1.40E-01	2.90E-01
MU3-G2	mg/kg	8270C LL	3.40E-02	_	1.40E-01	2.90E-01
MU3-G3	mg/kg	8270C LL	3.90E-02	_	1.40E-01	2.90E-01
MU3-GN	mg/kg	8270C LL	2.70E-02	_	1.40E-01	2.90E-01
MU3-GS	mg/kg	8270C LL	3.70E-02	_	1.40E-01	2.90E-01
ACENAPHTHENE						
MU1-G1	mg/kg	8270C LL	7.10E-02	9.00E-02	1.30E-01	4.00E-02
MU1-G2	mg/kg	8270C LL	6.70E-02	9.00E-02	1.30E-01	4.00E-02
MU1-G3	mg/kg	8270C LL	6.70E-02	9.00E-02	1.30E-01	4.00E-02
MU1-GNL	mg/kg	8270C LL	8.80E-02	9.00E-02	1.30E-01	4.00E-02
MU1-GNU	mg/kg	8270C LL	9.50E-02	9.00E-02	1.30E-01	4.00E-02
MU1-GS	mg/kg	8270C LL	3.60E-02	9.00E-02	1.30E-01	4.00E-02

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1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

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Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
ACENAPHTHENE						
MU2-G1	mg/kg	8270C LL	5.90E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-G2	mg/kg	8270C LL	6.30E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-G3	mg/kg	8270C LL	4.20E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-GN	mg/kg	8270C LL	6.00E-02	9.00E-02	1.30E-01	**4.00E-02**
MU2-GS	mg/kg	8270C LL	4.20E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-G1	mg/kg	8270C LL	7.80E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-G2	mg/kg	8270C LL	7.20E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-G3	mg/kg	8270C LL	5.90E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-GN	mg/kg	8270C LL	5.00E-02	9.00E-02	1.30E-01	**4.00E-02**
MU3-GS	mg/kg	8270C LL	5.80E-02	9.00E-02	1.30E-01	**4.00E-02**
ACENAPHTHYLENE						
MU1-G1	mg/kg	8270C LL	3.60E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-G2	mg/kg	8270C LL	5.10E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-G3	mg/kg	8270C LL	5.00E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-GNL	mg/kg	8270C LL	8.80E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-GNU	mg/kg	8270C LL	8.10E-02	**3.00E-02**	7.00E-02	4.00E-02
MU1-GS	mg/kg	8270C LL	2.10E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-G1	mg/kg	8270C LL	3.60E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-G2	mg/kg	8270C LL	3.50E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-G3	mg/kg	8270C LL	2.00E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-GN	mg/kg	8270C LL	5.30E-02	**3.00E-02**	7.00E-02	4.00E-02
MU2-GS	mg/kg	8270C LL	2.20E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-G1	mg/kg	8270C LL	4.70E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-G2	mg/kg	8270C LL	4.20E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-G3	mg/kg	8270C LL	3.80E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-GN	mg/kg	8270C LL	3.30E-02	**3.00E-02**	7.00E-02	4.00E-02
MU3-GS	mg/kg	8270C LL	2.90E-02	**3.00E-02**	7.00E-02	4.00E-02
ANTHRACENE						
MU1-G1	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-G2	mg/kg	8270C LL	1.60E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-G3	mg/kg	8270C LL	1.70E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-GNL	mg/kg	8270C LL	2.90E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-GNU	mg/kg	8270C LL	2.30E-01	2.50E-01	4.00E-01	**1.40E-01**
MU1-GS	mg/kg	8270C LL	7.80E-02	2.50E-01	4.00E-01	**1.40E-01**
MU2-G1	mg/kg	8270C LL	1.30E-01	2.50E-01	4.00E-01	**1.40E-01**
MU2-G2	mg/kg	8270C LL	1.50E-01	2.50E-01	4.00E-01	**1.40E-01**
MU2-G3	mg/kg	8270C LL	9.40E-02	2.50E-01	4.00E-01	**1.40E-01**
MU2-GN	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
MU2-GS	mg/kg	8270C LL	8.90E-02	2.50E-01	4.00E-01	**1.40E-01**
MU3-G1	mg/kg	8270C LL	1.90E-01	2.50E-01	4.00E-01	**1.40E-01**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
ANTHRACENE						
MU3-G2	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
MU3-G3	mg/kg	8270C LL	1.00E-01	2.50E-01	4.00E-01	**1.40E-01**
MU3-GN	mg/kg	8270C LL	1.20E-01	2.50E-01	4.00E-01	**1.40E-01**
MU3-GS	mg/kg	8270C LL	1.40E-01	2.50E-01	4.00E-01	**1.40E-01**
Benzo[a]anthracene						
MU1-G1	mg/kg	8270C LL	3.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-G2	mg/kg	8270C LL	4.30E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-G3	mg/kg	8270C LL	4.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-GNL	mg/kg	8270C LL	5.70E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-GNU	mg/kg	8270C LL	5.10E-01	1.10E+00	1.80E+00	**7.20E-01**
MU1-GS	mg/kg	8270C LL	1.90E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-G1	mg/kg	8270C LL	3.70E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-G2	mg/kg	8270C LL	4.10E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-G3	mg/kg	8270C LL	2.30E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-GN	mg/kg	8270C LL	4.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU2-GS	mg/kg	8270C LL	2.40E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-G1	mg/kg	8270C LL	4.60E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-G2	mg/kg	8270C LL	4.20E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-G3	mg/kg	8270C LL	3.00E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-GN	mg/kg	8270C LL	3.20E-01	1.10E+00	1.80E+00	**7.20E-01**
MU3-GS	mg/kg	8270C LL	4.80E-01	1.10E+00	1.80E+00	**7.20E-01**
Benzo[a]pyrene						
MU1-G1	mg/kg	8270C LL	3.30E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-G2	mg/kg	8270C LL	4.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-G3	mg/kg	8270C LL	5.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-GNL	mg/kg	8270C LL	4.70E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-GNU	mg/kg	8270C LL	6.10E-01	1.30E+00	2.10E+00	**9.80E-01**
MU1-GS	mg/kg	8270C LL	2.10E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-G1	mg/kg	8270C LL	4.00E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-G2	mg/kg	8270C LL	4.30E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-G3	mg/kg	8270C LL	2.60E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-GN	mg/kg	8270C LL	4.60E-01	1.30E+00	2.10E+00	**9.80E-01**
MU2-GS	mg/kg	8270C LL	2.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-G1	mg/kg	8270C LL	5.00E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-G2	mg/kg	8270C LL	4.60E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-G3	mg/kg	8270C LL	3.50E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-GN	mg/kg	8270C LL	3.40E-01	1.30E+00	2.10E+00	**9.80E-01**
MU3-GS	mg/kg	8270C LL	4.60E-01	1.30E+00	2.10E+00	**9.80E-01**
Benzo[b]fluoranthene						
MU1-G1	mg/kg	8270C LL	5.00E-01	1.50E+00	2.10E+00	**7.00E-01**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
Benzo[b]fluoranthene						
MU1-G2	mg/kg	8270C LL	5.80E-01	1.50E+00	2.10E+00	7.00E-01
MU1-G3	mg/kg	8270C LL	4.80E-01	1.50E+00	2.10E+00	7.00E-01
MU1-GNL	mg/kg	8270C LL	6.00E-01	1.50E+00	2.10E+00	7.00E-01
MU1-GNU	mg/kg	8270C LL	8.10E-01	1.50E+00	2.10E+00	7.00E-01
MU1-GS	mg/kg	8270C LL	2.00E-01	1.50E+00	2.10E+00	7.00E-01
MU2-G1	mg/kg	8270C LL	4.10E-01	1.50E+00	2.10E+00	7.00E-01
MU2-G2	mg/kg	8270C LL	5.60E-01	1.50E+00	2.10E+00	7.00E-01
MU2-G3	mg/kg	8270C LL	2.50E-01	1.50E+00	2.10E+00	7.00E-01
MU2-GN	mg/kg	8270C LL	5.70E-01	1.50E+00	2.10E+00	7.00E-01
MU2-GS	mg/kg	8270C LL	3.20E-01	1.50E+00	2.10E+00	7.00E-01
MU3-G1	mg/kg	8270C LL	4.80E-01	1.50E+00	2.10E+00	7.00E-01
MU3-G2	mg/kg	8270C LL	4.20E-01	1.50E+00	2.10E+00	7.00E-01
MU3-G3	mg/kg	8270C LL	3.80E-01	1.50E+00	2.10E+00	7.00E-01
MU3-GN	mg/kg	8270C LL	3.40E-01	1.50E+00	2.10E+00	7.00E-01
MU3-GS	mg/kg	8270C LL	6.30E-01	1.50E+00	2.10E+00	7.00E-01
Benzo[k]fluoranthene						
MU1-G1	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-G2	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-G3	mg/kg	8270C LL	2.60E-01	9.90E-01	1.70E+00	6.30E-01
MU1-GNL	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-GNU	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU1-GS	mg/kg	8270C LL	9.00E-02	9.90E-01	1.70E+00	6.30E-01
MU2-G1	mg/kg	8270C LL	1.50E-01	9.90E-01	1.70E+00	6.30E-01
MU2-G2	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU2-G3	mg/kg	8270C LL	1.10E-01	9.90E-01	1.70E+00	6.30E-01
MU2-GN	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU2-GS	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
MU3-G1	mg/kg	8270C LL	2.50E-01	9.90E-01	1.70E+00	6.30E-01
MU3-G2	mg/kg	8270C LL	2.50E-01	9.90E-01	1.70E+00	6.30E-01
MU3-G3	mg/kg	8270C LL	1.50E-01	9.90E-01	1.70E+00	6.30E-01
MU3-GN	mg/kg	8270C LL	1.30E-01	9.90E-01	1.70E+00	6.30E-01
MU3-GS	mg/kg	8270C LL	ND	9.90E-01	1.70E+00	6.30E-01
CHRYSENE						
MU1-G1	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	1.10E+00
MU1-G2	mg/kg	8270C LL	4.60E-01	1.20E+00	2.70E+00	1.10E+00
MU1-G3	mg/kg	8270C LL	5.50E-01	1.20E+00	2.70E+00	1.10E+00
MU1-GNL	mg/kg	8270C LL	5.90E-01	1.20E+00	2.70E+00	1.10E+00
MU1-GNU	mg/kg	8270C LL	6.40E-01	1.20E+00	2.70E+00	1.10E+00
MU1-GS	mg/kg	8270C LL	2.40E-01	1.20E+00	2.70E+00	1.10E+00
MU2-G1	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	1.10E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
CHRYSENE						
MU2-G2	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	**1.10E+00**
MU2-G3	mg/kg	8270C LL	2.90E-01	1.20E+00	2.70E+00	**1.10E+00**
MU2-GN	mg/kg	8270C LL	5.00E-01	1.20E+00	2.70E+00	**1.10E+00**
MU2-GS	mg/kg	8270C LL	2.60E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-G1	mg/kg	8270C LL	4.90E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-G2	mg/kg	8270C LL	4.40E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-G3	mg/kg	8270C LL	3.40E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-GN	mg/kg	8270C LL	3.30E-01	1.20E+00	2.70E+00	**1.10E+00**
MU3-GS	mg/kg	8270C LL	4.20E-01	1.20E+00	2.70E+00	**1.10E+00**
DIBENZ(A,H)ANTHRACENE						
MU1-G1	mg/kg	8270C LL	4.40E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-G2	mg/kg	8270C LL	6.30E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-G3	mg/kg	8270C LL	6.80E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-GNL	mg/kg	8270C LL	6.10E-02	2.00E-01	4.20E-01	**1.50E-01**
MU1-GNU	mg/kg	8270C LL	1.10E-01	2.00E-01	4.20E-01	**1.50E-01**
MU1-GS	mg/kg	8270C LL	1.50E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-G1	mg/kg	8270C LL	6.40E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-G2	mg/kg	8270C LL	6.70E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-G3	mg/kg	8270C LL	4.30E-02	2.00E-01	4.20E-01	**1.50E-01**
MU2-GN	mg/kg	8270C LL	1.00E-01	2.00E-01	4.20E-01	**1.50E-01**
MU2-GS	mg/kg	8270C LL	5.20E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-G1	mg/kg	8270C LL	8.10E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-G2	mg/kg	8270C LL	8.40E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-G3	mg/kg	8270C LL	6.30E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-GN	mg/kg	8270C LL	6.80E-02	2.00E-01	4.20E-01	**1.50E-01**
MU3-GS	mg/kg	8270C LL	7.80E-02	2.00E-01	4.20E-01	**1.50E-01**
FLUORANTHENE						
MU1-G1	mg/kg	8270C LL	6.30E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-G2	mg/kg	8270C LL	6.80E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-G3	mg/kg	8270C LL	7.70E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-GNL	mg/kg	8270C LL	7.50E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-GNU	mg/kg	8270C LL	7.80E-01	2.70E+00	4.10E+00	**1.80E+00**
MU1-GS	mg/kg	8270C LL	3.80E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-G1	mg/kg	8270C LL	6.10E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-G2	mg/kg	8270C LL	6.70E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-G3	mg/kg	8270C LL	4.20E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-GN	mg/kg	8270C LL	7.60E-01	2.70E+00	4.10E+00	**1.80E+00**
MU2-GS	mg/kg	8270C LL	5.10E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-G1	mg/kg	8270C LL	8.60E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-G2	mg/kg	8270C LL	7.50E-01	2.70E+00	4.10E+00	**1.80E+00**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
FLUORANTHENE						
MU3-G3	mg/kg	8270C LL	5.60E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-GN	mg/kg	8270C LL	5.50E-01	2.70E+00	4.10E+00	**1.80E+00**
MU3-GS	mg/kg	8270C LL	6.30E-01	2.70E+00	4.10E+00	**1.80E+00**
FLUORENE						
MU1-G1	mg/kg	8270C LL	9.10E-02	1.00E-01	1.80E-01	**4.00E-02**
MU1-G2	mg/kg	8270C LL	8.00E-02	1.00E-01	1.80E-01	**4.00E-02**
MU1-G3	mg/kg	8270C LL	9.30E-02	1.00E-01	1.80E-01	**4.00E-02**
MU1-GNL	mg/kg	8270C LL	1.50E-01	1.00E-01	1.80E-01	**4.00E-02**
MU1-GNU	mg/kg	8270C LL	1.40E-01	1.00E-01	1.80E-01	**4.00E-02**
MU1-GS	mg/kg	8270C LL	3.70E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-G1	mg/kg	8270C LL	7.40E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-G2	mg/kg	8270C LL	6.70E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-G3	mg/kg	8270C LL	4.40E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-GN	mg/kg	8270C LL	7.50E-02	1.00E-01	1.80E-01	**4.00E-02**
MU2-GS	mg/kg	8270C LL	4.50E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-G1	mg/kg	8270C LL	1.00E-01	1.00E-01	1.80E-01	**4.00E-02**
MU3-G2	mg/kg	8270C LL	7.60E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-G3	mg/kg	8270C LL	5.90E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-GN	mg/kg	8270C LL	5.20E-02	1.00E-01	1.80E-01	**4.00E-02**
MU3-GS	mg/kg	8270C LL	7.40E-02	1.00E-01	1.80E-01	**4.00E-02**
Indeno[1,2,3-cd]pyrene						
MU1-G1	mg/kg	8270C LL	1.70E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-G2	mg/kg	8270C LL	2.10E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-G3	mg/kg	8270C LL	2.90E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-GNL	mg/kg	8270C LL	2.00E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-GNU	mg/kg	8270C LL	3.10E-01	8.60E-01	1.60E+00	**5.10E-01**
MU1-GS	mg/kg	8270C LL	1.20E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-G1	mg/kg	8270C LL	2.10E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-G2	mg/kg	8270C LL	2.30E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-G3	mg/kg	8270C LL	1.30E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-GN	mg/kg	8270C LL	3.20E-01	8.60E-01	1.60E+00	**5.10E-01**
MU2-GS	mg/kg	8270C LL	1.50E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-G1	mg/kg	8270C LL	2.50E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-G2	mg/kg	8270C LL	2.30E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-G3	mg/kg	8270C LL	1.90E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-GN	mg/kg	8270C LL	2.20E-01	8.60E-01	1.60E+00	**5.10E-01**
MU3-GS	mg/kg	8270C LL	2.40E-01	8.60E-01	1.60E+00	**5.10E-01**
NAPHTHALENE						
MU1-G1	mg/kg	8270C LL	6.20E-02	**4.00E-02**	2.00E-01	1.70E-01
MU1-G2	mg/kg	8270C LL	7.20E-02	**4.00E-02**	2.00E-01	1.70E-01

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
NAPHTHALENE						
MU1-G3	mg/kg	8270C LL	6.90E-02	4.00E-02	2.00E-01	1.70E-01
MU1-GNL	mg/kg	8270C LL	1.90E-01	4.00E-02	2.00E-01	1.70E-01
MU1-GNU	mg/kg	8270C LL	1.60E-01	4.00E-02	2.00E-01	1.70E-01
MU1-GS	mg/kg	8270C LL	1.70E-02	4.00E-02	2.00E-01	1.70E-01
MU2-G1	mg/kg	8270C LL	6.30E-02	4.00E-02	2.00E-01	1.70E-01
MU2-G2	mg/kg	8270C LL	4.60E-02	4.00E-02	2.00E-01	1.70E-01
MU2-G3	mg/kg	8270C LL	2.80E-02	4.00E-02	2.00E-01	1.70E-01
MU2-GN	mg/kg	8270C LL	6.80E-02	4.00E-02	2.00E-01	1.70E-01
MU2-GS	mg/kg	8270C LL	2.20E-02	4.00E-02	2.00E-01	1.70E-01
MU3-G1	mg/kg	8270C LL	6.60E-02	4.00E-02	2.00E-01	1.70E-01
MU3-G2	mg/kg	8270C LL	4.50E-02	4.00E-02	2.00E-01	1.70E-01
MU3-G3	mg/kg	8270C LL	4.80E-02	4.00E-02	2.00E-01	1.70E-01
MU3-GN	mg/kg	8270C LL	3.10E-02	4.00E-02	2.00E-01	1.70E-01
MU3-GS	mg/kg	8270C LL	4.10E-02	4.00E-02	2.00E-01	1.70E-01
PHENANTHRENE						
MU1-G1	mg/kg	8270C LL	5.10E-01	1.30E+00	2.50E+00	9.90E-01
MU1-G2	mg/kg	8270C LL	5.00E-01	1.30E+00	2.50E+00	9.90E-01
MU1-G3	mg/kg	8270C LL	5.80E-01	1.30E+00	2.50E+00	9.90E-01
MU1-GNL	mg/kg	8270C LL	8.00E-01	1.30E+00	2.50E+00	9.90E-01
MU1-GNU	mg/kg	8270C LL	7.70E-01	1.30E+00	2.50E+00	9.90E-01
MU1-GS	mg/kg	8270C LL	2.70E-01	1.30E+00	2.50E+00	9.90E-01
MU2-G1	mg/kg	8270C LL	4.70E-01	1.30E+00	2.50E+00	9.90E-01
MU2-G2	mg/kg	8270C LL	5.10E-01	1.30E+00	2.50E+00	9.90E-01
MU2-G3	mg/kg	8270C LL	3.40E-01	1.30E+00	2.50E+00	9.90E-01
MU2-GN	mg/kg	8270C LL	5.40E-01	1.30E+00	2.50E+00	9.90E-01
MU2-GS	mg/kg	8270C LL	3.50E-01	1.30E+00	2.50E+00	9.90E-01
MU3-G1	mg/kg	8270C LL	5.90E-01	1.30E+00	2.50E+00	9.90E-01
MU3-G2	mg/kg	8270C LL	5.30E-01	1.30E+00	2.50E+00	9.90E-01
MU3-G3	mg/kg	8270C LL	3.90E-01	1.30E+00	2.50E+00	9.90E-01
MU3-GN	mg/kg	8270C LL	3.80E-01	1.30E+00	2.50E+00	9.90E-01
MU3-GS	mg/kg	8270C LL	5.80E-01	1.30E+00	2.50E+00	9.90E-01
PYRENE						
MU1-G1	mg/kg	8270C LL	6.50E-01	1.90E+00	3.00E+00	1.20E+00
MU1-G2	mg/kg	8270C LL	7.50E-01	1.90E+00	3.00E+00	1.20E+00
MU1-G3	mg/kg	8270C LL	9.20E-01	1.90E+00	3.00E+00	1.20E+00
MU1-GNL	mg/kg	8270C LL	8.10E-01	1.90E+00	3.00E+00	1.20E+00
MU1-GNU	mg/kg	8270C LL	1.00E+00	1.90E+00	3.00E+00	1.20E+00
MU1-GS	mg/kg	8270C LL	3.40E-01	1.90E+00	3.00E+00	1.20E+00
MU2-G1	mg/kg	8270C LL	6.60E-01	1.90E+00	3.00E+00	1.20E+00
MU2-G2	mg/kg	8270C LL	7.50E-01	1.90E+00	3.00E+00	1.20E+00

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

US Army Corps of Engineers ®

Calumet Harbor
Table 3: Individual Sediment Results Compared to Background Values

Location	UNITS	Method	Value	1	2	3
Organic, Semi-Volatile						
PYRENE						
MU2-G3	mg/kg	8270C LL	5.20E-01	1.90E+00	3.00E+00	**1.20E+00**
MU2-GN	mg/kg	8270C LL	6.90E-01	1.90E+00	3.00E+00	**1.20E+00**
MU2-GS	mg/kg	8270C LL	4.80E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-G1	mg/kg	8270C LL	7.90E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-G2	mg/kg	8270C LL	7.30E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-G3	mg/kg	8270C LL	5.40E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-GN	mg/kg	8270C LL	5.70E-01	1.90E+00	3.00E+00	**1.20E+00**
MU3-GS	mg/kg	8270C LL	8.30E-01	1.90E+00	3.00E+00	**1.20E+00**

TACO - Section 742.Appendix A General - Section 742.Table G Concentrations of Inorganic Chemicals in Background Soils and Section 742.TABLE H Concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils

1- Chicago
2- Metropolitan Areas
3- Non-Metropolitan Areas

Notes:
Purple Highlight - Minimum Background Level

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
METALLIC SPECIES					
ANTIMONY					
MU1-COMP	mg/L	6010B	ND	6.00E-03	6.00E-03
MU1-G3	mg/L	6010B	ND	6.00E-03	6.00E-03
MU1-GNL	mg/L	6010B	3.40E-03	6.00E-03	6.00E-03
MU1-GNU	mg/L	6010B	ND	6.00E-03	6.00E-03
MU1-GS	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-COMP	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-G1	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-GN	mg/L	6010B	ND	6.00E-03	6.00E-03
MU2-GS	mg/L	6010B	ND	6.00E-03	6.00E-03
MU3-COMP	mg/L	6010B	ND	6.00E-03	6.00E-03
MU3-GN	mg/L	6010B	ND	6.00E-03	6.00E-03
MU3-GS	mg/L	6010B	ND	6.00E-03	6.00E-03
ARSENIC					
MU1-COMP	mg/L	6010B	3.50E-03	5.00E-02	1.00E-02
MU1-G3	mg/L	6010B	3.30E-03	5.00E-02	1.00E-02
MU1-GNL	mg/L	6010B	2.30E-02	5.00E-02	1.00E-02
MU1-GNU	mg/L	6010B	5.00E-03	5.00E-02	1.00E-02
MU1-GS	mg/L	6010B	ND	5.00E-02	1.00E-02
MU2-COMP	mg/L	6010B	3.20E-03	5.00E-02	1.00E-02
MU2-G1	mg/L	6010B	3.10E-03	5.00E-02	1.00E-02
MU2-GN	mg/L	6010B	3.00E-03	5.00E-02	1.00E-02
MU2-GS	mg/L	6010B	ND	5.00E-02	1.00E-02
MU3-COMP	mg/L	6010B	ND	5.00E-02	1.00E-02
MU3-GN	mg/L	6010B	3.60E-03	5.00E-02	1.00E-02
MU3-GS	mg/L	6010B	2.70E-03	5.00E-02	1.00E-02
BARIUM					
MU1-COMP	mg/L	6010B	1.40E-02	2.00E+00	2.00E+00
MU1-G3	mg/L	6010B	1.40E-02	2.00E+00	2.00E+00
MU1-GNL	mg/L	6010B	2.40E-02	2.00E+00	2.00E+00
MU1-GNU	mg/L	6010B	1.60E-02	2.00E+00	2.00E+00
MU1-GS	mg/L	6010B	9.20E-03	2.00E+00	2.00E+00
MU2-COMP	mg/L	6010B	1.20E-02	2.00E+00	2.00E+00
MU2-G1	mg/L	6010B	9.30E-03	2.00E+00	2.00E+00
MU2-GN	mg/L	6010B	9.50E-03	2.00E+00	2.00E+00
MU2-GS	mg/L	6010B	1.00E-02	2.00E+00	2.00E+00
MU3-COMP	mg/L	6010B	1.50E-02	2.00E+00	2.00E+00
MU3-GN	mg/L	6010B	1.40E-02	2.00E+00	2.00E+00
MU3-GS	mg/L	6010B	1.50E-02	2.00E+00	2.00E+00

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
BERYLLIUM					
MU1-COMP	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-G3	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-GNL	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-GNU	mg/L	6010B	ND	4.00E-03	4.00E-03
MU1-GS	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-COMP	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-G1	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-GN	mg/L	6010B	ND	4.00E-03	4.00E-03
MU2-GS	mg/L	6010B	ND	4.00E-03	4.00E-03
MU3-COMP	mg/L	6010B	ND	4.00E-03	4.00E-03
MU3-GN	mg/L	6010B	ND	4.00E-03	4.00E-03
MU3-GS	mg/L	6010B	ND	4.00E-03	4.00E-03
BORON					
MU1-COMP	mg/L	6010B	3.10E-01	2.00E+00	-
MU1-G3	mg/L	6010B	2.80E-01	2.00E+00	-
MU1-GNL	mg/L	6010B	5.10E-01	2.00E+00	-
MU1-GNU	mg/L	6010B	3.30E-01	2.00E+00	-
MU1-GS	mg/L	6010B	2.30E-01	2.00E+00	-
MU2-COMP	mg/L	6010B	3.40E-01	2.00E+00	-
MU2-G1	mg/L	6010B	2.50E-01	2.00E+00	-
MU2-GN	mg/L	6010B	2.70E-01	2.00E+00	-
MU2-GS	mg/L	6010B	2.80E-01	2.00E+00	-
MU3-COMP	mg/L	6010B	2.50E-01	2.00E+00	-
MU3-GN	mg/L	6010B	2.70E-01	2.00E+00	-
MU3-GS	mg/L	6010B	2.80E-01	2.00E+00	-
CADMIUM					
MU1-COMP	mg/L	6010B	ND	5.00E-03	-
MU1-G3	mg/L	6010B	ND	5.00E-03	-
MU1-GNL	mg/L	6010B	4.30E-04	5.00E-03	-
MU1-GNU	mg/L	6010B	2.10E-04	5.00E-03	-
MU1-GS	mg/L	6010B	ND	5.00E-03	-
MU2-COMP	mg/L	6010B	ND	5.00E-03	-
MU2-G1	mg/L	6010B	ND	5.00E-03	-
MU2-GN	mg/L	6010B	ND	5.00E-03	-
MU2-GS	mg/L	6010B	ND	5.00E-03	-
MU3-COMP	mg/L	6010B	ND	5.00E-03	-
MU3-GN	mg/L	6010B	ND	5.00E-03	-
MU3-GS	mg/L	6010B	ND	5.00E-03	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
CALCIUM					
MU1-COMP	mg/L	6010B	2.20E+01	-	-
MU1-G3	mg/L	6010B	2.20E+01	-	-
MU1-GNL	mg/L	6010B	1.60E+01	-	-
MU1-GNU	mg/L	6010B	2.00E+01	-	-
MU1-GS	mg/L	6010B	2.10E+01	-	-
MU2-COMP	mg/L	6010B	1.90E+01	-	-
MU2-G1	mg/L	6010B	1.90E+01	-	-
MU2-GN	mg/L	6010B	2.10E+01	-	-
MU2-GS	mg/L	6010B	1.70E+01	-	-
MU3-COMP	mg/L	6010B	1.70E+01	-	-
MU3-GN	mg/L	6010B	1.70E+01	-	-
MU3-GS	mg/L	6010B	2.10E+01	-	-
MU1-COMP	mg/L	6010B	3.20E-03	**1.00E-01**	**1.00E-01**
MU1-G3	mg/L	6010B	2.70E-03	**1.00E-01**	**1.00E-01**
MU1-GNL	mg/L	6010B	7.40E-03	**1.00E-01**	**1.00E-01**
MU1-GNU	mg/L	6010B	6.00E-03	**1.00E-01**	**1.00E-01**
MU1-GS	mg/L	6010B	2.50E-03	**1.00E-01**	**1.00E-01**
MU2-COMP	mg/L	6010B	4.80E-03	**1.00E-01**	**1.00E-01**
MU2-G1	mg/L	6010B	3.60E-03	**1.00E-01**	**1.00E-01**
MU2-GN	mg/L	6010B	3.50E-03	**1.00E-01**	**1.00E-01**
MU2-GS	mg/L	6010B	4.10E-03	**1.00E-01**	**1.00E-01**
MU3-COMP	mg/L	6010B	5.00E-03	**1.00E-01**	**1.00E-01**
MU3-GN	mg/L	6010B	5.10E-03	**1.00E-01**	**1.00E-01**
MU3-GS	mg/L	6010B	5.00E-03	**1.00E-01**	**1.00E-01**
COBALT					
MU1-COMP	mg/L	6010B	1.20E-03	**1.00E+00**	-
MU1-G3	mg/L	6010B	5.10E-04	**1.00E+00**	-
MU1-GNL	mg/L	6010B	2.40E-03	**1.00E+00**	-
MU1-GNU	mg/L	6010B	1.40E-03	**1.00E+00**	-
MU1-GS	mg/L	6010B	4.70E-04	**1.00E+00**	-
MU2-COMP	mg/L	6010B	1.20E-03	**1.00E+00**	-
MU2-G1	mg/L	6010B	7.80E-04	**1.00E+00**	-
MU2-GN	mg/L	6010B	1.10E-03	**1.00E+00**	-
MU2-GS	mg/L	6010B	1.50E-03	**1.00E+00**	-
MU3-COMP	mg/L	6010B	1.30E-03	**1.00E+00**	-
MU3-GN	mg/L	6010B	1.60E-03	**1.00E+00**	-
MU3-GS	mg/L	6010B	1.50E-03	**1.00E+00**	-
COPPER					
MU1-COMP	mg/L	6010B	ND	**6.50E-01**	1.30E+00
MU1-G3	mg/L	6010B	ND	**6.50E-01**	1.30E+00
MU1-GNL	mg/L	6010B	1.10E-02	**6.50E-01**	1.30E+00
MU1-GNU	mg/L	6010B	5.60E-03	**6.50E-01**	1.30E+00
MU1-GS	mg/L	6010B	2.70E-03	**6.50E-01**	1.30E+00
MU2-COMP	mg/L	6010B	3.50E-03	**6.50E-01**	1.30E+00
MU2-G1	mg/L	6010B	3.40E-03	**6.50E-01**	1.30E+00
MU2-GN	mg/L	6010B	3.60E-03	**6.50E-01**	1.30E+00
MU2-GS	mg/L	6010B	4.90E-03	**6.50E-01**	1.30E+00
MU3-COMP	mg/L	6010B	4.50E-03	**6.50E-01**	1.30E+00
MU3-GN	mg/L	6010B	4.70E-03	**6.50E-01**	1.30E+00
MU3-GS	mg/L	6010B	4.40E-03	**6.50E-01**	1.30E+00

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
Cr (VI)					
MU1-COMP	mg/L	7196A	ND	-	-
MU1-G3	mg/L	7196A	ND	-	-
MU1-GNL	mg/L	7196A	ND	-	-
MU1-GNU	mg/L	7196A	ND	-	-
MU1-GS	mg/L	7196A	ND	-	-
MU2-COMP	mg/L	7196A	ND	-	-
MU2-G1	mg/L	7196A	ND	-	-
MU2-GN	mg/L	7196A	ND	-	-
MU2-GS	mg/L	7196A	ND	-	-
MU3-COMP	mg/L	7196A	ND	-	-
MU3-GN	mg/L	7196A	ND	-	-
MU3-GS	mg/L	7196A	ND	-	-
IRON					
MU1-COMP	mg/L	6010B	9.30E-01	5.00E+00	-
MU1-G3	mg/L	6010B	8.90E-01	5.00E+00	-
MU1-GNL	mg/L	6010B	7.30E+00	5.00E+00	-
MU1-GNU	mg/L	6010B	2.00E+00	5.00E+00	-
MU1-GS	mg/L	6010B	8.20E-01	5.00E+00	-
MU2-COMP	mg/L	6010B	1.40E+00	5.00E+00	-
MU2-G1	mg/L	6010B	1.10E+00	5.00E+00	-
MU2-GN	mg/L	6010B	1.10E+00	5.00E+00	-
MU2-GS	mg/L	6010B	1.50E+00	5.00E+00	-
MU3-COMP	mg/L	6010B	1.90E+00	5.00E+00	-
MU3-GN	mg/L	6010B	2.20E+00	5.00E+00	-
MU3-GS	mg/L	6010B	1.80E+00	5.00E+00	-
LEAD					
MU1-COMP	mg/L	6010B	2.60E-03	7.50E-03	1.50E-02
MU1-G3	mg/L	6010B	2.80E-03	7.50E-03	1.50E-02
MU1-GNL	mg/L	6010B	5.70E-02	7.50E-03	1.50E-02
MU1-GNU	mg/L	6010B	1.20E-02	7.50E-03	1.50E-02
MU1-GS	mg/L	6010B	2.70E-03	7.50E-03	1.50E-02
MU2-COMP	mg/L	6010B	5.20E-03	7.50E-03	1.50E-02
MU2-G1	mg/L	6010B	5.60E-03	7.50E-03	1.50E-02
MU2-GN	mg/L	6010B	6.60E-03	7.50E-03	1.50E-02
MU2-GS	mg/L	6010B	6.00E-03	7.50E-03	1.50E-02
MU3-COMP	mg/L	6010B	4.90E-03	7.50E-03	1.50E-02
MU3-GN	mg/L	6010B	6.30E-03	7.50E-03	1.50E-02
MU3-GS	mg/L	6010B	3.90E-03	7.50E-03	1.50E-02
MAGNESIUM					
MU1-COMP	mg/L	6010B	2.50E+00	-	-
MU1-G3	mg/L	6010B	2.30E+00	-	-
MU1-GNL	mg/L	6010B	3.00E+00	-	-
MU1-GNU	mg/L	6010B	3.00E+00	-	-
MU1-GS	mg/L	6010B	2.10E+00	-	-
MU2-COMP	mg/L	6010B	2.40E+00	-	-
MU2-G1	mg/L	6010B	2.30E+00	-	-
MU2-GN	mg/L	6010B	2.60E+00	-	-
MU2-GS	mg/L	6010B	2.00E+00	-	-
MU3-COMP	mg/L	6010B	2.50E+00	-	-
MU3-GN	mg/L	6010B	2.50E+00	-	-
MU3-GS	mg/L	6010B	2.40E+00	-	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
MANGANESE					
MU1-COMP	mg/L	6010B	9.00E-03	1.50E-01	-
MU1-G3	mg/L	6010B	8.10E-03	1.50E-01	-
MU1-GNL	mg/L	6010B	1.50E-01	1.50E-01	-
MU1-GNU	mg/L	6010B	2.60E-02	1.50E-01	-
MU1-GS	mg/L	6010B	1.10E-02	1.50E-01	-
MU2-COMP	mg/L	6010B	1.60E-02	1.50E-01	-
MU2-G1	mg/L	6010B	1.30E-02	1.50E-01	-
MU2-GN	mg/L	6010B	1.90E-02	1.50E-01	-
MU2-GS	mg/L	6010B	2.00E-02	1.50E-01	-
MU3-COMP	mg/L	6010B	2.10E-02	1.50E-01	-
MU3-GN	mg/L	6010B	2.30E-02	1.50E-01	-
MU3-GS	mg/L	6010B	1.80E-02	1.50E-01	-
MERCURY					
MU1-COMP	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-G3	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-GNL	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-GNU	mg/L	7470A	ND	2.00E-03	2.00E-03
MU1-GS	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-COMP	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-G1	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-GN	mg/L	7470A	ND	2.00E-03	2.00E-03
MU2-GS	mg/L	7470A	ND	2.00E-03	2.00E-03
MU3-COMP	mg/L	7470A	ND	2.00E-03	2.00E-03
MU3-GN	mg/L	7470A	ND	2.00E-03	2.00E-03
MU3-GS	mg/L	7470A	ND	2.00E-03	2.00E-03
NICKEL					
MU1-COMP	mg/L	6010B	ND	1.00E-01	-
MU1-G3	mg/L	6010B	ND	1.00E-01	-
MU1-GNL	mg/L	6010B	4.90E-03	1.00E-01	-
MU1-GNU	mg/L	6010B	2.30E-03	1.00E-01	-
MU1-GS	mg/L	6010B	ND	1.00E-01	-
MU2-COMP	mg/L	6010B	1.90E-03	1.00E-01	-
MU2-G1	mg/L	6010B	2.30E-03	1.00E-01	-
MU2-GN	mg/L	6010B	1.70E-03	1.00E-01	-
MU2-GS	mg/L	6010B	2.30E-03	1.00E-01	-
MU3-COMP	mg/L	6010B	1.80E-03	1.00E-01	-
MU3-GN	mg/L	6010B	2.70E-03	1.00E-01	-
MU3-GS	mg/L	6010B	3.00E-03	1.00E-01	-
POTASSIUM					
MU1-COMP	mg/L	6010B	1.10E+00	-	-
MU1-G3	mg/L	6010B	9.80E-01	-	-
MU1-GNL	mg/L	6010B	2.60E+00	-	-
MU1-GNU	mg/L	6010B	1.60E+00	-	-
MU1-GS	mg/L	6010B	ND	-	-
MU2-COMP	mg/L	6010B	1.00E+00	-	-
MU2-G1	mg/L	6010B	8.50E-01	-	-
MU2-GN	mg/L	6010B	9.20E-01	-	-
MU2-GS	mg/L	6010B	9.00E-01	-	-
MU3-COMP	mg/L	6010B	1.30E+00	-	-
MU3-GN	mg/L	6010B	1.30E+00	-	-
MU3-GS	mg/L	6010B	1.40E+00	-	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
SELENIUM					
MU1-COMP	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-G3	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-GNL	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-GNU	mg/L	6010B	ND	5.00E-02	5.00E-02
MU1-GS	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-COMP	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-G1	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-GN	mg/L	6010B	ND	5.00E-02	5.00E-02
MU2-GS	mg/L	6010B	ND	5.00E-02	5.00E-02
MU3-COMP	mg/L	6010B	ND	5.00E-02	5.00E-02
MU3-GN	mg/L	6010B	ND	5.00E-02	5.00E-02
MU3-GS	mg/L	6010B	ND	5.00E-02	5.00E-02
SILVER					
MU1-COMP	mg/L	6010B	ND	5.00E-02	-
MU1-G3	mg/L	6010B	ND	5.00E-02	-
MU1-GNL	mg/L	6010B	ND	5.00E-02	-
MU1-GNU	mg/L	6010B	ND	5.00E-02	-
MU1-GS	mg/L	6010B	ND	5.00E-02	-
MU2-COMP	mg/L	6010B	ND	5.00E-02	-
MU2-G1	mg/L	6010B	ND	5.00E-02	-
MU2-GN	mg/L	6010B	ND	5.00E-02	-
MU2-GS	mg/L	6010B	ND	5.00E-02	-
MU3-COMP	mg/L	6010B	ND	5.00E-02	-
MU3-GN	mg/L	6010B	ND	5.00E-02	-
MU3-GS	mg/L	6010B	ND	5.00E-02	-
SODIUM					
MU1-COMP	mg/L	6010B	1.80E+01	-	-
MU1-G3	mg/L	6010B	1.90E+01	-	-
MU1-GNL	mg/L	6010B	2.20E+01	-	-
MU1-GNU	mg/L	6010B	1.90E+01	-	-
MU1-GS	mg/L	6010B	1.80E+01	-	-
MU2-COMP	mg/L	6010B	2.00E+01	-	-
MU2-G1	mg/L	6010B	1.80E+01	-	-
MU2-GN	mg/L	6010B	1.90E+01	-	-
MU2-GS	mg/L	6010B	1.90E+01	-	-
MU3-COMP	mg/L	6010B	1.80E+01	-	-
MU3-GN	mg/L	6010B	1.80E+01	-	-
MU3-GS	mg/L	6010B	1.80E+01	-	-
THALLIUM					
MU1-COMP	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-G3	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-GNL	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-GNU	mg/L	6010B	ND	2.00E-03	2.00E-03
MU1-GS	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-COMP	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-G1	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-GN	mg/L	6010B	ND	2.00E-03	2.00E-03
MU2-GS	mg/L	6010B	ND	2.00E-03	2.00E-03
MU3-COMP	mg/L	6010B	ND	2.00E-03	2.00E-03
MU3-GN	mg/L	6010B	ND	2.00E-03	2.00E-03
MU3-GS	mg/L	6010B	ND	2.00E-03	2.00E-03

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Calumet Harbor
Table 4 - SPLP Aqueous Phase Results

Location	UNITS	Method	Value	1	2
VANADIUM					
MU1-COMP	mg/L	6010B	3.10E-03	**4.90E-02**	-
MU1-G3	mg/L	6010B	3.50E-03	**4.90E-02**	-
MU1-GNL	mg/L	6010B	8.60E-03	**4.90E-02**	-
MU1-GNU	mg/L	6010B	6.20E-03	**4.90E-02**	-
MU1-GS	mg/L	6010B	3.00E-03	**4.90E-02**	-
MU2-COMP	mg/L	6010B	5.70E-03	**4.90E-02**	-
MU2-G1	mg/L	6010B	5.10E-03	**4.90E-02**	-
MU2-GN	mg/L	6010B	3.30E-03	**4.90E-02**	-
MU2-GS	mg/L	6010B	4.00E-03	**4.90E-02**	-
MU3-COMP	mg/L	6010B	6.50E-03	**4.90E-02**	-
MU3-GN	mg/L	6010B	7.00E-03	**4.90E-02**	-
MU3-GS	mg/L	6010B	6.50E-03	**4.90E-02**	-
ZINC					
MU1-COMP	mg/L	6010B	8.10E-03	**5.00E+00**	-
MU1-G3	mg/L	6010B	9.40E-03	**5.00E+00**	-
MU1-GNL	mg/L	6010B	1.10E-01	**5.00E+00**	-
MU1-GNU	mg/L	6010B	2.70E-02	**5.00E+00**	-
MU1-GS	mg/L	6010B	7.30E-03	**5.00E+00**	-
MU2-COMP	mg/L	6010B	1.40E-02	**5.00E+00**	-
MU2-G1	mg/L	6010B	1.20E-02	**5.00E+00**	-
MU2-GN	mg/L	6010B	1.60E-02	**5.00E+00**	-
MU2-GS	mg/L	6010B	1.20E-02	**5.00E+00**	-
MU3-COMP	mg/L	6010B	1.20E-02	**5.00E+00**	-
MU3-GN	mg/L	6010B	1.40E-02	**5.00E+00**	-
MU3-GS	mg/L	6010B	1.10E-02	**5.00E+00**	-

1 - TACO Table E - Groundwater Ingestion Route - Class 1
2 - USEPA MCLs

Purple font indicates lowest of 2 screening levels

Table 5a. ProUCL Evaluation of Arsenic SPLP Results

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	WorkSheet_b.wst
Full Precision	OFF
Confidence Coefficient	95%
umber of Bootstrap Operations	2000

AsSPLP

General Statistics

Number of Valid Data	12	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	3
		Percent Non-Detects	25.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0027	Minimum Detected	-5.915
Maximum Detected	0.023	Maximum Detected	-3.772
Mean of Detected	0.0056	Mean of Detected	-5.479
SD of Detected	0.00656	SD of Detected	0.662
Minimum Non-Detect	0.0027	Minimum Non-Detect	-5.915
Maximum Non-Detect	0.0027	Maximum Non-Detect	-5.915

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.471	Shapiro Wilk Test Statistic	0.611
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.00454	Mean	-5.761
SD	0.00591	SD	0.761
95% DL/2 (t) UCL	0.0076	95% H-Stat (DL/2) UCL	0.00748
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.00363	Mean in Log Scale	-5.815
SD	0.00663	SD in Log Scale	0.839
95% MLE (t) UCL	0.00707	Mean in Original Scale	0.00448
95% MLE (Tiku) UCL	0.00709	SD in Original Scale	0.00595
		95% t UCL	0.00756
		95% Percentile Bootstrap UCL	0.00778
		95% BCA Bootstrap UCL	0.00923
		95% H UCL	0.00825

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.307	Data do not follow a Discernable Distribution (0.05)	
Theta Star	0.00428		
nu star	23.53		
A-D Test Statistic	1.934	**Nonparametric Statistics**	
5% A-D Critical Value	0.731	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.731	Mean	0.00488
5% K-S Critical Value	0.283	SD	0.0055
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00168
		95% KM (t) UCL	0.0079
Assuming Gamma Distribution		95% KM (z) UCL	0.00764
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0078
Minimum	1E-06	95% KM (bootstrap t) UCL	0.0398
Maximum	0.023	95% KM (BCA) UCL	0.00827
Mean	0.0042	95% KM (Percentile Bootstrap) UCL	0.00817
Median	0.00315	95% KM (Chebyshev) UCL	0.0122
SD	0.00614	97.5% KM (Chebyshev) UCL	0.0154
k star	0.3	99% KM (Chebyshev) UCL	0.0216
Theta star	0.014		
Nu star	7.192	**Potential UCLs to Use**	
AppChi2	2.277	95% KM (BCA) UCL	0.00827
95% Gamma Approximate UCL (Use when n >= 40)	0.0133		
95% Adjusted Gamma UCL (Use when n < 40)	0.0161		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Table 5b. ProUCL Evaluation of Mercury Sediment Results

General UCL Statistics for Full Data Sets

User Selected Options	
From File	WorkSheet_a.wst
Full Precision	OFF
Confidence Coefficient	95%
ımber of Bootstrap Operations	2000

mercury

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	13

Raw Statistics		Log-transformed Statistics	
Minimum	0.045	Minimum of Log Data	-3.101
Maximum	0.16	Maximum of Log Data	-1.833
Mean	0.0868	Mean of log Data	-2.516
Geometric Mean	0.0808	SD of log Data	0.394
Median	0.084		
SD	0.0339		
Std. Error of Mean	0.00849		
Coefficient of Variation	0.391		
Skewness	0.627		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.928	Shapiro Wilk Test Statistic	0.94
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.102	95% H-UCL	0.106
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.125
95% Adjusted-CLT UCL (Chen-1995)	0.102	97.5% Chebyshev (MVUE) UCL	0.141
95% Modified-t UCL (Johnson-1978)	0.102	99% Chebyshev (MVUE) UCL	0.174

Gamma Distribution Test		Data Distribution
k star (bias corrected)	5.817	Data appear Normal at 5% Significance Level
Theta Star	0.0149	
MLE of Mean	0.0868	
MLE of Standard Deviation	0.036	
nu star	186.1	
Approximate Chi Square Value (.05)	155.6	Nonparametric Statistics
Adjusted Level of Significance	0.0335	95% CLT UCL 0.101
Adjusted Chi Square Value	152.4	95% Jackknife UCL 0.102
		95% Standard Bootstrap UCL 0.1
Anderson-Darling Test Statistic	0.383	95% Bootstrap-t UCL 0.104
Anderson-Darling 5% Critical Value	0.74	95% Hall's Bootstrap UCL 0.103
Kolmogorov-Smirnov Test Statistic	0.164	95% Percentile Bootstrap UCL 0.101
Kolmogorov-Smirnov 5% Critical Value	0.216	95% BCA Bootstrap UCL 0.102
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.124
		97.5% Chebyshev(Mean, Sd) UCL 0.14
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.171
95% Approximate Gamma UCL (Use when n >= 40)	0.104	
95% Adjusted Gamma UCL (Use when n < 40)	0.106	

Potential UCL to Use		
	Use 95% Student's-t UCL	0.102

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5c. ProUCL Evaluation of Benzo(b)Fluroanthene Sediment Results

General UCL Statistics for Full Data Sets

User Selected Options	
From File	WorkSheet_a.wst
Full Precision	OFF
Confidence Coefficient	95%
ımber of Bootstrap Operations	2000

B(b)F

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	15

Raw Statistics		Log-transformed Statistics	
Minimum	0.2	Minimum of Log Data	-1.609
Maximum	0.81	Maximum of Log Data	-0.211
Mean	0.471	Mean of log Data	-0.811
Geometric Mean	0.445	SD of log Data	0.362
Median	0.48		
SD	0.156		
Std. Error of Mean	0.039		
Coefficient of Variation	0.331		
Skewness	0.222		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.981	Shapiro Wilk Test Statistic	0.96
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.539	95% H-UCL	0.568
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.662
95% Adjusted-CLT UCL (Chen-1995)	0.537	97.5% Chebyshev (MVUE) UCL	0.744
95% Modified-t UCL (Johnson-1978)	0.539	99% Chebyshev (MVUE) UCL	0.906

Gamma Distribution Test		Data Distribution
k star (bias corrected)	7.295	Data appear Normal at 5% Significance Level
Theta Star	0.0645	
MLE of Mean	0.471	
MLE of Standard Deviation	0.174	
nu star	233.4	
Approximate Chi Square Value (.05)	199.1	Nonparametric Statistics
Adjusted Level of Significance	0.0335	95% CLT UCL 0.535
Adjusted Chi Square Value	195.5	95% Jackknife UCL 0.539
		95% Standard Bootstrap UCL 0.533
Anderson-Darling Test Statistic	0.228	95% Bootstrap-t UCL 0.54
Anderson-Darling 5% Critical Value	0.739	95% Hall's Bootstrap UCL 0.544
Kolmogorov-Smirnov Test Statistic	0.13	95% Percentile Bootstrap UCL 0.53
Kolmogorov-Smirnov 5% Critical Value	0.215	95% BCA Bootstrap UCL 0.536
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.64
		97.5% Chebyshev(Mean, Sd) UCL 0.714
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.858
95% Approximate Gamma UCL (Use when n >= 40)	0.552	
95% Adjusted Gamma UCL (Use when n < 40)	0.562	

Potential UCL to Use		Use 95% Student's-t UCL	0.539

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5d. ProUCL Evaluation of Aroclor 1254 Sediment Results

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	WorkSheet_b.wst
Full Precision	OFF
Confidence Coefficient	95%
umber of Bootstrap Operations	2000

1254

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	16

Raw Statistics		**Log-transformed Statistics**	
Minimum	0.014	Minimum of Log Data	-4.269
Maximum	0.25	Maximum of Log Data	-1.386
Mean	0.0509	Mean of log Data	-3.283
Geometric Mean	0.0375	SD of log Data	0.718
Median	0.0305		
SD	0.0565		
Std. Error of Mean	0.0141		
Coefficient of Variation	1.11		
Skewness	3.259		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.571	Shapiro Wilk Test Statistic	0.908
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.0756	95% H-UCL	0.0743
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.087
95% Adjusted-CLT UCL (Chen-1995)	0.0864	97.5% Chebyshev (MVUE) UCL	0.104
95% Modified-t UCL (Johnson-1978)	0.0776	99% Chebyshev (MVUE) UCL	0.138

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	1.494	**Data Follow Appr. Gamma Distribution at 5% Significance Level**
Theta Star	0.034	
MLE of Mean	0.0509	
MLE of Standard Deviation	0.0416	
nu star	47.82	
Approximate Chi Square Value (.05)	32.95	**Nonparametric Statistics**
Adjusted Level of Significance	0.0335	95% CLT UCL 0.0741
Adjusted Chi Square Value	31.55	95% Jackknife UCL 0.0756
		95% Standard Bootstrap UCL 0.0735
Anderson-Darling Test Statistic	1.01	95% Bootstrap-t UCL 0.114
Anderson-Darling 5% Critical Value	0.752	95% Hall's Bootstrap UCL 0.157
Kolmogorov-Smirnov Test Statistic	0.209	95% Percentile Bootstrap UCL 0.0749
Kolmogorov-Smirnov 5% Critical Value	0.218	95% BCA Bootstrap UCL 0.0892
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.112
		97.5% Chebyshev(Mean, Sd) UCL 0.139
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.191
95% Approximate Gamma UCL (Use when n >= 40)	0.0738	
95% Adjusted Gamma UCL (Use when n < 40)	0.0771	

Potential UCL to Use	Use 95% Approximate Gamma UCL 0.0738

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5e. ProUCL Evaluation of Total PCB Sediment Results

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	WorkSheet_b.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

totalPCB

General Statistics

Number of Valid Observations	16	Number of Distinct Observations	14

Raw Statistics		Log-transformed Statistics	
Minimum	0.023	Minimum of Log Data	-3.772
Maximum	0.59	Maximum of Log Data	-0.528
Mean	0.102	Mean of log Data	-2.628
Geometric Mean	0.0722	SD of log Data	0.717
Median	0.058		
SD	0.134		
Std. Error of Mean	0.0334		
Coefficient of Variation	1.315		
Skewness	3.656		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.474	Shapiro Wilk Test Statistic	0.861
Shapiro Wilk Critical Value	0.887	Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.16	95% H-UCL	0.143
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.167
95% Adjusted-CLT UCL (Chen-1995)	0.189	97.5% Chebyshev (MVUE) UCL	0.2
95% Modified-t UCL (Johnson-1978)	0.165	99% Chebyshev (MVUE) UCL	0.265

Gamma Distribution Test		Data Distribution
k star (bias corrected)	1.346	**Data do not follow a Discernable Distribution (0.05)**
Theta Star	0.0756	
MLE of Mean	0.102	
MLE of Standard Deviation	0.0877	
nu star	43.08	
Approximate Chi Square Value (.05)	29.03	**Nonparametric Statistics**
Adjusted Level of Significance	0.0335	95% CLT UCL 0.157
Adjusted Chi Square Value	27.72	95% Jackknife UCL 0.16
		95% Standard Bootstrap UCL 0.156
Anderson-Darling Test Statistic	1.567	95% Bootstrap-t UCL 0.334
Anderson-Darling 5% Critical Value	0.754	95% Hall's Bootstrap UCL 0.393
Kolmogorov-Smirnov Test Statistic	0.283	95% Percentile Bootstrap UCL 0.163
Kolmogorov-Smirnov 5% Critical Value	0.219	95% BCA Bootstrap UCL 0.202
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.248
		97.5% Chebyshev(Mean, Sd) UCL 0.311
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.435
95% Approximate Gamma UCL (Use when n >= 40)	0.151	
95% Adjusted Gamma UCL (Use when n < 40)	0.158	

Potential UCL to Use	Use 95% Chebyshev (Mean, Sd) UCL 0.248

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5f. ProUCL Evaluation of Iron SPLP Results

General UCL Statistics for Full Data Sets

User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Confidence Coefficient	95%
umber of Bootstrap Operations	2000

Fe

General Statistics

Number of Valid Observations 9

Number of Distinct Observations 8

Raw Statistics	
Minimum	0.82
Maximum	7.3
Mean	2.079
Geometric Mean	1.619
Median	1.5
SD	2.019
Std. Error of Mean	0.673
Coefficient of Variation	0.971
Skewness	2.667

Log-transformed Statistics	
Minimum of Log Data	-0.198
Maximum of Log Data	1.988
Mean of log Data	0.482
SD of log Data	0.666

Warning: There are only 9 Values in this data

Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test	
Shapiro Wilk Test Statistic	0.617
Shapiro Wilk Critical Value	0.829

Data not Normal at 5% Significance Level

Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.86
Shapiro Wilk Critical Value	0.829

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution	
95% Student's-t UCL	3.33
95% UCLs (Adjusted for Skewness)	
95% Adjusted-CLT UCL (Chen-1995)	3.825
95% Modified-t UCL (Johnson-1978)	3.43

Assuming Lognormal Distribution	
95% H-UCL	3.691
95% Chebyshev (MVUE) UCL	3.907
97.5% Chebyshev (MVUE) UCL	4.747
99% Chebyshev (MVUE) UCL	6.398

Gamma Distribution Test	
k star (bias corrected)	1.51
Theta Star	1.377
MLE of Mean	2.079
MLE of Standard Deviation	1.692
nu star	27.18
Approximate Chi Square Value (.05)	16.29
Adjusted Level of Significance	0.0231
Adjusted Chi Square Value	14.54
Anderson-Darling Test Statistic	0.82
Anderson-Darling 5% Critical Value	0.729
Kolmogorov-Smirnov Test Statistic	0.266
Kolmogorov-Smirnov 5% Critical Value	0.282

Data follow Appr. Gamma Distribution at 5% Significance Level

Assuming Gamma Distribution	
95% Approximate Gamma UCL (Use when n >= 40)	3.469
95% Adjusted Gamma UCL (Use when n < 40)	3.886

Data Distribution

Data Follow Appr. Gamma Distribution at 5% Significance Level

Nonparametric Statistics	
95% CLT UCL	3.186
95% Jackknife UCL	3.33
95% Standard Bootstrap UCL	3.111
95% Bootstrap-t UCL	5.829
95% Hall's Bootstrap UCL	7.52
95% Percentile Bootstrap UCL	3.312
95% BCA Bootstrap UCL	3.923
95% Chebyshev(Mean, Sd) UCL	5.012
97.5% Chebyshev(Mean, Sd) UCL	6.282
99% Chebyshev(Mean, Sd) UCL	8.775

Potential UCL to Use

Use 95% Approximate Gamma UCL 3.469

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5g. ProUCL Evaluation of Lead SPLP Results

General UCL Statistics for Full Data Sets

User Selected Options

From File	WorkSheet.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Pb

General Statistics

Number of Valid Observations	9	Number of Distinct Observations	9

Raw Statistics		**Log-transformed Statistics**	
Minimum	0.0027	Minimum of Log Data	-5.915
Maximum	0.057	Maximum of Log Data	-2.865
Mean	0.0114	Mean of log Data	-5.002
Geometric Mean	0.00673	SD of log Data	0.925
Median	0.006		
SD	0.0173		
Std. Error of Mean	0.00577		
Coefficient of Variation	1.514		
Skewness	2.858		

Warning: There are only 9 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.527	Shapiro Wilk Test Statistic	0.829
Shapiro Wilk Critical Value	0.829	Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.0222	95% H-UCL	0.0282
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.0232
95% Adjusted-CLT UCL (Chen-1995)	0.0268	97.5% Chebyshev (MVUE) UCL	0.029
95% Modified-t UCL (Johnson-1978)	0.0231	99% Chebyshev (MVUE) UCL	0.0405

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	0.793	Data do not follow a Discernable Distribution (0.05)
Theta Star	0.0144	
MLE of Mean	0.0114	
MLE of Standard Deviation	0.0128	
nu star	14.28	
Approximate Chi Square Value (.05)	6.761	**Nonparametric Statistics**
Adjusted Level of Significance	0.0231	95% CLT UCL 0.0209
Adjusted Chi Square Value	5.707	95% Jackknife UCL 0.0222
		95% Standard Bootstrap UCL 0.0205
Anderson-Darling Test Statistic	1.152	95% Bootstrap-t UCL 0.0854
Anderson-Darling 5% Critical Value	0.742	95% Hall's Bootstrap UCL 0.0796
Kolmogorov-Smirnov Test Statistic	0.352	95% Percentile Bootstrap UCL 0.0227
Kolmogorov-Smirnov 5% Critical Value	0.286	95% BCA Bootstrap UCL 0.0282
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.0366
		97.5% Chebyshev(Mean, Sd) UCL 0.0475
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.0688
95% Approximate Gamma UCL (Use when n >= 40)	0.0241	
95% Adjusted Gamma UCL (Use when n < 40)	0.0286	

Potential UCL to Use	Use 95% Chebyshev (Mean, Sd) UCL 0.0366

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 5h. ProUCL Evaluation of Manganese SPLP Results

General UCL Statistics for Full Data Sets

User Selected Options

From File	WorkSheet.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Mn

General Statistics

Number of Valid Observations	9	Number of Distinct Observations	9

Raw Statistics		**Log-transformed Statistics**	
Minimum	0.0081	Minimum of Log Data	-4.816
Maximum	0.15	Maximum of Log Data	-1.897
Mean	0.032	Mean of log Data	-3.876
Geometric Mean	0.0207	SD of log Data	0.83
Median	0.019		
SD	0.0446		
Std. Error of Mean	0.0149		
Coefficient of Variation	1.394		
Skewness	2.905		

Warning: There are only 9 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.515	Shapiro Wilk Test Statistic	0.816
Shapiro Wilk Critical Value	0.829	Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.0597	95% H-UCL	0.068
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.0626
95% Adjusted-CLT UCL (Chen-1995)	0.0719	97.5% Chebyshev (MVUE) UCL	0.0776
95% Modified-t UCL (Johnson-1978)	0.0621	99% Chebyshev (MVUE) UCL	0.107

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	0.936	Data do not follow a Discernable Distribution (0.05)
Theta Star	0.0342	
MLE of Mean	0.032	
MLE of Standard Deviation	0.0331	
nu star	16.86	
Approximate Chi Square Value (.05)	8.569	**Nonparametric Statistics**
Adjusted Level of Significance	0.0231	95% CLT UCL 0.0565
Adjusted Chi Square Value	7.358	95% Jackknife UCL 0.0597
		95% Standard Bootstrap UCL 0.0547
Anderson-Darling Test Statistic	1.242	95% Bootstrap-t UCL 0.183
Anderson-Darling 5% Critical Value	0.738	95% Hall's Bootstrap UCL 0.188
Kolmogorov-Smirnov Test Statistic	0.36	95% Percentile Bootstrap UCL 0.0612
Kolmogorov-Smirnov 5% Critical Value	0.285	95% BCA Bootstrap UCL 0.076
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 0.0968
		97.5% Chebyshev(Mean, Sd) UCL 0.125
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 0.18
95% Approximate Gamma UCL (Use when n >= 40)	0.063	
95% Adjusted Gamma UCL (Use when n < 40)	0.0733	

Potential UCL to Use	Use 95% Chebyshev (Mean, Sd) UCL 0.0968

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Table 6a. Average concentrations of elements in Cook County, Illinois

USGS Streambed Sediment Survey

(Calculated from cells in the geochemical grid plotting in this area.)

Element	Symbol	Mean	Std. dev.	Minimum	Maximum
Aluminum	Al (wt%)	5.199	0.485	3.713	6.411
Arsenic	As (ppm)	10.739	2.368	3.664	23.719
Calcium	Ca (wt%)	4.675	1.305	0.989	7.929
Copper	Cu (ppm)	104.22	70.848	19.156	387.926
Iron	Fe (wt%)	3.069	0.296	2.105	4.091
Mercury	Hg (ppm)	1.048	1.225	0.022	10.988
Magnesium	Mg (wt%)	2.462	0.56	0.94	3.976
Manganese	Mn (ppm)	682.1	124.389	395.23	1246.71
Sodium	Na (wt%)	0.459	0.055	0.27	0.645
Phosphorus	P (wt%)	0.193	0.085	0.046	0.523
Lead	Pb (ppm)	181.63	128.164	21.411	848.523
Selenium	Se (ppm)	1.143	0.497	0.337	3.831
Titanium	Ti (wt%)	0.237	0.018	0.136	0.302
Zinc	Zn (ppm)	404.93	250.98	52.65	1120.24

URL: http://mrdata.usgs.gov/geochem/county.php?place=f17031&el=Hg&rf=upper-midwestern

Page Contact Information: pschweitzer@usgs.gov

Page Last modified: 13:36 on 06-Apr-2012

Other counties:

http://mrdata.usgs.gov/geochem/doc/averages/hg/upper-midwestern.html

Table 6b. Average County-Wide Concentrations of Elements in Illinois Streambed Sediments

USGS Streambed Sediment Survey (units are the same as those used for each constituent in Table 4a)

County	State	As	σ_As	Hg	σ_Hg	Pb	σ_Pb	Mn	σ_Mn	Fe	σ_Fe
Adams	Illinois	7.715	3.134	0.011	0.002	19.011	5.439	859.559	389.434	1.847	0.362
Alexander	Illinois	7.291	1.365	0.031	0.007	36.590	42.386	973.027	259.095	2.069	0.257
Bond	Illinois	9.241	2.489	0.012	0.002	18.792	4.314	793.555	136.101	1.760	0.347
Boone	Illinois	5.093	1.018	0.018	0.003	12.385	1.157	762.586	103.663	2.312	0.247
Brown	Illinois	4.444	0.859	0.010	0.001	12.838	1.676	503.745	52.224	1.458	0.157
Bureau	Illinois	6.608	2.092	0.025	0.006	15.624	4.697	559.262	90.362	1.899	0.335
Calhoun	Illinois	12.131	4.016	0.024	0.021	29.936	11.368	1673.430	833.893	2.836	0.470
Carroll	Illinois	6.915	2.224	0.014	0.004	53.276	54.840	891.877	168.719	1.954	0.259
Cass	Illinois	4.685	0.995	0.013	0.002	13.137	2.011	629.091	108.184	1.969	0.437
Champaign	Illinois	7.101	1.763	0.020	0.005	18.556	2.869	705.615	236.902	2.118	0.252
Christian	Illinois	7.932	1.695	0.022	0.005	23.201	1.498	809.026	150.502	2.097	0.169
Clark	Illinois	6.907	2.113	0.010	0.001	11.819	2.115	430.160	95.925	1.317	0.247
Clay	Illinois	5.406	2.640	0.010	0.001	14.996	2.718	680.661	160.093	1.961	0.277
Clinton	Illinois	14.729	3.376	0.019	0.004	31.983	6.401	1246.530	202.748	2.728	0.304
Coles	Illinois	5.837	1.054	0.018	0.005	18.205	3.583	667.446	171.218	2.037	0.213
Cook	Illinois	10.739	2.368	1.048	1.225	181.632	128.164	682.096	124.389	3.069	0.296
Crawford	Illinois	7.673	1.934	0.013	0.002	18.325	4.312	810.010	240.659	1.956	0.417
Cumberland	Illinois	7.883	2.167	0.010	0.001	22.854	4.974	804.804	127.404	1.872	0.161
De Kalb	Illinois	7.214	1.067	0.044	0.047	27.704	19.034	760.023	114.821	2.147	0.211
De Witt	Illinois	8.362	0.762	0.038	0.006	21.813	2.301	817.141	80.808	2.503	0.081
Douglas	Illinois	5.734	0.878	0.015	0.004	17.184	2.004	599.921	99.605	2.041	0.209
Du Page	Illinois	10.462	1.550	0.321	0.158	89.297	35.824	823.465	163.975	3.094	0.175
Edgar	Illinois	6.025	1.796	0.015	0.004	13.148	1.912	514.358	99.946	1.678	0.246
Edwards	Illinois	11.234	1.451	0.020	0.013	21.506	2.117	1173.330	141.250	2.418	0.174
Effingham	Illinois	4.026	0.761	0.010	0.000	14.737	4.315	605.878	115.992	1.800	0.336
Fayette	Illinois	7.896	5.059	0.012	0.002	18.112	6.115	867.762	349.608	1.957	0.556
Ford	Illinois	8.227	1.715	0.022	0.006	21.808	3.081	594.288	90.334	2.401	0.288
Franklin	Illinois	10.926	4.324	0.019	0.005	25.163	5.910	946.274	440.731	2.526	0.604
Fulton	Illinois	7.719	2.439	0.020	0.011	19.381	6.379	867.171	309.246	2.432	0.440
Gallatin	Illinois	6.249	1.224	0.173	0.149	16.089	2.804	715.409	182.093	1.908	0.246
Greene	Illinois	9.861	2.237	0.013	0.003	21.354	3.466	1379.160	383.850	2.451	0.132
Grundy	Illinois	9.609	2.165	0.207	0.152	55.262	23.451	773.087	144.489	2.683	0.237
Hamilton	Illinois	6.646	0.701	0.029	0.007	19.290	1.360	722.577	84.544	2.069	0.197
Hancock	Illinois	8.070	2.629	0.012	0.004	17.797	4.957	791.361	287.630	1.804	0.439
Hardin	Illinois	5.273	1.182	0.314	0.202	15.460	1.071	586.444	111.367	1.585	0.132
Henderson	Illinois	10.363	2.881	0.028	0.004	21.882	2.631	1215.680	327.635	2.717	0.447
Henry	Illinois	7.893	2.893	0.016	0.004	15.265	3.329	827.221	210.683	2.125	0.306
Iroquois	Illinois	8.216	1.336	0.036	0.016	23.319	1.768	589.885	93.748	2.586	0.201
Jackson	Illinois	6.729	3.152	0.052	0.013	25.809	10.709	924.335	253.967	2.028	0.507
Jasper	Illinois	9.482	2.426	0.012	0.002	24.101	3.302	880.985	147.455	2.155	0.295
Jefferson	Illinois	14.389	5.084	0.019	0.005	25.955	6.819	1351.870	521.173	3.049	0.894
Jersey	Illinois	9.700	1.990	0.028	0.022	29.833	10.430	1429.010	310.737	2.529	0.394
Jo Daviess	Illinois	6.342	0.900	0.020	0.005	57.860	74.440	852.109	127.346	2.097	0.240
Johnson	Illinois	6.204	1.021	0.038	0.006	16.155	4.345	675.303	108.241	1.819	0.222
Kane	Illinois	8.249	1.434	0.161	0.141	57.953	31.304	801.698	116.363	2.593	0.202
Kankakee	Illinois	13.387	6.785	0.059	0.034	28.640	5.991	812.885	332.826	3.109	1.033
Kendall	Illinois	8.157	1.323	0.160	0.096	50.663	17.799	860.474	122.130	2.566	0.168
Knox	Illinois	12.540	5.444	0.018	0.004	21.728	3.975	1140.270	513.110	2.782	0.434
Lake	Illinois	7.933	1.838	0.207	0.203	41.447	18.123	854.937	120.668	2.632	0.344
La Salle	Illinois	8.459	2.134	0.142	0.149	42.420	26.913	659.149	111.947	2.525	0.352
Lawrence	Illinois	11.807	3.097	0.017	0.005	25.957	5.137	1155.570	129.719	2.964	0.572
Lee	Illinois	7.984	3.603	0.037	0.023	23.975	15.311	666.462	230.019	1.924	0.431
Livingston	Illinois	9.845	2.026	0.029	0.011	22.064	3.628	667.387	127.049	2.676	0.353
Logan	Illinois	7.243	1.161	0.019	0.005	18.579	1.749	740.164	118.981	2.208	0.208
McDonough	Illinois	10.749	1.889	0.018	0.005	23.420	3.890	1110.790	267.031	2.495	0.188

Table 6b. Average County-Wide Concentrations of Elements in Illinois Streambed Sediments

USGS Streambed Sediment Survey (units are the same as those used for each constituent in Table 4a)

County	State	As	σ_As	Hg	σ_Hg	Pb	σ_Pb	Mn	σ_Mn	Fe	σ_Fe
McHenry	Illinois	6.559	1.708	0.087	0.087	24.577	18.499	714.892	209.855	2.129	0.319
McLean	Illinois	9.373	1.068	0.038	0.005	22.289	2.329	816.785	148.805	2.604	0.198
Macon	Illinois	7.091	1.010	0.022	0.007	20.234	1.983	743.393	89.247	2.151	0.223
Macoupin	Illinois	9.204	4.983	0.013	0.004	21.615	8.906	1290.700	756.527	1.854	0.645
Madison	Illinois	8.281	2.468	0.015	0.004	25.997	7.659	1129.180	346.107	2.138	0.488
Marion	Illinois	9.959	4.550	0.013	0.003	22.337	5.185	926.356	238.095	2.252	0.370
Marshall	Illinois	9.783	1.896	0.030	0.005	21.011	2.616	728.208	91.576	2.575	0.356
Mason	Illinois	5.393	1.835	0.013	0.002	13.610	2.290	666.869	175.314	1.927	0.390
Massac	Illinois	7.516	1.562	0.039	0.011	20.725	3.723	828.247	172.755	2.062	0.301
Menard	Illinois	8.628	2.185	0.015	0.003	19.108	2.963	804.374	185.430	2.053	0.229
Mercer	Illinois	8.324	3.556	0.022	0.013	18.675	4.134	854.274	169.875	2.157	0.427
Monroe	Illinois	10.786	5.321	0.019	0.008	27.790	10.278	1261.040	577.457	2.173	0.538
Montgomery	Illinois	7.395	4.152	0.013	0.004	18.790	5.596	723.498	330.832	1.864	0.516
Morgan	Illinois	9.808	4.613	0.017	0.003	23.056	8.538	1295.100	708.781	2.243	0.382
Moultrie	Illinois	6.859	0.633	0.016	0.002	21.665	3.545	751.401	115.867	1.844	0.129
Ogle	Illinois	6.205	1.273	0.019	0.005	16.395	2.834	965.187	286.860	2.014	0.275
Peoria	Illinois	10.693	3.595	0.014	0.003	20.090	4.952	1164.010	689.521	2.735	0.604
Perry	Illinois	7.407	2.936	0.020	0.006	20.842	4.635	925.695	317.164	1.992	0.416
Piatt	Illinois	8.166	1.506	0.025	0.007	20.730	1.735	674.761	87.837	2.482	0.350
Pike	Illinois	6.768	1.998	0.018	0.011	17.326	2.168	1271.690	1348.950	2.104	0.815
Pope	Illinois	5.826	0.837	0.048	0.023	18.530	3.474	649.545	176.148	1.756	0.170
Pulaski	Illinois	9.452	1.573	0.036	0.005	35.538	18.790	1067.130	268.717	2.388	0.203
Putnam	Illinois	8.203	0.731	0.033	0.005	21.384	1.837	740.500	99.448	2.461	0.093
Randolph	Illinois	5.403	0.833	0.029	0.006	17.620	2.409	639.826	178.770	1.837	0.175
Richland	Illinois	8.835	2.708	0.011	0.001	18.036	4.559	866.673	164.025	2.136	0.333
Rock Island	Illinois	6.229	1.661	0.017	0.004	16.372	2.142	894.904	280.676	2.240	0.412
St. Clair	Illinois	12.406	4.373	0.022	0.006	34.574	11.059	1459.470	517.765	3.095	0.485
Saline	Illinois	5.728	0.435	0.032	0.007	20.883	2.621	587.196	133.976	2.169	0.307
Sangamon	Illinois	8.789	2.185	0.023	0.006	27.227	4.600	1106.060	398.442	2.308	0.207
Schuyler	Illinois	4.676	1.217	0.011	0.001	11.252	1.937	563.195	88.126	1.718	0.260
Scott	Illinois	6.528	1.170	0.016	0.002	16.307	3.017	714.566	189.467	1.943	0.213
Shelby	Illinois	6.375	3.335	0.012	0.002	19.062	5.058	830.050	262.178	1.998	0.494
Stark	Illinois	15.475	3.468	0.023	0.003	23.031	2.787	1304.420	485.836	2.760	0.398
Stephenson	Illinois	5.936	0.591	0.017	0.003	17.578	2.722	849.023	100.983	2.095	0.115
Tazewell	Illinois	8.159	1.420	0.019	0.007	19.535	3.371	831.274	175.334	2.208	0.234
Union	Illinois	5.665	0.933	0.032	0.003	17.340	3.691	797.997	125.879	1.754	0.165
Vermilion	Illinois	9.562	3.024	0.027	0.014	22.766	5.232	1090.820	698.872	2.466	0.554
Wabash	Illinois	15.393	2.828	0.019	0.005	36.492	9.536	1434.950	285.226	2.907	0.287
Warren	Illinois	6.707	2.103	0.027	0.006	19.655	2.414	771.951	169.989	2.010	0.365
Washington	Illinois	10.304	2.418	0.018	0.005	25.612	6.836	1025.710	222.101	2.392	0.380
Wayne	Illinois	9.724	1.770	0.019	0.010	21.063	2.214	932.460	158.223	2.362	0.350
White	Illinois	6.344	1.301	0.057	0.017	18.664	1.764	706.166	60.230	1.992	0.256
Whiteside	Illinois	8.859	3.565	0.018	0.003	14.225	5.372	1120.830	472.467	1.944	0.436
Will	Illinois	11.009	2.530	0.244	0.228	66.762	43.343	716.142	138.249	2.897	0.276
Williamson	Illinois	4.174	0.727	0.022	0.007	19.695	6.344	564.648	113.963	1.576	0.226
Winnebago	Illinois	5.855	1.773	0.021	0.004	16.161	3.136	929.035	355.482	2.289	0.398
Woodford	Illinois	9.758	1.844	0.035	0.010	25.211	7.493	753.138	155.937	2.589	0.372
	minimum	*4.03*		*0.01*		*11*		*430*		*1.32*	
	average	*8.27*		*0.05*		*26*		*870*		*2.24*	
	maximum	*15.48*		*1.05*		*182*		*1673*		*3.11*	
		As		Hg		Pb		Mn		Fe	

CEMVR-EC-DN **22 January 2015**

Memorandum for Record

Subject: Cal Sag Sediment Sampling and Analysis Summary

1. Material in the Cal-Sag Channel (Cook County, IL) contains contaminants. This material has been analyzed under several contracts and by several sources. Copies of these reports are available at the U.S. Army Corps of Engineers, Rock Island District, CEMVR-EC-DN. A list of these reports follows.

    a. FutureNet Group, Inc., *Sediment Sampling and Analysis Report, Calumet-Sag Channel, Cook County, IL,* completed for the U.S. Army Corps of Engineers, Rock Island District, Contract Number W911XK-07-D-0004, January 2009.

    b. Foth Infrastructure and Environment, LLC, *Existing Sediment Characterization Summary*, Completed for U.S. Army Corps of Engineers, Rock Island District, Contract Number W912EK-09-D-0008, October 2009.

    c. Foth Infrastructure and Environment, LLC, *Calumet-Sag Channel Sediment Data Analysis Report, Cook County, Illinois,* Completed for U.S. Army Corps of Engineers, Rock Island District, Contract Number W912EK-09-D-0008, February 2010.

    d. Foth Infrastructure and Environment, LLC, *Calumet-Sag Channel 2009 Sediment Sampling Summary Report, Calumet-Sag Channel, Cook County, IL,* Completed for U.S. Army Corps of Engineers, Rock Island District, Contract Number W912EK-09-D-0008, March 2010.

    e. Foth Infrastructure and Environment, LLC, *Calumet-Sag 35% Design Report, Cook County, Illinois*, Completed for U.S. Army Corps of Engineers, Rock Island District, Contract Number W912EK-09-D-0008, August 2010.

    f. Foth Infrastructure and Environment, LLC, *Memorandum to Kara Mitvalsky, P.E. CEMVR-EC-DN, US Army Corps of Engineers, W912EK-09-D-0008, TO 0, Geotextile Fabric Simulation Testing "Hanging Bag Testing" on Sediment Samples Collected from the Calumet-Sag Channel*, April 7, 2011.

    g. CEERD-EP-E, *Memorandum for Ms. Kara N. Mitvalsky, Preliminary Evaluation of Cal-Sag Sediment from River Miles 309 to 318,* May 26, 2011. A copy of this memorandum is attached.

    h. FutureNet Group, Inc., *Sediment Sampling Report, Calumet-Sag Channel, Cook County, IL,* completed for the U.S. Army Corps of Engineers, Rock Island District, Contract Number W912P6-10-D-003, September 2014.

i. Work is currently underway at CEERD-EP-E evaluating sediment. Funding for this work has been provided by CEMVR. A description of the work is contained in the 2014-10-31 Estimated FY 15 project costs for the CalSag Project (attached).

2. **Sample and Analysis Background**. Previous sediment sampling events were conducted to determine the composition of the channel sediments. There were four sediment sampling events dated as far back as 1992 and as recently as 2009. Most of these samples were obtained with sample depth intervals that were generally isolated to the top 6 inches of sediment, but some included sampling intervals over sediment depths that were greater than the targeted sampling depths.

   a. The **Metropolitan Water Reclamation District of Greater Chicago** (MWRDGC) sampled the channel in 1992, 2003, and 2007. Thirteen (13) samples were collected and analyzed for metals, general chemistry, pesticides, PCBs, SVOCs, and VOCs.

   b. The **U.S. Environmental Protection Agency** (EPA) sampled the channel in 2001. The EPA collected 20 samples using a ponar sampling device. These samples were analyzed for metals, general chemistry, pesticides, PCBs, and SVOCs.

   c. In 2008, the sediment samples were coordinated by CEMVR and collected by **FutureNet Group, Inc**. Eighteen samples were collected from fourteen locations and analyzed for metals, physical properties, pesticides, PCBs, SVOCs, and VOCs. These sample depths ranged from 6 feet to 17 feet below the sediment-water interface.

   d. In 2009, sampling was again conducted by CEMVR and coordinated by **Foth Infrastructure and Environmental, LLC**. The objective of the 2009 investigation was to collect sediment samples from the six priority sections on roughly 13 miles of the channel where dredging will be implemented to perform navigational maintenance of the channel. The goal for this sampling effort was to characterize the channel in areas of potential concern such that design criteria can be established to dredge, transport, and place sediment in an upland CDF. Previous sampling identified eight areas of concern corresponding to outfalls within the channel (MWRD02, MWRD05, USEPA01, USEPA07, USEPA08, USEPA10, USEPA11, and USEPA12). Two additional priority areas did not have any characterization data; locations USACE01 and USACE02 were sampled in order to obtain data from these areas. The 2009 baseline characterization sampling included collecting vibracore samples within each of these eight areas of concern and also two priority areas. It also includes collecting eight additional vibracore samples from areas approximately 25-50 feet upstream of and out of any influence of the adjacent outfall (Foth Infrastructure and Environment, 2010). The sample depths ranged from 2 - 8 feet below the sediment-water

3. **ERDC Preliminary Sediment Analysis.** In 2011, ERDC-EL (at the request of CEMVR) conducted a preliminary screening evaluation of the 2009 sediment data to identify potential pathways of concern, as described in the *Evaluation of Dredged Material Proposed for Disposal at Island, Nearshore, or Upland Confined Disposal Facilities--Testing Manual* (U.S. Army

Corps of Engineers, 2003), which is better known as the Upland Testing Manual (UTM). The UTM identifies the following pathways for evaluation: effluent, leachate, runoff, volatilization, and plants and animal uptake.

Please note that all tables referenced in this discussion are attachments to the 2011 memorandum, which is attached to this memorandum.

The screening model used to perform a preliminary screening of the contaminant pathway for effluent, runoff, leachate, volatilization, and plant and animal uptake utilized the sediment data described above and available chemical screening criteria (see Table for input data of river mile 309-310). Using the average bulk sediment chemistry per river mile and default screening criteria, the results of the preliminary screening evaluation are as follow.

a. **Effluent Results.** Effluent is considered the water discharge from a CDF while filling or disposing dredged material. Effluent becomes a concern when contaminants are present and/or are discharged into a body of water. The equilibrium partitioning screening approach predicts the maximum probable contaminant concentrations that would be generated as dredged material effluent, considering the concentrations of dredged material solids in the ponded water and effluent, the bulk concentration of contaminants in the dredged material, the initial mixing of effluent in receiving waters, and applicable water quality standards. The average bulk sediment concentrations for each river mile were entered in the screening spreadsheet. The Tier II results show potential exceedances of water quality criteria in the effluent for Pb, 4,4' DDT, and total PCB (Table 1) and elutriate testing is needed to confirm the potential exceedances.

b. **Leachate Results.** Leachate is the water with its dissolved and colloidal materials that seeps through the dredged material and subsequently through dike or foundation material. Since solid particles generally do not transport with the leachate, dissolved concentration poses the most concern for leachate quality. The average bulk sediment concentrations for each river mile were entered in the screening spreadsheet. Based on default groundwater criteria, the overall results show no exceedance of groundwater standards. However, each group of analytes indicates a potential to violate groundwater standards under a different set of foundation characteristics. Table 2 shows the leachate screening spreadsheet results.

c. **Surface Runoff Results.** Surface runoff is water released from an upland CDF resulting from precipitation events on exposed dredged material. The screen spreadsheet for runoff is based on equilibrium partitioning principles and conservative application of design and operating principles for CDFs. The evaluation utilizes site-specific data and default values to calculate a predicted runoff concentration of contaminants for oxidize and unoxidized conditions. The assumptions are that rainfall is negligible and that a 50:1 dilution within mixing zone. The results are compared to water quality standards. Based on screen spreadsheet default surface water criteria, the results show no concern for runoff quality (Table 3).

d. **Volatilization Results.** Volatilization is the movement of a chemical into the air from surface water in a CDF. The volatilization screen calculates and considers the bulk sediment concentration of contaminants in the dredged material and variables specific to the proposed CDF operation. As with the other pathways, conservative estimates are utilized during calculations. The maximum contaminant air concentrations and fluxes on- and off-site under both submerged and exposed dredged material conditions are calculated. The volatilization calculations in the spreadsheet yield contaminant concentrations at the interface surface between air and the ponded water or the dredged material in the CDF. The results show potential volatile emissions exceeding emission standards for mercury, PCB 1016, and ammonia. The ponded and drying conditions for on site and off site for ammonia exceeded emission standards for each river mile along the area of interest (Table 4). The emissions of ammonia are likely overestimated because ammonia volatilization is quite sensitive to pH and requires a high pH.

e. **Plant and Animal Uptake Results.** Plant and animal uptakes are the bioaccumulation of contaminant from dredged material in the tissue of plants and animals growing on the dredged material. Once a contaminant is in the tissue of a plant or an animal, it can be passed along to other species in the food web. Besides a few organics, metals are the most common contaminant for plant uptake. The animal bioaccumulation evaluation considers earthworms as the primary animals for direct bioaccumulation of contaminant from dredged material in terrestrial habitats in CDFs. The Screening Spreadsheet uses a theoretical bioaccumulation potential for animal bioaccumulation because there is not a complete exposure route to offsite consumer via earthworms. There are presently no criteria directly applicable to plant or animal uptake. Therefore, bioaccumulation is evaluated on the basis of its potential to cause effects on a receptor. Table 5 shows barium, vanadium, zinc, anthracene, phenanthrene, and phenol analytes needs further evaluation for each river mile.

f. **ERDC Recommendation.** Based on the preliminary screening evaluation, ERDC-EL recommended that each pathway identified in the UTM procedures be considered for testing. ERDC-EL also recommends that sediment samples be collected for the tests that will represent the entire dredge prism, including aerial extent as well as depth. Table 6 is a sampling layout for future sediment collection including number of samples, locations, physical and chemical analysis, and sample volume. Table 7 lists the laboratory analytical procedures.

4. **Current Sediment Analysis.** In 2014, samples were obtained by FutureNet for CEMVR, and were transported to ERDC. ERDC is performing evaluations in accordance with the attached work scope. This information will be used to assist with the design of a final placement site for the Cal Sag dredged material.

5. Questions or requests for this report can be addressed to the undersigned.

MITVALSKY.KARA.N.1230379137

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DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=MITVALSKY.KARA.N.1230379137
Date: 2015.01.23 13:13:58 -06'00'

Kara N. Mitvalsky, P.E.
CEMVR-EC-DN

CF:
Afflerbaugh, Matthew CEMVP-PD-C
Anderson, Heather, CEMVR-EC-DN
Brodzinsky, Sara, CELRC-PL-F
Carmack, Charlene, CEMVP-PD-C
Gustafson, Steve, CEMVR-EC-DN
Johnson, Steve CEMVP-PD-F
Manasco, Nicole, CEMVR-OD-T
Saichek, Richard, CELRC-TS-D-HE
Skalak, Jerry, CEMVR-PM-M
Ziegler, Adam, CEMVR-PM-M

CEERD-EP-E 26 May 2011

MEMORANDUM FOR Ms Kara N. Mitvalsky

SUBJECT: Preliminary Evaluation of Cal-Sag Channel Sediment from River Miles 309 to 318

1. Background. Previous sediment sampling events were conducted to determine the composition of the channel sediments. There were four sediment sampling events dated as far back as 1992 and as recently as 2009. Most of these samples were obtained with sample depth intervals that were generally isolated to the top 6 inches of sediment, but some included sampling intervals over sediment depths that were greater than the targeted sampling depths. The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) sampled the channel in 1992, 2003, and 2007. Thirteen (13) samples were collected and analyzed for metals, general chemistry, pesticides, PCBs, SVOCs, and VOCs. The U.S. Environmental Protection Agency (EPA) sampled the channel in 2001. The EPA collected 20 samples using a ponar sampling device. These samples were analyzed for metals, general chemistry, pesticides, PCBs, and SVOCs. The third source was the USACE. In 2008, the sediment samples were coordinated by USACE and collected by FutureNet Group, Inc. Eighteen samples were collected from fourteen locations and analyzed for metals, physical properties, pesticides, PCBs, SVOCs, and VOCs. These sample depths ranged from 6 feet to 17 feet below the sediment-water interface.

In 2009, sampling was again conducted by the USACE and coordinated by Foth Infrastructure and Environmental, LLC (Foth Infrastructure and Environment, 2010). The objective of the 2009 investigation was to collect sediment samples from the six priority sections on roughly 13 miles of the channel where dredging will be implemented to perform navigational maintenance of the channel. The goal for this sampling effort was to characterize the channel in areas of potential concern such that design criteria can be established to dredge, transport, and place sediment in an upland CDF. Previous sampling identified eight areas of concern corresponding to outfalls within the channel (MWRD02, MWRD05, USEPA01, USEPA07, USEPA08, USEPA10, USEPA11, and USEPA12). Two additional priority areas did not have any characterization data; locations USACE01 and USACE02 were sampled in order to obtain data from these areas. The 2009 baseline characterization sampling included collecting vibracore samples within each of these eight areas of concern and also two priority areas. It also includes collecting eight additional vibracore samples from areas approximately 25-50 feet upstream of and out of any influence of the adjacent outfall (Foth Infrastructure and Environment, 2010). The sample depths ranged from 2 - 8 feet below the sediment-water interface.

ERDC-EL conducted a preliminary screening evaluation of the 2009 sediment data to identify potential pathways of concern, as described in the Evaluation of Dredged Material Proposed for Disposal at Island, Nearshore, or Upland Confined Disposal Facilities--Testing Manual (U.S. Army Corps of Engineers, 2003), which is better known as the Upland Testing Manual (UTM). The UTM identifies the following pathways for evaluation: effluent, leachate, runoff, volatilization, and plants and animal uptake. The screening model used to perform a preliminary screening of the contaminant pathway for effluent, runoff, leachate, volatilization, and plant and animal uptake utilized the sediment data described above and available chemical screening

criteria (see Table for input data of river mile 309-310). Using the average bulk sediment chemistry per river mile and default screening criteria, the results of the preliminary screening evaluation are as follow.

2. Effluent Results. Effluent is considered the water discharge from a CDF while filling or disposing dredged material. Effluent becomes a concern when contaminants are present and/or are discharged into a body of water. The equilibrium partitioning screening approach predicts the maximum probable contaminant concentrations that would be generated as dredged material effluent, considering the concentrations of dredged material solids in the ponded water and effluent, the bulk concentration of contaminants in the dredged material, the initial mixing of effluent in receiving waters, and applicable water quality standards. The average bulk sediment concentrations for each river mile were entered in the screening spreadsheet. The Tier II results show potential exceedances of water quality criteria in the effluent for Pb, 4,4' DDT, and total PCB (Table 1) and elutriate testing is needed to confirm the potential exceedances.

3. Leachate Results. Leachate is the water with its dissolved and colloidal materials that seeps through the dredged material and subsequently through dike or foundation material. Since solid particles generally do not transport with the leachate, dissolved concentration poses the most concern for leachate quality. The average bulk sediment concentrations for each river mile were entered in the screening spreadsheet. Based on default groundwater criteria, the overall results show no exceedance of groundwater standards. However, each group of analytes indicates a potential to violate groundwater standards under a different set of foundation characteristics. Table 2 shows the leachate screening spreadsheet results.

4. Surface Runoff Results. Surface runoff is water released from an upland CDF resulting from precipitation events on exposed dredged material. The screen spreadsheet for runoff is based on equilibrium partitioning principles and conservative application of design and operating principles for CDFs. The evaluation utilizes site-specific data and default values to calculate a predicted runoff concentration of contaminants for oxidize and unoxidized conditions. The assumptions are that rainfall is negligible and that a 50:1 dilution within mixing zone. The results are compared to water quality standards. Based on screen spreadsheet default surface water criteria, the results show no concern for runoff quality (Table 3).

5. Volatilization Results. Volatilization is the movement of a chemical into the air from surface water in a CDF. The volatilization screen calculates and considers the bulk sediment concentration of contaminants in the dredged material and variables specific to the proposed CDF operation. As with the other pathways, conservative estimates are utilized during calculations. The maximum contaminant air concentrations and fluxes on- and off-site under both submerged and exposed dredged material conditions are calculated. The volatilization calculations in the spreadsheet yield contaminant concentrations at the interface surface between air and the ponded water or the dredged material in the CDF. The results show potential volatile emissions exceeding emission standards for mercury, PCB 1016, and ammonia. The ponded and drying conditions for on site and off site for ammonia exceeded emission standards for each river mile along the area of interest (Table 4). The emissions of ammonia are likely overestimated because ammonia volatilization is quite sensitive to pH and requires a high pH.

6. Plant and Animal Uptake Results. Plant and animal uptakes are the bioaccumulation of contaminant from dredged material in the tissue of plants and animals growing on the dredged material. Once a contaminant is in the tissue of a plant or an animal, it can be passed along to other species in the food web. Besides a few organics, metals are the most common contaminant for plant uptake. The animal bioaccumulation evaluation considers earthworms as the primary animals for direct bioaccumulation of contaminant from dredged material in terrestrial habitats in CDFs. The Screening Spreadsheet uses a theoretical bioaccumulation potential for animal bioaccumulation because there is not a complete exposure route to offsite consumer via earthworms. There are presently no criteria directly applicable to plant or animal uptake. Therefore, bioaccumulation is evaluated on the basis of its potential to cause effects on a receptor. Table 5 shows barium, vanadium, zinc, anthracene, phenanthrene, and phenol analytes needs further evaluation for each river mile.

7. Recommendation. Based on the preliminary screening evaluation, ERDC-EL is recommending that each pathway identified in the UTM procedures be considered for testing. ERDC-EL also recommends that sediment samples be collected for the tests that will represent the entire dredge prism, including aerial extent as well as depth. Table 6 is a sampling layout for future sediment collection including number of samples, locations, physical and chemical analysis, and sample volume. Table 7 lists the laboratory analytical procedures.

8. References. *Foth Infrastructure and Environment, LLC, 2010. Calumet-Sag Channel Sediment Data Analysis Report. February 2010.*

U.S. Army Corps of Engineers. (2003). "Evaluation of Dredged Material Proposed for Disposal at Island, Nearshore, or Upland Confined Disposal Facilities--Testing Manual," Technical Report ERDC/EL TR-03-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Messrs. Roy Wade and John L. Childs
Research Civil Engineer
Environmental Engineering Branch

Example of UTM Screening Model Input Data – USEPA12 & USEPA12-UP					
In Situ Sediment Properties	**Units**	**Value**	**Plant and Animal Uptake Parameters**	**Units**	**Value**
Total Organic Carbon	%	6.05	Silt & Clay Fraction for Reference Soil	%	70
Silt & Clay Fraction	%	94	Total Organic Carbon of Reference Soil	%	2.25
Clay Fraction	%	40	**Leachate Parameters**		
Enrichment Factor	-	2.20	Distance from Edge of CDF to Receptor	m	0.1
Specific Gravity	-	2.75	Length of CDF Cell	m	111
Dissolved Organic Carbon	mg/L	24.6	Width of CDF Cell	m	56
Water Content	%	42	Area of CDF Cell	m^2	6,216
Hydraulic Dredging Operational Parameters			Time Period of Interest	years	1
Influent Slurry Solids Concentration	g/L	120	Foundation Soil Total Organic Carbon	%	2
Influent Slurry Porosity	-	0.96	Foundation Soil Silt & Clay Fraction	%	47
Effluent Parameters			Specific Gravity of Foundation Soil	-	2.68
Dilution within Mixing Zone	-	30	Thickness of Dredged Material in the CDF	m	9
Background Exceedance	%	0	Thickness of the Foundation Soil (Vadose Zone)	m	0.1
Runoff Parameters			Thickness of the Saturated Zone	m	6
Dilution within Mixing Zone	-	50	Effective Porosity of Foundation (Vadose Zone)	-	0.4
Background Exceedance	%	0	Effective Porosity of Foundation (Aquifer)	-	0.6
Unoxidized Runoff Solids Conc.	g/L	20	Hydraulic Conductivity	m/year	30,000
Oxidized Runoff Solids Conc.	g/L	2	Slope of the Water Table	-	0.001
Volatilization Exposure Parameters			Net Recharge Percolating into Plume	m/year	0.1
Average Weight of Off-site Child	kg	19	Percolation Rate from Facility (CDF)	m/year	0.03
Off-Site Exposure Period	min/day	1440	Vertical Dispersivity	m	0.15
Respiration Rate of Off-site Child	L/min	12	Transverse Dispersivity	m	1.5
Breathing Rate of Off-site Child	m^3/day/kg	0.91	Maximum Depth of Mixing at Edge of Facility	m	5.95
Average Weight of On-site Adult	kg	72.57	Thickness of the Plume at the Receptor	m	5.96
Respiration Rate of On-site Adult	L/min	28.6	Aquifer Dilution Factor	-	12.8
On-Site Ponded Exposure Period	min/day	480			
On-Site Drying Exposure Period	min/day	480			
Ponded Breathing Rate of On-site Adult	m^3/day/kg	0.19			
Drying Breathing Rate of On-site Adult	m^3/day/kg	0.19			
Wind Speed	m/s	2.5			
Temperature of Ponded Water	°K	298			
Water Depth	m	0.3			
Length of CDF Cell	m	111			
Width of CDF Cell	m	56			
Unit Air Conc Factor	(mg/m^3)/(g/s)	5.158			

Note: Only the in situ sediment properties changes for each river mile.

Table 1. UTM Screening Testing Requirement for Effluent Pathway - 2009 Calumet-Sag Channel Samples

Analytes	River Mile							
Metals (mg/kg)	309-310	310-311	311-312	312-313	313-314	314-315	316-317	317-318
Aluminum	No	No	No	No	No	No	No	No
Antimony	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Arsenic	No	No	No	No	No	No	No	No
Barium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Beryllium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Boron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Cadmium	No	No	No	No	No	No	No	No
Chromium III	No	No	No	No	No	No	No	No
Chromium VI		No	No		No	No	No	No
Cobalt	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Copper	No	No	No	No	No	No	No	No
Iron	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Lead	No	No	Needed	No	No	Needed	No	No
Manganese	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Mercury	No	No	No	No	No	No	No	No
Molybdenum	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Nickel	No	No	No	No	No	No	No	No
Selenium	No	No	No	No	No	No	No	No
Silver	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Strontium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Tin	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Vanadium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Zinc	No	No	No	No	No	No	No	No
Inorganic/General Chemistry								
Ammonia-N	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PAH's (µg/kg)								
Acenaphthene	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Acenaphthylene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(a)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(b)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(k)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(g,h,i)perylene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(a)pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(e)pyrene						No Criteria		
Biphenyl						No Criteria		
Carbazol					No Criteria	No Criteria	No Criteria	No Criteria
Chrysene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzo(a,h)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzofuran							No Criteria	No Criteria
Fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Fluorene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Indeno(1,2,3-c,d)pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2-Methylnaphthalene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Naphthalene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Phenanthrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Semi-Volatile Organic Compounds (µg/kg)								
Bis(2-chloroethyl) ether								No Criteria
Bis(2-ethylhexyl) phthalate	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
4-Chloroaniline	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria
Di-n-butyl phthalate				No Criteria				
Di-n-octyl phthalate		No Criteria				No Criteria		
1,2-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
1,3-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria		
1,4-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria		
2,4-Dimethylphenol						No Criteria		
4-Methylphenol (p-Cresol)	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
N-Nitrosodiphenylamine				No Criteria		No Criteria	No Criteria	
Phenol				No Criteria	No Criteria		No Criteria	No Criteria
1,2,4-Trichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria
Volatile Organic Compounds (µg/kg)								
Acetone				No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzene						No Criteria	No Criteria	No Criteria
2-Butanone (methyl ethyl ketone)					No Criteria	No Criteria	No Criteria	No Criteria
Carbon disulfide						No Criteria	No Criteria	
Chlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Ethylbenzene						No Criteria	No Criteria	
Methylene chloride (Dichloromethane)		No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	
Tetrachloroethene (PCE)						No Criteria		
Toluene						No Criteria	No Criteria	
m,p-Xylene						No Criteria	No Criteria	
o-Xylene						No Criteria	No Criteria	No Criteria
Xylenes, Total						No Criteria	No Criteria	No Criteria
Chlorinated Pesticides (µg/kg)								
Aldrin		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Atrazine			No Criteria			No Criteria	No Criteria	
alpha-BHC						No Criteria	No Criteria	
beta-BHC	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
delta-BHC	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
gamma-BHC (Lindane)		No Criteria			No Criteria	No Criteria	No Criteria	
alpha-Chlordane	No	No	No	No	No	No	No	
gamma-Chlordane	No	No	No	No	No	No	No	No
4,4'-DDD	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
o,p'-DDE (2,4')						No Criteria		
p,p'-DDE (4,4')	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2,4'-DDT						No Criteria		
p,p'-DDT (4,4')	No			No	No	No	Needed	Needed
Dacthal (DCPA)						No Criteria		
Dichlorophenoxy acetic acid (2,4-D)	No Criteria		No Criteria	No Criteria		No Criteria		No Criteria
Dicofol						No Criteria		
Dieldrin	No	No	No	No	No	No	No	No
Endosulfan sulfate		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Endrin		No	No					
Endrin aldehyde		No Criteria	No Criteria	No Criteria		No Criteria		
Endrin ketone	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Heptachlor		No	No				No	No
Heptachlor epoxide	No	No	No	No	No	No	No	No
Isodrin						No Criteria		
Kepone						No Criteria		
Methoxychlor				No	No	No	No	
PCB Congeners (µg/kg)								
PCB(Aroclor-1016)	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1242)		No Criteria	No Criteria					
PCB(Aroclor-1254)	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1260)	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB Total	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed

Table 2. UTM Screening Testing Requirement for Leachate Pathway - 2009 Calumet-Sag Channel Samples

Analytes	River Mile							
Metals (mg/kg)	309-310	310-311	311-312	312-313	313-314	314-315	316-317	317-318
Aluminum	No Criteria	No-1	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Antimony	No-1	No Criteria	No-1	No-1	No-1	No-1	No-1	No-1
Arsenic	No-2	No-1	No-2	No-2	No-2	No-2	No-2	No-2
Barium	No-2	No Criteria	No-2	No-2	No-2	No-2	No-2	No-2
Beryllium	No-1	No Criteria	No-2	No-2	No-1	No-1	No-1	No-1
Boron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Cadmium	No-2	No-2	No-2	No-2	No-2	No-2	No-2	No-2
Chromium III	No-1	No-1	No-1	No-1	No-1	No-1	No-1	No-1
Chromium VI		No-1	No-1		No-1	No-1	No-1	No-1
Cobalt	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Copper	No-1	No-2	No-1	No-1	No-1	No-1	No-1	No-1
Iron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Lead	No-2	No-1	No-2	No-2	No-2	No-2	No-2	No-2
Manganese	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Mercury	No-1	No-1	No-1	No-1	No-1	No-1	No-1	No-1
Molybdenum	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Nickel	No Criteria	No-1	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Selenium	No-2	No Criteria	No-2	No-2	No-2	No-2	No-2	No-2
Silver	No Criteria	No-1	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Strontium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Tin	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Vanadium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Zinc	No Criteria	No-1	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Inorganic/General Chemistry								
Ammonia-N	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PAH's (µg/kg)								
Acenaphthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Acenaphthylene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(a)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(b)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(k)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(g,h,i)perylene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(a)pyrene	No-2	No Criteria	No-2	No-2	No-2	No-2	No-2	No-2
Benzo(e)pyrene								
Biphenyl								
Carbazol					No Criteria	No Criteria	No Criteria	No Criteria
Chrysene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzo(a,h)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzofuran							No Criteria	No Criteria
Fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Fluorene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Indeno(1,2,3-c,d)pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2-Methylnaphthalene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Naphthalene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Phenanthrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Semi-Volatile Organic Compounds (µg/kg)								
Bis(2-chloroethyl) ether								No Criteria
Bis(2-ethylhexyl) phthalate	No-1	No Criteria	No-1	No-1	No-2	No-1	No-1	No-1
4-Chloroaniline	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria
Di-n-butyl phthalate								
Di-n-octyl phthalate		No Criteria		No Criteria		No Criteria		
1,2-Dichlorobenzene	No-1	No Criteria	No-1	No-1	No-1	No-1	No-1	No-1
1,3-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria		
1,4-Dichlorobenzene	No-1	No Criteria	No-1	No-1	No-1	No-1		
2,4-Dimethylphenol								
4-Methylphenol (p-Cresol)	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
N-Nitrosodiphenylamine				No Criteria		No Criteria	No Criteria	
Phenol				No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
1,2,4-Trichlorobenzene	No-1	No Criteria	No-1	No-1		No-1	No-1	No-1
Volatile Organic Compounds (µg/kg)								
Acetone				No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzene						No-1	No-1	No-1
2-Butanone (methyl ethyl ketone)					No Criteria	No Criteria	No Criteria	No Criteria
Carbon disulfide						No Criteria	No Criteria	
Chlorobenzene	No-1	No Criteria	No-1	No-1	No-1	No-1	No-1	No-1
Ethylbenzene						No-1	No-1	
Methylene chloride (Dichloromethane)		No Criteria		No-2	No-2	No-1	No-2	
Tetrachloroethene (PCE)						No-2		
Toluene						No-1	No-1	
m,p-Xylene						No Criteria	No Criteria	
o-Xylene						No Criteria	No Criteria	No Criteria
Xylenes, Total						No-1	No-1	No-1
Chlorinated Pesticides (µg/kg)								
Aldrin		No-1	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Atrazine			No-1					
alpha-BHC						No Criteria	No Criteria	
beta-BHC	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
delta-BHC	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
gamma-BHC (Lindane)		No-1			No-1			
alpha-Chlordane	No-1	No-1	No-1	No-1	No-1	No-1	No-1	
gamma-Chlordane	No-1	No-1	No-1	No-1	No-1	No-1	No-1	No-1
4,4'-DDD	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
o,p'-DDE (2,4')								
p,p'-DDE (4,4')	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2,4'-DDT								
p,p'-DDT (4,4')	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dacthal (DCPA)								
Dichlorophenoxy acetic acid (2,4-D)	No-1		No-1	No-1		No-1		No-1
Dicofol								
Dieldrin	No Criteria	No-1	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Endosulfan sulfate		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Endrin		No-1	No-2					
Endrin aldehyde		No Criteria	No Criteria	No Criteria				
Endrin ketone	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Heptachlor		No-1	No-1				No-1	No-1
Heptachlor epoxide	No-1	No-1	No-1	No-1	No-1	No-1	No-1	No-1
Isodrin								
Kepone								
Methoxychlor				No-1	No-1	No-1	No-1	
PCB Congeners (µg/kg)								
PCB(Aroclor-1016)	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1242)		No Criteria	No Criteria					
PCB(Aroclor-1254)	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1260)	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB Total	No-2	No Criteria	No-2	No-2	No-2	No-2	No-2	No-2

Table 3. UTM Screening Testing Requirement for Runoff Oxidized and Unoxidized Pathways - 2009 Calumet-Sag Channel Samples

Analytes	River Mile															
	309-310		310-311		311-312		312-313		313-314		314-315		316-317		317-318	
Metals (mg/kg)	Unoxidized	Oxidized	Unoxidized	Oxidized	Unoxidized	Oxidized	Unoxidized	Oxidized	Unoxidized	Oxidized	Unoxidized	Oxidized	Unoxidized	Oxidized	Unoxidized	Oxidized
Aluminum	No	No	No Criteria	No Criteria	No	No	No	No	No	No	No	No	No	No	No	No
Antimony	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Arsenic	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Barium	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Beryllium	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Boron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Cadmium	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Chromium III	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Chromium VI	Missing Data	Missing Data	No	No	No	No			No	No	No	No	No	No	No	No
Cobalt	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Copper	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Iron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Lead	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Manganese	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Mercury	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Molybdenum	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Nickel	No	No	No Criteria	No Criteria	No	No	No	No	No	No	No	No	No	No	No	No
Selenium	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Silver	No	No	No Criteria	No Criteria	No	No	No	No	No	No	No	No	No	No	No	No
Strontium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Tin	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Vanadium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Zinc	No	No	No Criteria	No Criteria	No	No	No	No	No	No	No	No	No	No	No	No
Inorganic/General Chemistry																
Ammonia-N	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PAH's (µg/kg)																
Acenaphthene	No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Acenaphthylene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(a)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(b)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(k)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(g,h,i)perylene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(a)pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(e)pyrene			No	No												
Biphenyl																
Carbazol									No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Chrysene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzo(a,h)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzofuran													No Criteria	No Criteria		
Fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Fluorene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Indeno(1,2,3-c,d)pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2-Methylnaphthalene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Naphthalene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Phenanthrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Semi-Volatile Organic Compounds (µg/kg)																
Bis(2-chloroethyl) ether															No Criteria	No Criteria
Bis(2-ethylhexyl) phthalate	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
4-Chloroaniline	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Di-n-butyl phthalate							No Criteria	No Criteria								
Di-n-octyl phthalate	Missing Data	Missing Data	No Criteria	No Criteria							No Criteria	No Criteria				
1,2-Dichlorobenzene	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
1,3-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria				
1,4-Dichlorobenzene	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria				
2,4-Dimethylphenol											No Criteria	No Criteria				
4-Methylphenol (p-Cresol)	No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
N-Nitrosodiphenylamine							No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria		
Phenol							No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria
1,2,4-Trichlorobenzene	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Volatile Organic Compounds (µg/kg)																
Acetone							No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzene											No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2-Butanone (methyl ethyl ketone)									No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Carbon disulfide											No Criteria	No Criteria	No Criteria	No Criteria		
Chlorobenzene	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Ethylbenzene											No Criteria	No Criteria	No Criteria	No Criteria		
Methylene chloride (Dichloromethane)			No	No			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria		
Tetrachloroethene (PCE)											No Criteria	No Criteria				
Toluene											No Criteria	No Criteria	No Criteria	No Criteria		
m,p-Xylene											No Criteria	No Criteria	No Criteria	No Criteria		
o-Xylene											No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Xylenes, Total											No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Chlorinated Pesticides (µg/kg)																
Aldrin			No Criteria	No Criteria	No	No	No	No	No	No	No	No	No	No	No	No
Atrazine	Missing Data	Missing Data			No Criteria	No Criteria										
alpha-BHC											No Criteria	No Criteria	No Criteria	No Criteria		
beta-BHC	No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
delta-BHC	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
gamma-BHC (Lindane)			No	No					No	No	No	No				
alpha-Chlordane			No	No	No	No	No	No	No	No	No	No	No	No		
gamma-Chlordane			No	No	No	No	No	No	No	No			No	No	No	No
4,4'-DDD	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
o,p'-DDE (2,4')																
p,p'-DDE (4,4')	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2,4'-DDT																
p,p'-DDT (4,4')							No	No	No	No	No	No	No	No	No	No
Dacthal (DCPA)																
Dichlorophenoxy acetic acid (2,4-D)	No Criteria	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria			No Criteria	No Criteria			No Criteria	No Criteria
Dicofol																
Dieldrin			No Criteria	No Criteria	No	No	No	No	No	No	No	No	No	No	No	No
Endosulfan sulfate			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Endrin			No	No	No	No										
Endrin aldehyde			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	Missing Data	Missing Data						
Endrin ketone	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Heptachlor			No	No	No	No							No	No	No	No
Heptachlor epoxide			No	No	No	No	No	No			No	No	No	No	No	No
Isodrin																
Kepone																
Methoxychlor							No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria		
PCB Congeners (µg/kg)																
PCB(Aroclor-1016)	No Criteria	No Criteria					No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1242)			No Criteria	No Criteria	No Criteria	No Criteria										
PCB(Aroclor-1254)	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1260)	No Criteria	No Criteria					No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB Total	No Criteria	No Criteria	No	No	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria

Table 4. UTM Screening Testing Requirement for Volatilization Pathway - 2009 Calumet-Sag Channel Samples

Analytes	River Mile															
	309-310				310-311				311-312				312-313			
Metals (mg/kg)	Ponded Condition		Drying Condition		Ponded Condition		Drying Condition		Ponded Condition		Drying Condition		Ponded Condition		Drying Condition	
	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site
Aluminum	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Antimony	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Chromium III					Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Chromium VI	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data				
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	No	No	Needed	No	No	No	Needed	No	No	No	Needed	No	No	No	Needed	No
Molybdenum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Silver	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Strontium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganic/General Chemistry																
Ammonia-N	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed
PAH's (µg/kg)																
Acenaphthene	No	No	No	No	No	No	No	No					No	No	No	No
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(e)pyrene																
Biphenyl																
Carbazol																
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran																
Fluoranthene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Fluorene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Indeno(1,2,3-c,d)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Naphthalene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Phenanthrene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Pyrene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Semi-Volatile Organic Compounds (µg/kg)																
Bis(2-chloroethyl) ether																
Bis(2-ethylhexyl) phthalate	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate																
Di-n-octyl phthalate	Missing Data	Missing Data	Missing Data	Missing Data	No	No	No	No					No	No	No	No
1,2-Dichlorobenzene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
1,3-Dichlorobenzene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
1,4-Dichlorobenzene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
2,4-Dimethylphenol																
4-Methylphenol (p-Cresol)	No	No	No	No	No	No	No	No					No	No	No	No
N-Nitrosodiphenylamine													NA	NA	NA	NA
Phenol													No	No	No	No
1,2,4-Trichlorobenzene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Volatile Organic Compounds (µg/kg)																
Acetone													NA	NA	NA	NA
Benzene																
2-Butanone (methyl ethyl ketone)																
Carbon disulfide																
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene																
Methylene chloride (Dichloromethane)					NA	NA	NA	NA					NA	NA	NA	NA
Tetrachloroethene (PCE)																
Toluene																
m,p-Xylene																
o-Xylene																
Xylenes, Total																
Chlorinated Pesticides (µg/kg)																
Aldrin					No	No	No	No	No	No	No	No	No	No	No	No
Atrazine	NA	NA	NA	NA					NA	NA	NA	NA				
alpha-BHC																
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC (Lindane)	NA	NA	NA	NA	NA	NA	NA	NA								
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,p'-DDE (2,4')																
p,p'-DDE (4,4')	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4'-DDT																
p,p'-DDT (4,4')	No	No	No	No									No	No	No	No
Dacthal (DCPA)																
Dichlorophenoxy acetic acid (2,4-D)	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Dicofol																
Dieldrin	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Endosulfan sulfate					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin					No	No	No	No	No	No	No	No				
Endrin aldehyde					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor					No	No	No	No	No	No	No	No				
Heptachlor epoxide	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Isodrin																
Kepone																
Methoxychlor													No	No	No	No
PCB Congeners (µg/kg)																
PCB(Aroclor-1016)	Needed	No	Needed	No									Needed	No	Needed	No
PCB(Aroclor-1242)					NA	NA	NA	NA	NA	NA	NA	NA				
PCB(Aroclor-1254)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB(Aroclor-1260)	NA	NA	NA	NA									NA	NA	NA	NA
PCB Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 4 (Concluded). UTM Screening Testing Requirement for Volatilization Pathway - 2009 Calumet-Sag Channel Samples

Analytes	River Mile															
	313-314				314-315				316-317				317-318			
Metals (mg/kg)	Ponded Condition		Drying Condition		Ponded Condition		Drying Condition		Ponded Condition		Drying Condition		Ponded Condition		Drying Condition	
	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site
Aluminum	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Antimony	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Chromium III	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Chromium VI	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	No	No	Needed	No	No	No	Needed	No	No	No	Needed	No	No	No	Needed	No
Molybdenum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Silver	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data
Strontium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganic/General Chemistry																
Ammonia-N	Needed	Needed	Needed	Needed	Needed	Needed	Needed	No	Needed	Needed	Needed	Needed	Needed	Needed	Needed	No
PAH's (µg/kg)																
Acenaphthene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(e)pyrene																
Biphenyl																
Carbazol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran									NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Fluorene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Indeno(1,2,3-c,d)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Naphthalene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Phenanthrene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Pyrene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Semi-Volatile Organic Compounds (µg/kg)																
Bis(2-chloroethyl) ether													NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
4-Chloroaniline					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate																
Di-n-octyl phthalate					No	No	No	No								
1,2-Dichlorobenzene	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
1,3-Dichlorobenzene	No	No	No	No	No	No	No	No								
1,4-Dichlorobenzene					No	No	No	No								
2,4-Dimethylphenol					No	No	No	No								
4-Methylphenol (p-Cresol)	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
N-Nitrosodiphenylamine									NA	NA	NA	NA				
Phenol	No	No	No	No	NA	NA	NA	NA	No	No	No	No	No	No	No	No
1,2,4-Trichlorobenzene					No	No	No	No	No	No	No	No	No	No	No	No
Volatile Organic Compounds (µg/kg)																
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (methyl ethyl ketone)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide					NA	NA	NA	NA	NA	NA	NA	NA				
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene					NA	NA	NA	NA	NA	NA	NA	NA				
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Tetrachloroethene (PCE)					No	No	No	No								
Toluene					NA	NA	NA	NA	NA	NA	NA	NA				
m,p-Xylene					NA	NA	NA	NA	NA	NA	NA	NA				
o-Xylene					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorinated Pesticides (µg/kg)																
Aldrin	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Atrazine					NA	NA	NA	NA	NA	NA	NA	NA				
alpha-BHC					NA	NA	NA	NA	NA	NA	NA	NA				
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC (Lindane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,p'-DDE (2,4')					NA	NA	NA	NA								
p,p'-DDE (4,4')	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4'-DDT					NA	NA	NA	NA								
p,p'-DDT (4,4')	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Dacthal (DCPA)					NA	NA	NA	NA								
Dichlorophenoxy acetic acid (2,4-D)					NA	NA	NA	NA					NA	NA	NA	NA
Dicofol					NA	NA	NA	NA								
Dieldrin	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin																
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA								
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor								No	No	No	No	No	No	No	No	No
Heptachlor epoxide	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Isodrin					NA	NA	NA	NA								
Kepone					NA	NA	NA	NA								
Methoxychlor	No	No	No	No	No	No	No	No	No	No	No	No				
PCB Congeners (µg/kg)																
PCB(Aroclor-1016)	No	No	Needed	No	Needed	No	Needed	No	Needed	No	Needed	No	Needed	No	Needed	No
PCB(Aroclor-1242)																
PCB(Aroclor-1254)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB(Aroclor-1260)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 5. UTM Screening Testing Requirement for Plant and Animal Uptake - 2009 Calumet-Sag Channel Samples

Analytes	River Mile							
Metals (mg/kg)	309-310	310-311	311-312	312-313	313-314	314-315	316-317	317-318
Aluminum	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Antimony	No	No	No	No	No	No	No	No
Arsenic	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Barium	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed
Beryllium	No	No	No	No	No	No	No	No
Boron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Cadmium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Chromium III	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Chromium VI		No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria
Cobalt	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Copper	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Iron	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Lead	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Manganese	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Mercury	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Molybdenum	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Nickel	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Selenium	No	No	No	No	No	No	No	No
Silver	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Strontium	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Tin	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Vanadium	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed
Zinc	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed
Inorganic/General Chemistry								
Ammonia-N	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PAH's (µg/kg)								
Acenaphthene	No	No		No	No	No	No	No
Acenaphthylene	No	No	No	No	No	No	No	No
Anthracene	Needed	No	Needed	No	No	Needed	Needed	Needed
Benzo(a)anthracene	No	No	No	No	No	No	No	No
Benzo(b)fluoranthene	No	No	No	No	No	No	No	No
Benzo(k)fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzo(g,h,i)perylene	No	No	No	No	No	No	No	No
Benzo(a)pyrene	No	No	No	No	No	No	No	No
Benzo(e)pyrene								
Biphenyl								
Carbazol					No	No	No	No
Chrysene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzo(a,h)anthracene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dibenzofuran							No Criteria	No Criteria
Fluoranthene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Fluorene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Indeno(1,2,3-c,d)pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
2-Methylnaphthalene	No	No	No	No	No	No	No	No
Naphthalene	No	No	No	No	No	No	No	No
Phenanthrene	Needed	Needed	Needed	Needed	Needed	Needed	Needed	Needed
Pyrene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Semi-Volatile Organic Compounds (µg/kg)								
Bis(2-chloroethyl) ether								No Criteria
Bis(2-ethylhexyl) phthalate	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
4-Chloroaniline	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria
Di-n-butyl phthalate								
Di-n-octyl phthalate		No Criteria		No Criteria		No Criteria		
1,2-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
1,3-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria		
1,4-Dichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria		
2,4-Dimethylphenol						No Criteria		
4-Methylphenol (p-Cresol)	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
N-Nitrosodiphenylamine				No Criteria		No Criteria	No Criteria	
Phenol				Needed	Needed		Needed	Needed
1,2,4-Trichlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria
Volatile Organic Compounds (µg/kg)								
Acetone				No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Benzene						No Criteria	No Criteria	No Criteria
2-Butanone (methyl ethyl ketone)					No Criteria	No Criteria	No Criteria	No Criteria
Carbon disulfide						No Criteria	No Criteria	
Chlorobenzene	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Ethylbenzene						No Criteria	No Criteria	
Methylene chloride (Dichloromethane)		No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	
Tetrachloroethene (PCE)						No Criteria		
Toluene						No Criteria	No Criteria	
m,p-Xylene						No Criteria	No Criteria	
o-Xylene						No Criteria	No Criteria	No Criteria
Xylenes, Total						No Criteria	No Criteria	No Criteria
Chlorinated Pesticides (µg/kg)								
Aldrin		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Atrazine			No Criteria			No Criteria	No Criteria	
alpha-BHC						No	No	
beta-BHC	No Criteria	No Criteria		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
delta-BHC	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
gamma-BHC (Lindane)		No Criteria			No Criteria	No Criteria	No Criteria	
alpha-Chlordane	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	
gamma-Chlordane	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
4,4'-DDD	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
o,p'-DDE (2,4')						No Criteria		
p,p'-DDE (4,4')	No	No	No	No	No	No	No	No
2,4'-DDT						No Criteria		
p,p'-DDT (4,4')	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Dacthal (DCPA)						No Criteria		
Dichlorophenoxy acetic acid (2,4-D)	No Criteria		No Criteria	No Criteria		No Criteria		No Criteria
Dicofol						No Criteria		
Dieldrin	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Endosulfan sulfate		No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Endrin		No Criteria	No Criteria			No Criteria		
Endrin aldehyde		No Criteria	No Criteria	No Criteria		No Criteria		
Endrin ketone	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Heptachlor		No Criteria	No Criteria			No Criteria	No Criteria	No Criteria
Heptachlor epoxide	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
Isodrin						No Criteria		
Kepone						No Criteria		
Methoxychlor				No	No	No	No	
PCB Congeners (µg/kg)								
PCB(Aroclor-1016)	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1242)		No Criteria	No Criteria					
PCB(Aroclor-1254)	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB(Aroclor-1260)	No Criteria			No Criteria	No Criteria	No Criteria	No Criteria	No Criteria
PCB Total	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria

Table 6. Calumet - Sag DMMP - Sediment Sample Locations							
River Miles	**Previous Sample and GPS Location**			**Priority Number**	**Sediment Volume**	**Site Water Volume**	**Tests**
306.5	----	----	----	1	5 gal /1.125 L	3.5 L	Phy/Chem
307.5	----	----	----	1	5 gal /1.125 L	3.5 L	Phy/Chem
308.5	----	----	----	1	5 gal /1.125 L	3.5 L	Phy/Chem
309.5	USEPA12	N 1827634.62	E 1121699.66	1	47 gal /1.125 L	9.5 L	Settling/Phy/Chem
310.5	USEPA10	N 1826809.31	E 1126255.63	1	5 gal /1.125 L	3.5 L	Phy/Chem
310.5	USEPA11	N 1826854.55	E 112075.81	----	----	----	----
311.5	USEPA08	N 1825911.54	E 1129816.35	1	5 gal /1.125 L	3.5 L	Phy/Chem
312.5	USEPA07	N 1824410.89	E 1135755.83	4,5	5 gal /1.125 L	3.5 L	Phy/Chem
313.5	USEPA01	N 1821648.63	E 1141278.55	2	5 gal /1.125 L	3.5 L	Phy/Chem
314.5	MWRD02	N 1817511.88	E 1146699.22	2	5 gal /1.125 L	3.5 L	Phy/Chem
314.5	MWRD05	N 1817588.63	E 1146986.83	----	----	----	----
315.5	----	----	----	2	47 gal /1.125 L	12 gal /6 L	UTM/Phy/Chem
316.5	USACE01	N 1816153.91	E 1156010.91	6	5 gal /1.125 L	3.5 L	Phy/Chem
317.5	USACE02	N 1816488.82	E 1160142.21	6	5 gal /1.125 L	3.5 L	Phy/Chem
318.5	----	----	----	3	5 gal /1.125 L	3.5 L	Phy/Chem

Table 7. Laboratory Analytical Procedure				
Parameter	**Analytical Method**	**Sediment Volume**	**Site Water Volume**	**Notes***
TAL Metals (incl. Hg)	EPA 6010 (6020) & EPA 7471	250 ml (glass)	250 ml (plastic)	Preserve water sample w/ nitric acid
BNA	EPA 8270	250 ml (glass)	1 L (amber glass)	Additional 2 L at one site for QC
Pesticides	EPA 8081A	250 ml (glass)	1 L (amber glass)	Additional 2 L at one site for QC
PCBs	EPA 8082	250 ml (glass)	1 L (amber glass)	Additional 2 L at one site for QC
DOC	EPA 9060	N/A	125 ml (plastic)	Filter water sample & preserve with sulfuric acid
TOC	EPA 9060	125 ml (glass)	125 ml (plastic)	Preserve with sulfuric acid
*The notes are for water samples.				

Cal Sag Sediment Analysis Scope of Work
"Estimated FY15 project costs for the CalSag project_V3.doc"

Prepared by:
Trudy J. Estes, Ph.D., P.E.
US Army Corps Engineer Research and Development Center
CEERD-EPE-E
3909 Halls Ferry Road
Vicksburg, MS 39180-6199
For:
CEMVR

Table 1 contains a summary of the estimated FY15 project costs for the CalSag project, based upon the previously developed SOW. Because the specific pathway tests that will be required will not be known until the initial sediment and water characterization is completed, the total project costs for FY 15 have been broken down into three categories: Required, Probable and Possible.

Required costs include funding necessary to homogenize the sediment and complete the chemical characterization of the sediment and site water samples, to obtain necessary supplies and materials for the laboratory testing, and labor to complete the following testing and associated chemical analysis:

- Column testing - U433D10
- Elutriate testing - U433D10
- Partitioning analysis - U433D10
- PSDDF modeling - U433D10
- HELPQ modeling - U433D10
- Grain size analysis - U433D10
- Geotechnical characterization - U438240
- Chemical characterization – U433D30
- Consolidation testing - U438240
- Data reduction, interpretation and report preparation - U433D10

Probable costs include those tests and associated chemical analysis that the District may need or want to conduct to provide as robust an analysis as possible regarding potential environmental effects associated with disposal of the dredged material in a confined disposal facility, and with potential plant and animal exposures that may be of interest to the community. These include:

- Sequential batch leaching test (SBLT) - U433D10
- Simplified lab runoff procedure (SLRP) - U433D70
- Elutriate toxicity testing - U433D70

Possible costs include those tests and associated chemical analysis that may only be needed if specific pathways are of concern or more intensive testing/modeling seems warranted following completion of other testing, or in consideration of the public's specific concerns regarding exposures at the selected disposal site. These include:

- HELPQ modeling - U433D10
- Volatilization testing - U433D80
- Plant uptake testing - U433D70
- SAV bioaccumulation test (replaces plant uptake modeling) – U433D70
- Sediment toxicity testing - U433D70
- Sediment bioaccumulation testing - U433D70

The required programming information has also been included in Table 1.