1123

POINT THOMSON GAS CYCLING PROJECT

SEDIMENT QUALITY RESULTS SUMMER 2002

FINAL

Prepared for

ExxonMobil

ExxonMobil Production Company
P.O. Box 196601
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and

The Point Thomson Unit Owners

October 31, 2002

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1.0 INTRODUCTION

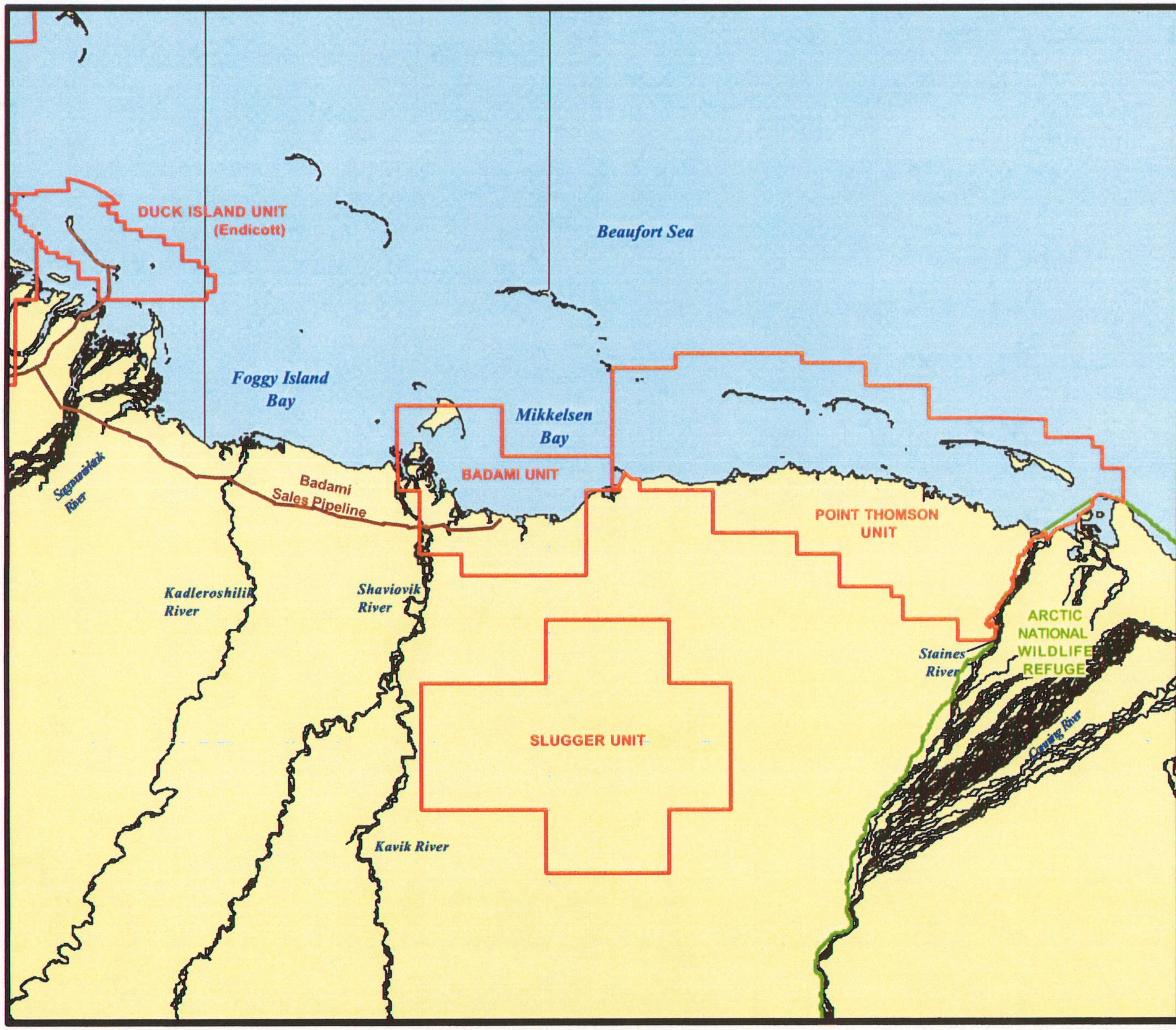
ExxonMobil Production Company (ExxonMobil) and the Point Thomson Unit Owners plan to develop the Point Thomson Gas Cycling Project for production and transport of sales-quality gas condensate to the Trans-Alaska Pipeline System. The Thomson Sands Reservoir will be developed from four gravel pads, an in-field road system, an airstrip, a gravel mine, and a 750-ft dock, all of which will be situated on the mainland between Brownlow Point and Point Hopson (Figure 1-1). As part of this development, camp and facility modules will be transported to the project site by sea-lift using oceangoing barges and tugs. The end of the Point Thomson dock will be located in relatively shallow waters; therefore, a channel adjacent to the end of the dock may need to be dredged to allow barge access.

The Marine Protection, Research, and Sanctuaries Act (MPRSA), otherwise known as the Ocean Dumping Act, specifies that prior to all proposed dumping of dredged material into ocean waters, the potential environmental impact of such activities must be determined. The U.S. Environmental Protection Agency (EPA), requested that ExxonMobil conduct baseline sediment sampling and analyses to support the dredging of a channel and the subsequent disposal of channel spoils. Potential ocean dumping zones that have been identified for the dredged material were an area outside Mary Sachs Entrance (summer dumping zone) and Lions Bay (winter dumping zone). As ExxonMobil excavated drilling waste from reserve pits on Flaxman Island in winter 2002, EPA also requested that samples be collected that are representative of sediment near the reserve pit excavation sites and under the ice road that was used by trucks hauling waste from the reserve pits.

URS Corporation (URS) was retained by ExxonMobil to conduct the baseline sediment sampling in the proposed channel, the ocean dumping zones, and near Flaxman Island. This sampling will be conducted in two phases:

- A summer phase characterizing surficial sediment conditions in both the dredging site and potential dumping areas; and
- A winter phase characterizing surface and subsurface (dredge) sediments from the proposed channel.

This interim report presents findings from the summer phase. A comprehensive sediment characterization report following completion of the winter phase will summarize the results and findings of this investigation.



ExxonMobil

Point Thomson Gas Cycling Project

Sediment Quality Results Summer 2002

Figure 1-1

Point Thomson Vicinity Map

N

6 0 6

Miles

Base maps provided by BPXA Cartography.

URS

Anchorage, Alaska

S:Projects/2001/74-388...PTUer/Version.../GIS/SedQltyResSum2002 - Fig 1.WOR

2.0 FIELD ACTIVITIES

The summer phase of the sampling program was conducted in July and August 2002 in general accordance with the *Ocean Dumping Evaluation Work Plan* (URS, 2002a) (Work Plan) and the *Ocean Dumping Evaluation Safety, Health and Environmental Plan* (URS, 2002b) (SHE Plan). The Work Plan and SHE Plan are provided as Appendices A and B, respectively.

URS personnel traveled to Deadhorse, Alaska on July 31, 2002 to gather equipment and prepare for sampling. On August 1, URS personnel met with personnel from Alaska Clean Seas (ACS) and loaded sampling equipment and supplies onboard the 42-foot Motor Vessel (M/V) Gwydyr Bay, an aluminum vessel owned by ACS. The M/V Gwydyr Bay is powered by twin diesel engines, equipped with propellers, and used for oil spill response. The M/V Gwydyr Bay was clean, well maintained, and proved to be a suitable vessel for day sampling trips. Chuck Crabaugh, a U.S. Coast Guard licensed captain and ACS employee, operated the vessel. On the morning of August 2, URS personnel were picked up at Endicott by the M/V Gwydyr Bay and transported to the Badami production facility. Badami provided housing and meals for URS and ACS personnel for the remainder of the project. Following facility orientation and a meeting with Badami management and logistics personnel, the crew departed for Point Thomson and began sampling on the afternoon of August 2. Field sampling continued until completed on August 7, and URS and ACS personnel left Badami on the morning of August 8 to return to Deadhorse. Upon arrival at Deadhorse, URS shipped and/or stored the sampling equipment and leftover supplies, and departed Deadhorse late on August 8. Daily progress reports are presented as Appendix C.

Samples were collected from each of the planned locations (stations) in the proposed ocean dumping zones. Surface samples were also collected from three stations in the general proposed channel excavation area to provide initial characterization of the sediment. The samples from the proposed channel excavation area included one sample within the proposed channel and a sample on either side of the proposed channel. Table 2-1 summarizes the samples collected during the summer phase and sample locations are presented on Figure 2-1.

Table 2-1. Number of Surface Sediment Samples Collected

Sampling Area	Sample Stations†	Number of Primary Samples	Number of Replicate Samples	Number of Archival Samples	Number of Field Duplicate Samples	Total Surface Samples for Area
Proposed Excavation Site	3	3	6	6	0	15
Proposed Winter Dumping Zone	15	15	30	30	1	76
Proposed Summer Dumping Zone	5	5	10	10	1	26
Flaxman Island Area	4	4	8	8	1	21
Total:	**27**	**27**	**54**	**54**	**3**	**138**

† As noted below, four sample stations were resampled, as an error occurred navigating to the station. The initial samples collected from these stations were analyzed for grain size distribution and bulk density only.

Quality control/quality assurance samples included equipment rinsate and ambient field blanks collected one each per day (6 each), and two site-specific MS/MSD samples.

Samples collected each day were transported onboard the M/V Gwydyr Bay to Badami. Samples were then shipped from Badami via a Cape Smythe Air chartered cargo plane to Deadhorse where they connected with Alaska Airlines for transport to the Portland, Oregon airport. A Columbia Analytical Services courier picked up the samples from the Portland airport.

Sample locations were found by entering the target coordinates into the vessel's plotter and navigating to the location. Upon arrival, the boat was anchored over the location and sampling was conducted. Anchor line scope (amount of line deployed) varied and depended on the bottom and wind conditions. The amount of swing could not be measured, but intuitively, the distance between replicate samples at each location could have been several tens of feet, depending primarily on the variableness of wind direction and the amount of scope. It should be noted that the engines were idled during sampling to power the capstan used to retrieve the sampler. Engine exhaust was vented near the stern just above the water line, aft of the area where the sampler was deployed and retrieved.

Samples were collected using a 0.1 square meter Kynar® coated van Veen grab sampler. Work was conducted in accordance with the Work Plan except for minor deviations or clarifications noted below.

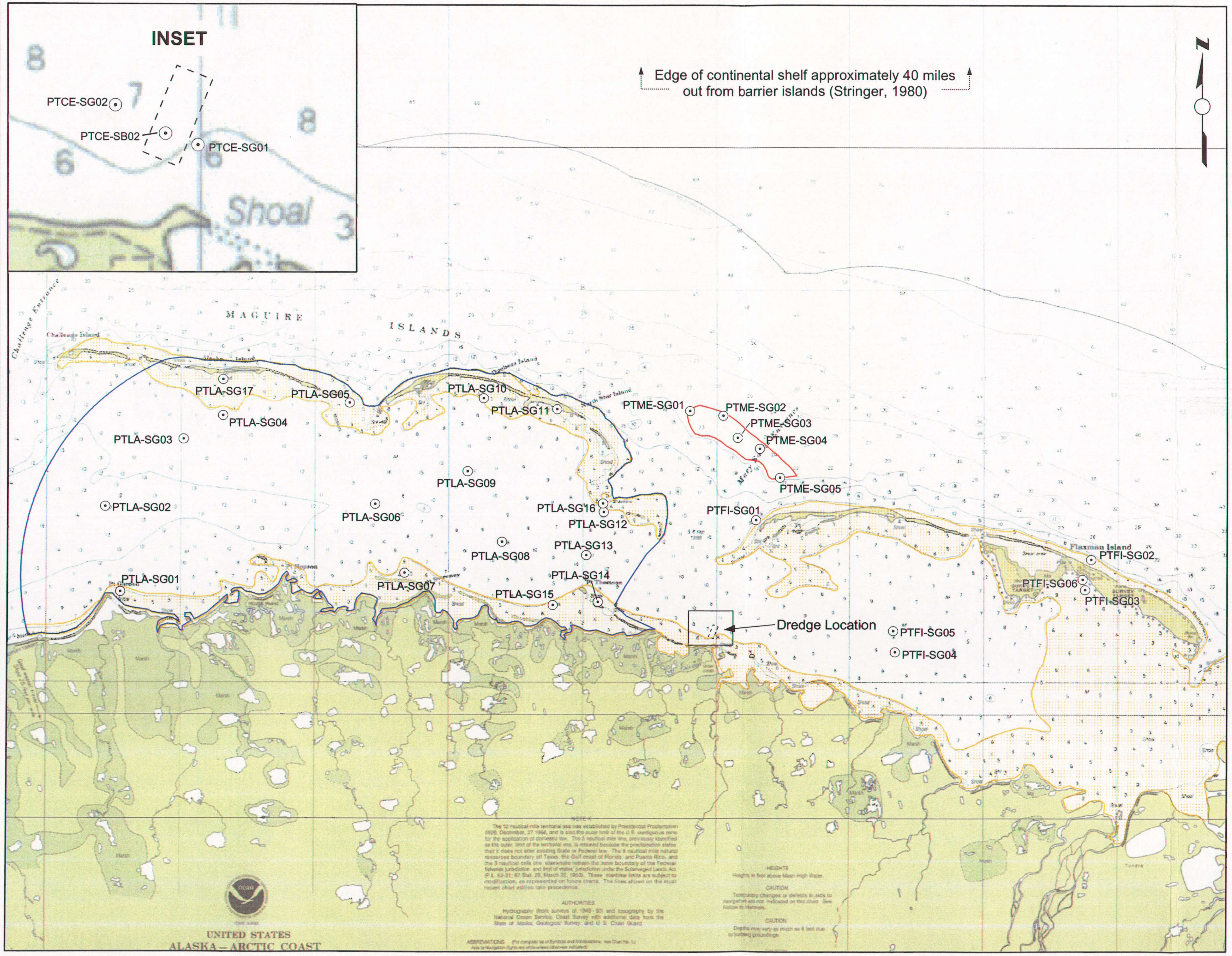
- Sediment at location PTLA-SG01 contained large amounts of gravel and could not be sampled using the van Veen sampler. Water depth at this location was shallow and the samples were collected using a large stainless steel spoon after wading to the location.

- An error occurred loading the planned station coordinates into the vessel's plotter, resulting in four sample stations that were located an unacceptable distance from the planned locations. Two of these locations were near Flaxman Island and two were in the proposed winter dumping zone. Samples collected at these locations were analyzed for grain size distribution and bulk density only. After the coordinates were corrected and the four stations were relocated, samples were collected and analyzed for the full suite of analytical methods.

- Field blanks were analyzed for volatile organic compounds only, in keeping with industry standards.

- Equipment rinsate blanks were analyzed for each chemical parameter.

- The grain size measurement technique used was ASTM D422, as required by the Work Plan. However, according to the *Dredged Material Evaluative Framework, Lower Columbia River Management Area* (Corps et al., 1998) guidance document, slightly different sized sieves should have been used. Reanalysis of one sample from each of the locations using the modified method is underway. Upon completion of testing, the results will be presented and discussed in a technical memorandum letter report to be issued in early December 2002.



ExxonMobil

Point Thompson Gas Cycling Project

Sediment Quality Results-Summer 2002 to Support an Ocean Dumping Evaluation

Figure 2-1
Sediment Quality Sampling Locations (Stations)

LEGEND

- Summer Zone of Siting Feasability
- Winter Zone of Siting Feasability
- Bottom-fast Ice (0-6 foot isobath)
- Sediment Sample Location

0 1,875 3,750 7,500 11,250 15,000
SCALE IN FEET

Source: Base map from the National Oceanic and Atmospheric Administration (NOAA) nautical chart No. 16045, revised in 1996

URS Anchorage, Alaska

Figure 3-1
Chromium vs Barium

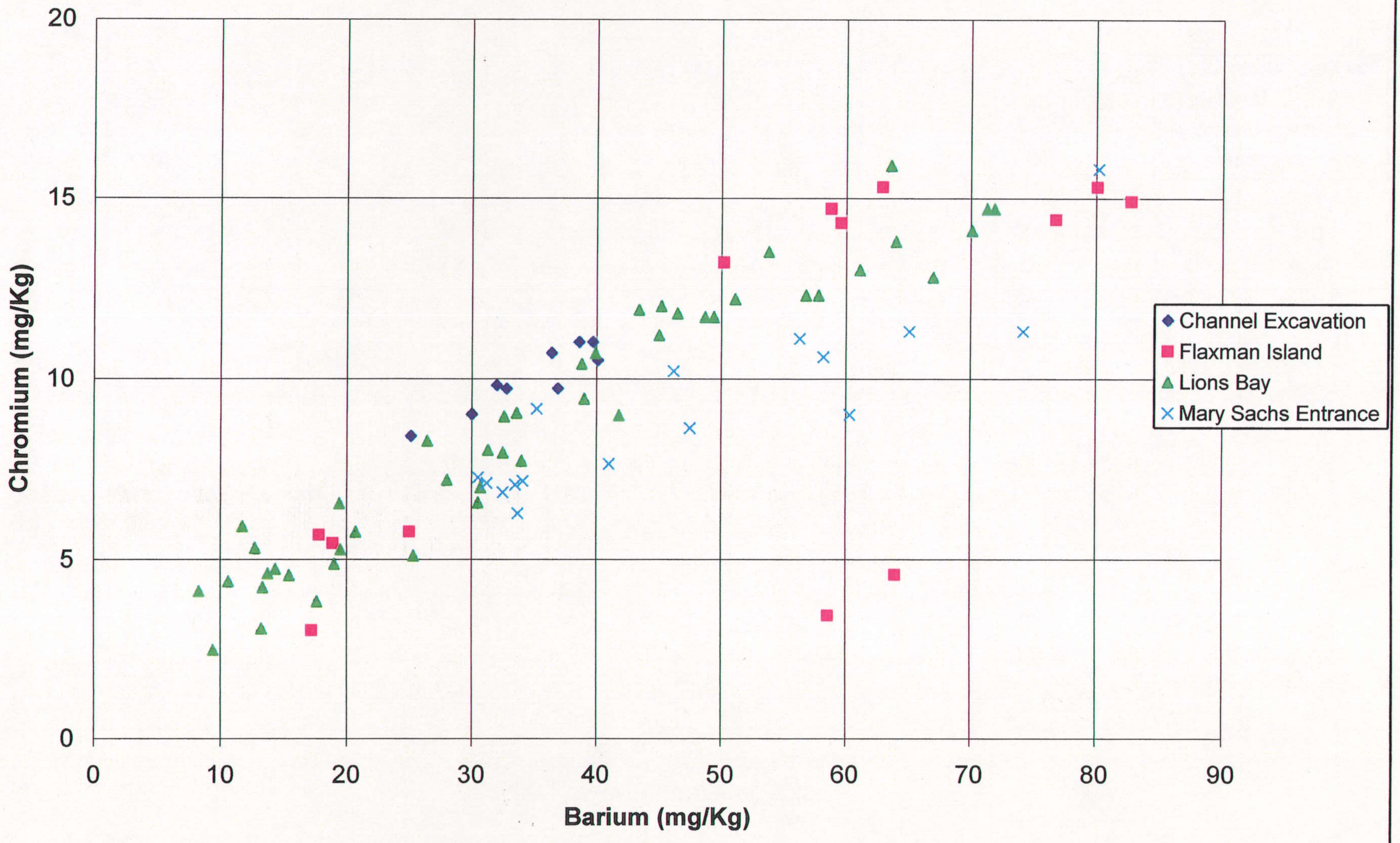


Figure 3-2
Chromium vs Nickel

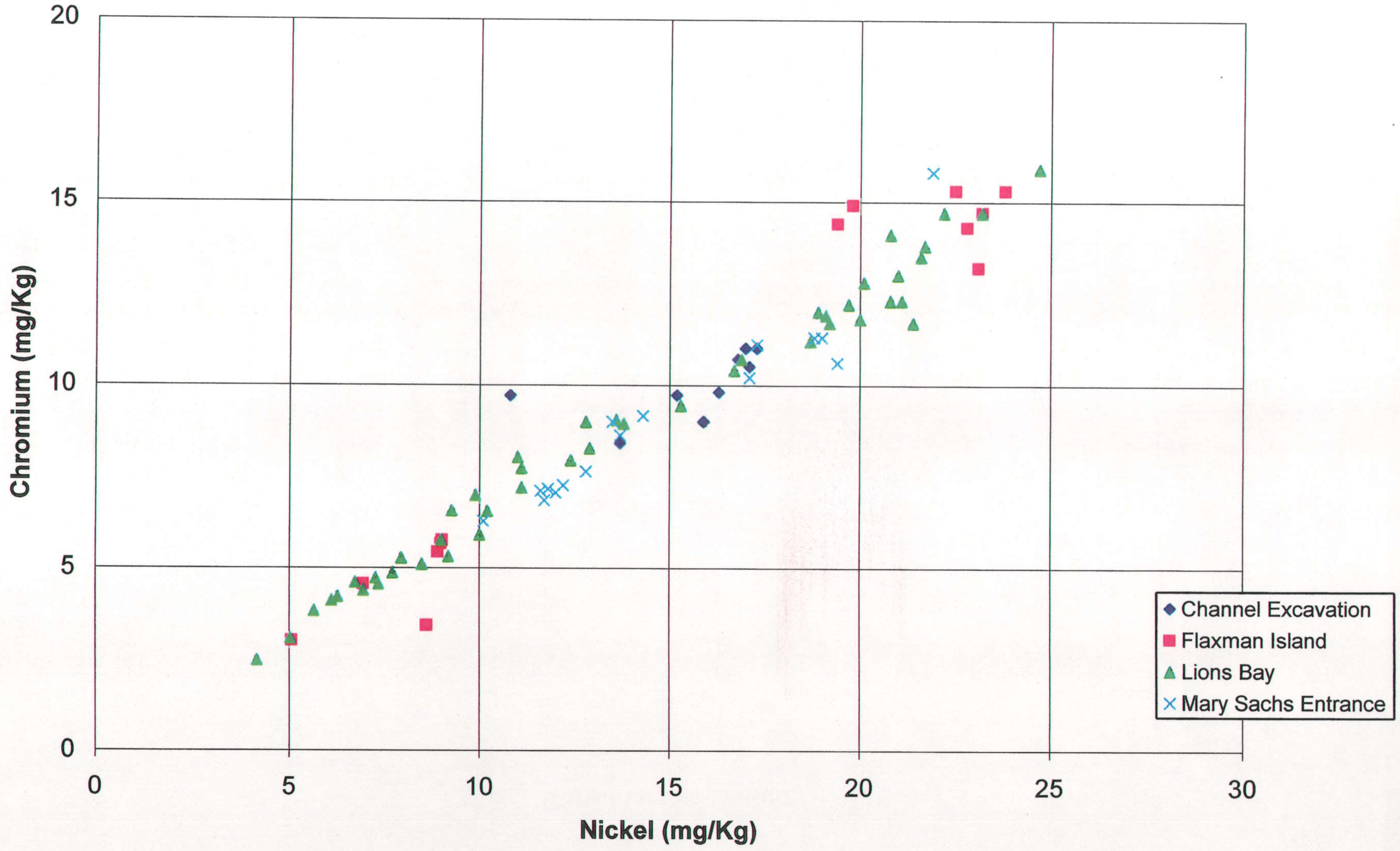


Figure 3-3
Chromium vs Zinc

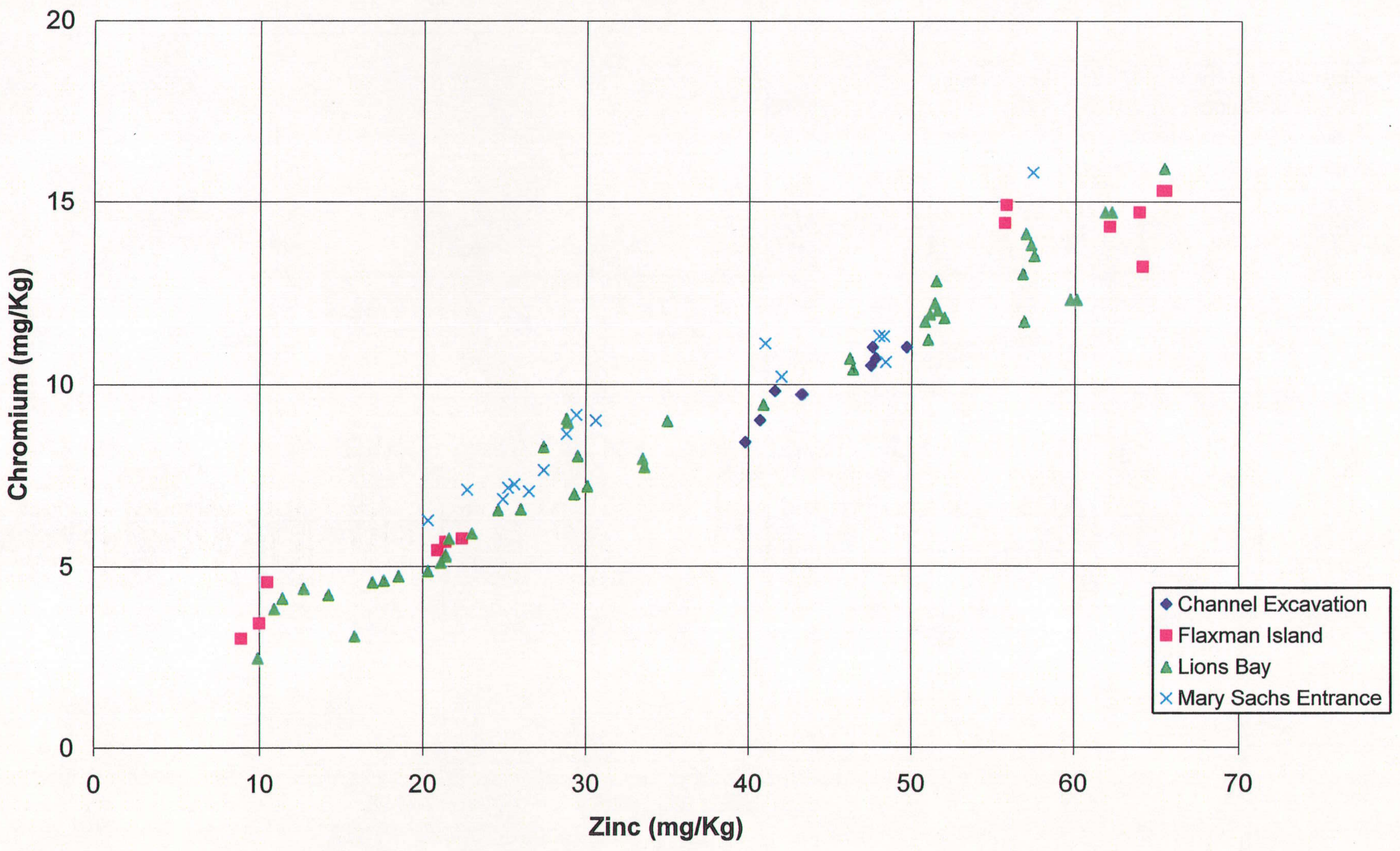


Figure 3-4
Nickel vs Zinc

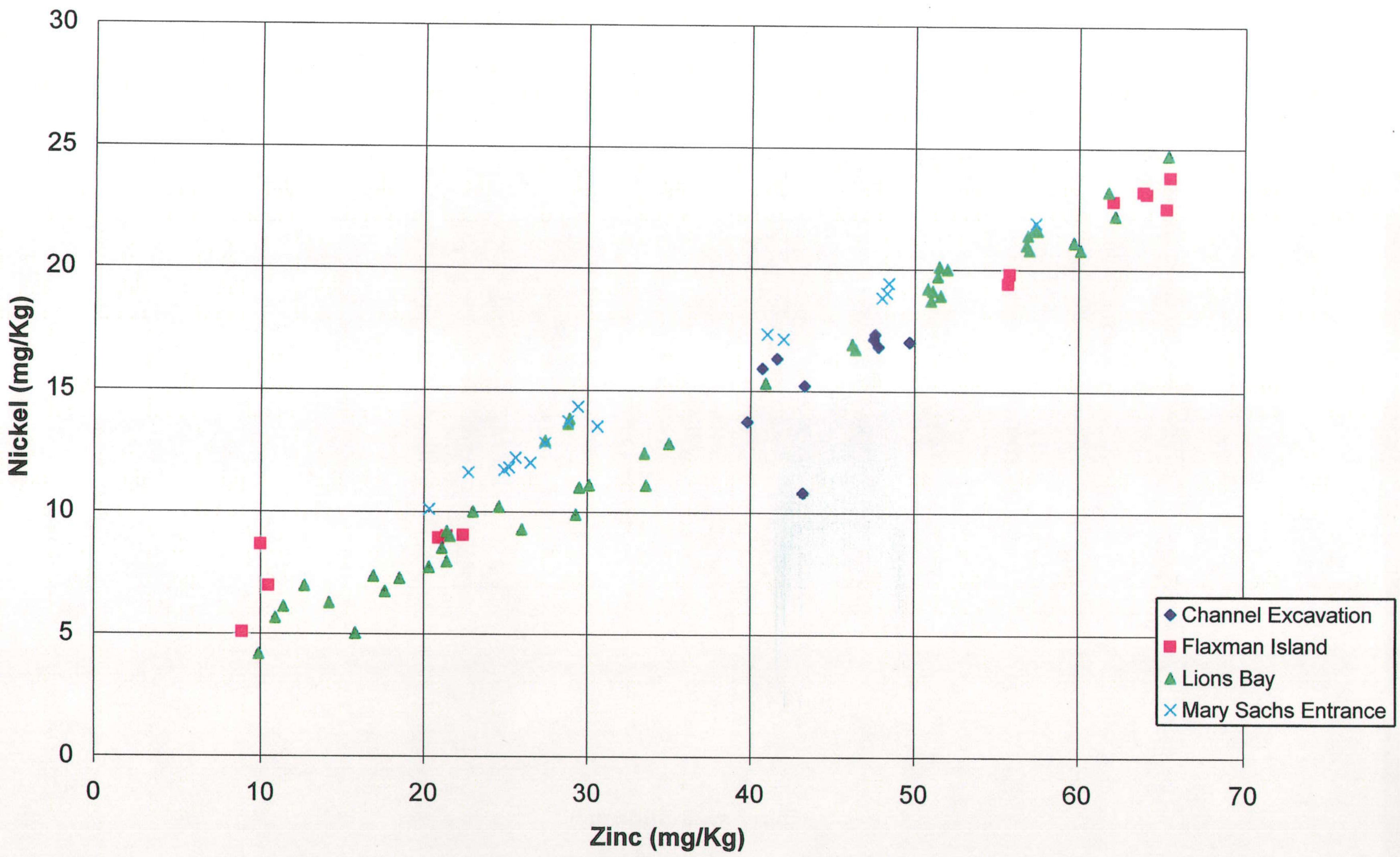


Figure 3-5
Mercury vs Percent Fines

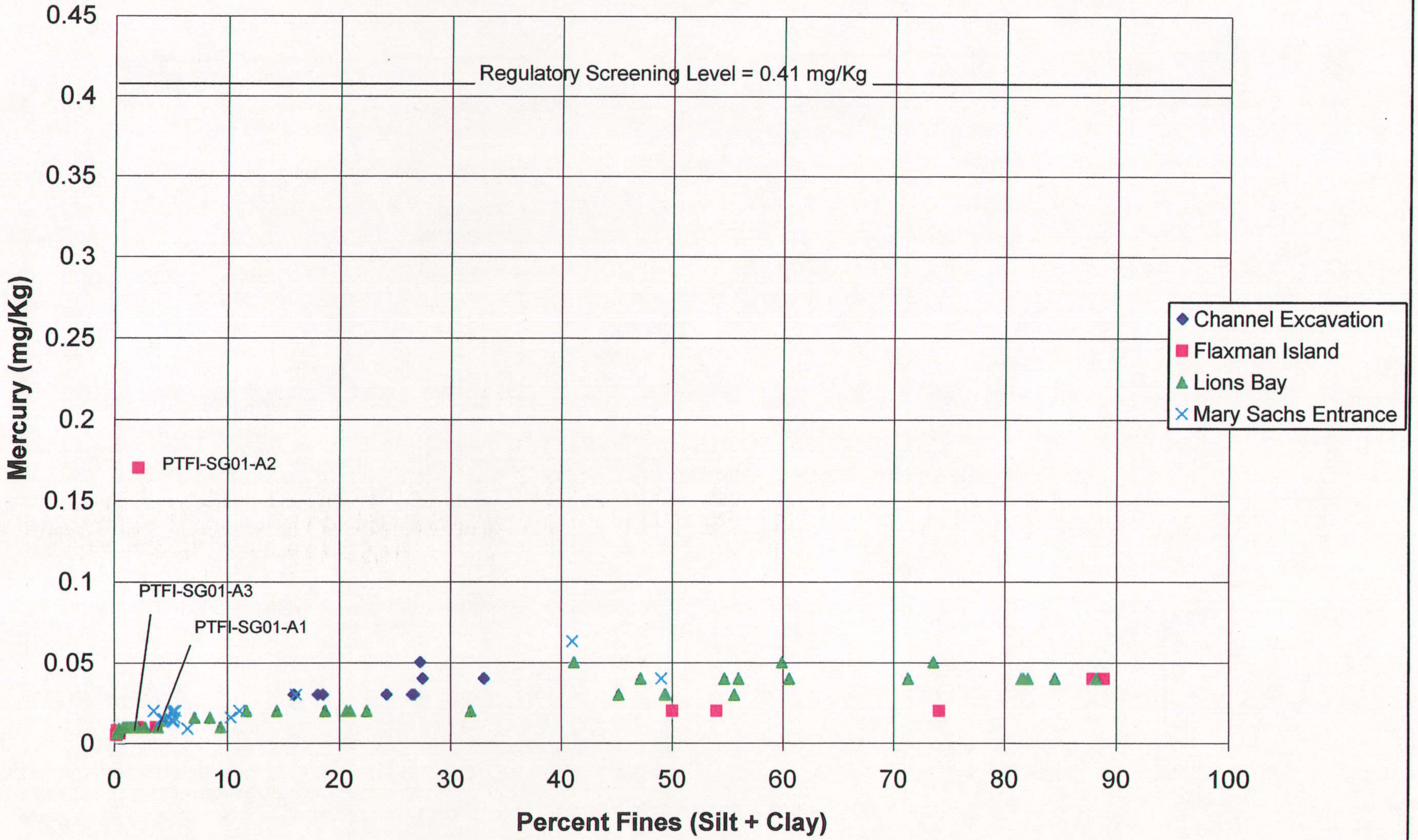


Figure 3-6
Total PAH vs Percent Fines

Note: Screening level for total low density PAHs is 5,200 ug/kg and 12,000 ug/kg for high density PAHs.

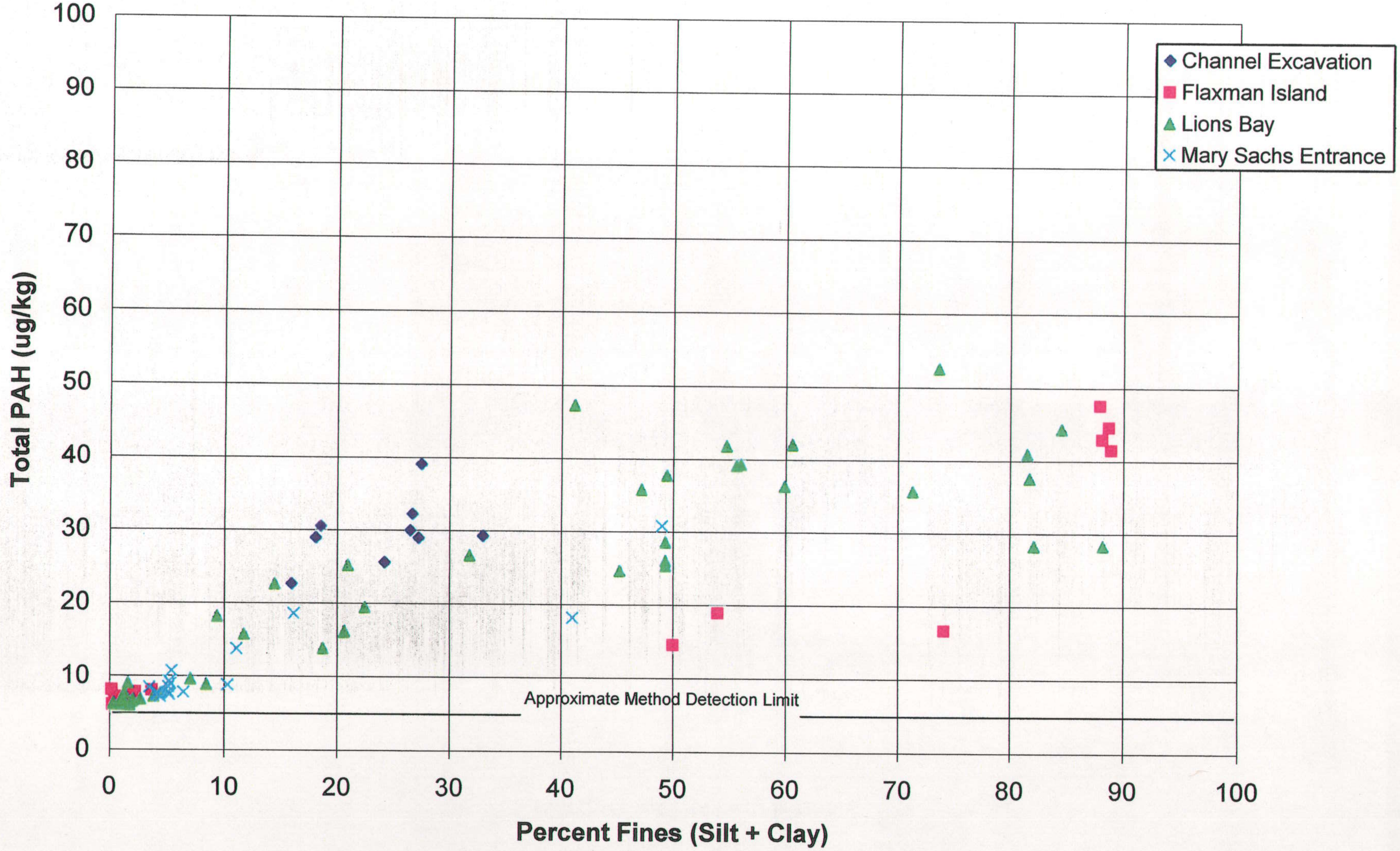


Figure 3-7
Phenol vs Percent Fines

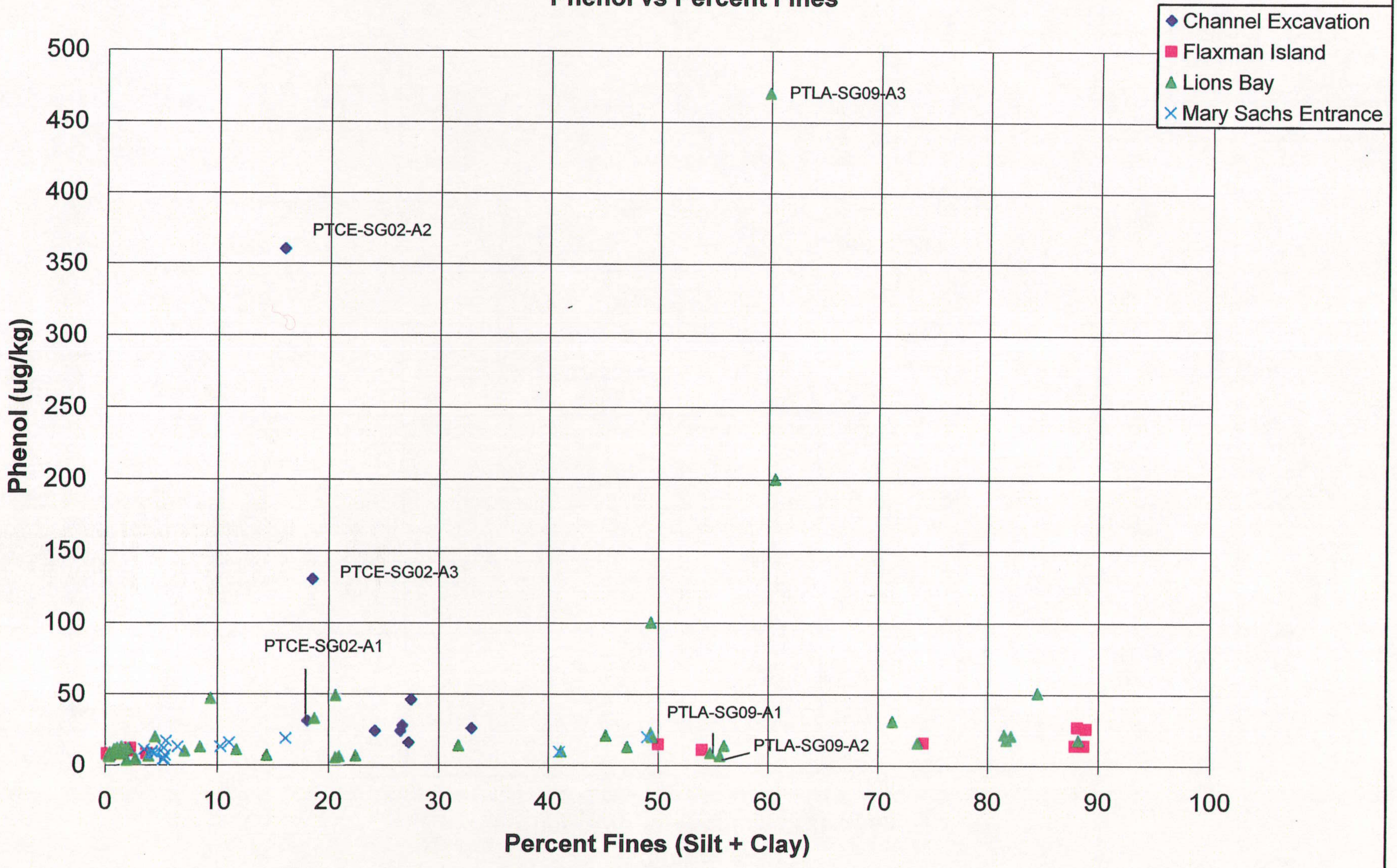


Figure 3-8
Phenol vs Ammonia as Nitrogen

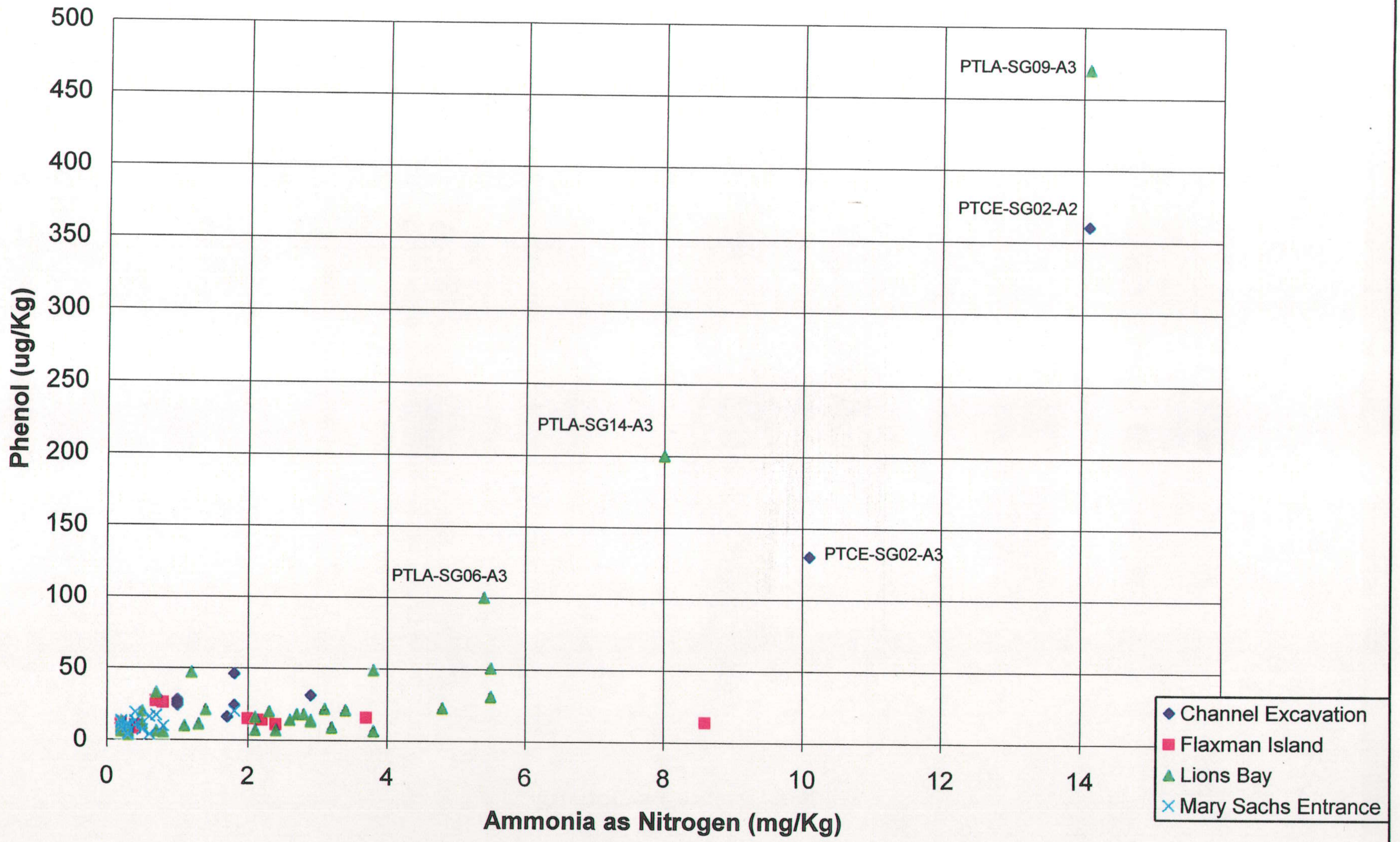


Figure 3-9
Ammonia as Nitrogen vs Percent Fines

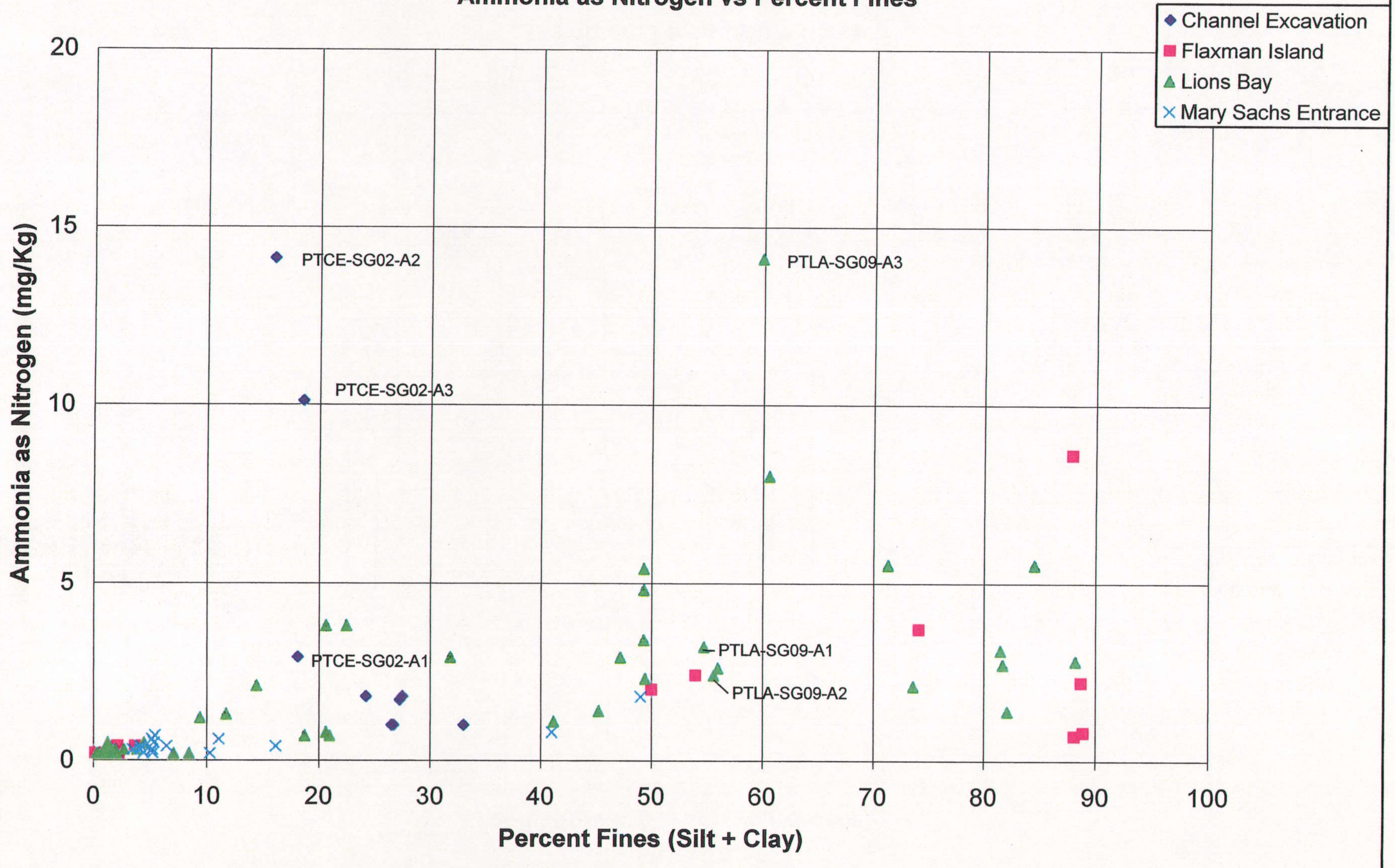


Figure 3-10
Total Organic Carbon vs Percent Fines

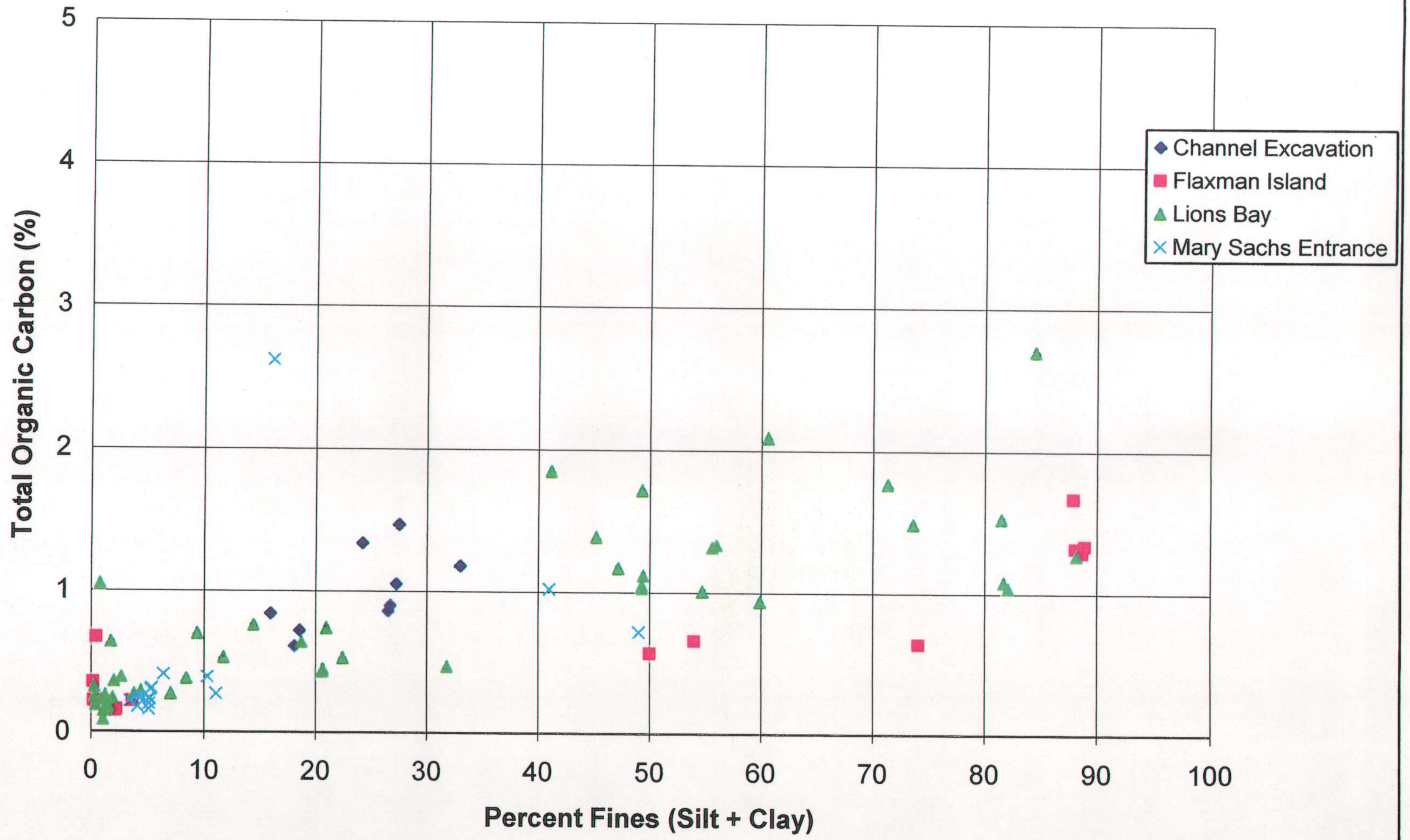


Figure 3-11
Total Volatile Solids vs Percent Fines

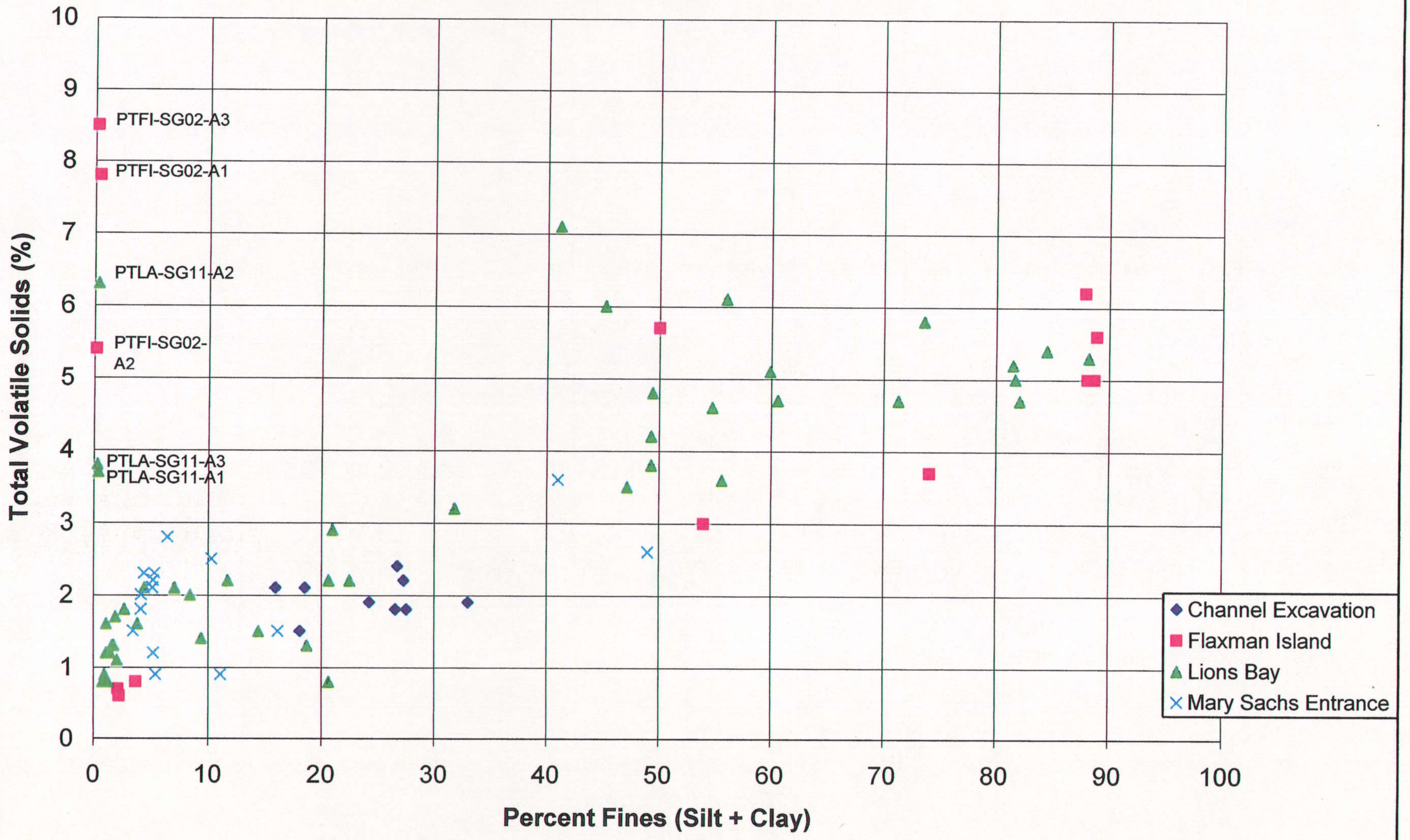
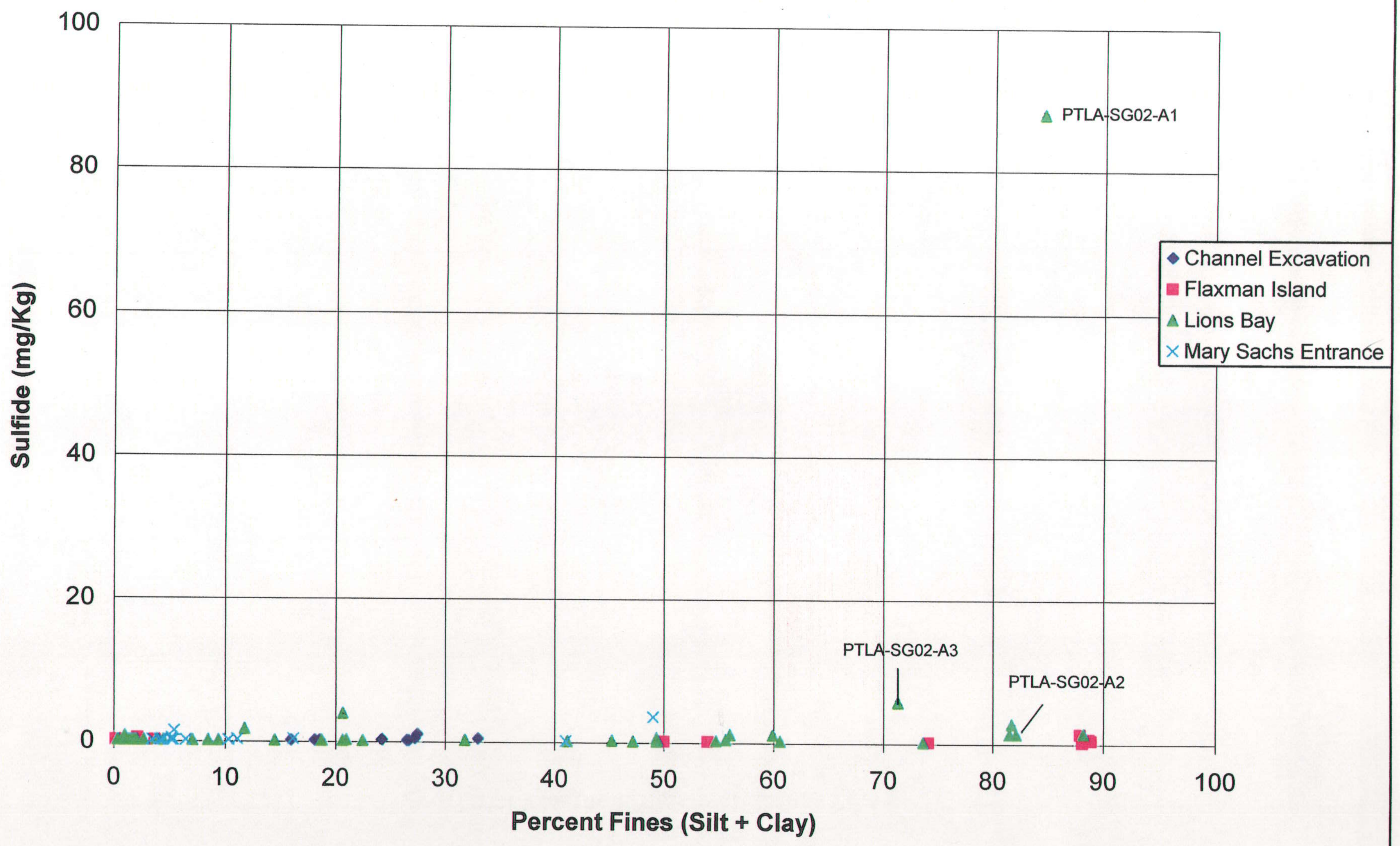


Figure 3-12
Sulfide vs Percent Fines



3.0 FINDINGS

The EPA and Corps have not promulgated guidance for environmental evaluation of dredging activities specific to Alaska. However, guidance exists for the Lower Columbia River and other Pacific Northwest estuaries in the form of the *Dredged Material Evaluation Framework* (Corps et al., 1998). EPA Region 10 directed that this guidance be applied to the Point Thomson sampling program. Screening levels for specific chemicals of concern (CoCs) are provided in Table 3-1. Data are presented in Appendix D and a summary of laboratory quality assurance and quality control (QA/QC) is provided as Appendix E.

Table 3-1. Sediment Chemistry Results and Screening Levels

Chemical	Screening Level[1]	Minimum Result	Maximum Result	Frequency of Detection (per total # samples)	Frequency of Detection
Physical Properties and Conventional Chemicals of Concern					
Total Solids (Percent)	--	64.4	97.2	84 / 84	100%
Total Volatile Solids (Percent)	--	0.6	8.5	84 / 84	100%
Total Organic Carbon (Percent)	--	0.09	2.7	84 / 84	100%
Total Sulfides (mg/kg)	--	ND (0.2)	88	45 / 84	54%
Ammonia as Nitrogen (mg/kg)	--	ND (0.2)	14.1	67 / 87	77%
Metals (mg/kg)					
Antimony	150	ND (0.04)	0.16	71 / 84	84%
Arsenic	57	1.9	10.2	84 / 84	100%
Barium	--	8.3	82.8	84 / 84	100%
Cadmium	5.1	0.03	0.36	84 / 84	100%
Chromium	--	2.47	15.9	84 / 84	100%
Copper	390	2.31	17.8	84 / 84	100%
Iron	--	2,980	18,700	84 / 84	100%
Lead	450	1.60	10.5	84 / 84	100%
Mercury	0.41	ND (0.01)	0.17	72 / 84	86%
Nickel	140	4.17	24.7	84 / 84	100%
Silver	6.1	ND (0.01)	0.24	83 / 84	99%
Zinc	410	8.9	65.5	84 / 84	100%
Low Molecular Weight Polynuclear Aromatic Hydrocarbons (µg/Kg)					
2-Methylnaphthalene	670	ND (0.45)	12	64 / 84	76%
Acenaphthene	500	ND (0.44)	0.65	4 / 84	4.8%
Acenaphthylene	560	ND (0.33)	ND (0.5)	0 / 84	0%
Anthracene	960	ND (0.44)	0.80	5 / 84	6%
Fluorene	540	ND (0.35)	2.4	48 / 84	57%
Naphthalene	2,100	ND (0.44)	5.9	62 / 84	74%
Phenanthrene	1,500	ND (0.34)	13	77 / 84	92%
Total LPAH	5,200	ND (0.66)	34.7	78 / 84	93%

Table 3-1 (Continued). Sediment Chemistry Results and Screening Levels

Chemical	Screening Level[1]	Minimum Result	Maximum Result	Frequency of Detection (per total # samples)	Frequency of Detection
High Molecular Weight Polynuclear Aromatic Hydrocarbons (µg/Kg)					
Benzo(a)anthracene	1,300	ND (0.27)	0.99	28 / 84	33%
Benzo(a)pyrene	1,600	ND (0.3)	0.93	13 / 84	15%
Benzo(b)fluoranthene	3,200	ND (0.29)	2.8	56 / 84	67%
Benzo(k)fluoranthene	3,200	ND (0.31)	0.66	6 / 84	7%
Benzo(g,h,i)perylene	670	ND (0.21)	2.1	47 / 84	59%
Chrysene	1,400	ND (0.32)	6.5	69 / 84	82%
Dibenzo(a,h)anthracene	230	ND (0.37)	0.62	4 / 84	4.8%
Fluoranthene	1,700	ND (0.35)	2.3	51 / 84	61%
Indeno(1,2,3-cd)pyrene	600	ND (0.32)	1.0	11 / 84	13%
Pyrene	2,600	ND (0.23)	2.8	63 / 84	75%
Total HPAH	12,000	ND (0.56)	18.72	70 / 84	83%
Chlorinated Hydrocarbons (µg/Kg)					
1,3-Dichlorobenzene	170	ND (0.74)	ND (1.2)	0 / 84	0%
1,4-Dichlorobenzene	110	ND (0.85)	ND (1.3)	0 / 84	0%
1,2-Dichlorobenzene	35	ND (0.67)	ND (1.1)	0 / 84	0%
1,2,4-Trichlorobenzene	31	ND (2.7)	10	1 / 84	1%
Hexachlorobenzene (HCB)	22	ND (3.1)	13	1 / 84	1%
Phthalates (µg/Kg)					
Dimethyl Phthalate	1,400	ND (2.7)	ND (4)	0 / 84	0%
Diethyl Phthalate	1,200	ND (3.2)	5.7	2 / 84	2.4%
Di-n-butyl Phthalate	5,100	ND (2.7)	10	12 / 84	14%
Butyl Benzyl Phthalate	970	ND (1.5)	8.7	7 / 84	8.3%
Bis(2-ethylhexyl) Phthalate	8,300	ND (2)	310	68 / 84	81%
Di-n-octyl Phthalate	6,200	ND (1.7)	ND (2.6)	0 / 84	0%
Phenols (µg/Kg)					
Phenol	420	3.4	**470**	84 / 84	100%
2-Methylphenol	63	ND (2.5)	ND (3.7)	0 / 84	0%
4-Methylphenol	670	ND (2.5)	140	41 / 84	49%
2,4-Dimethylphenol	29	ND (16)	ND (24)	0 / 84	0%
Pentachlorophenol	400	ND (2.4)	43	22 / 84	26%
Miscellaneous Extractables (µg/Kg)					
Benzyl Alcohol	57	ND (2.9)	3.4	1 / 84	1%
Benzoic Acid	650	24	230	84 / 84	100%
Dibenzofuran	540	ND (3)	3.4	1 / 84	1%
Hexachloroethane	1,400	ND (2.4)	9.8	1 / 84	1%
Hexachlorobutadiene	29	ND (2.9)	ND (4.3)	0 / 84	0%
N-Nitrosodiphenylamine	28	ND (2.5)	ND (3.8)	0 / 84	0%

Table 3-1 (Continued). Sediment Chemistry Results and Screening Levels

Chemical	Screening Level[1]	Minimum Result	Maximum Result	Frequency of Detection (per total # samples)	Frequency of Detection
Pesticides and PCBs (µg/Kg)					
Total DDT (sum of 4,4'-DDD, 4,4'-DDE and 4,4'-DDT)	6.9	ND (0.16)	ND (0.39)	0 / 84	0%
Aldrin	10	ND (0.24)	0.78	1 / 84	1%
a-Chlordane	10	ND (0.12)	0.15	1 / 84	1%
Dieldrin	10	ND (0.32)	ND (0.48)	0 / 84	0%
Heptachlor	10	ND (0.14)	ND (0.21)	0 / 84	0%
g-BHC (Lindane)	10	ND (0.25)	1.8	3 / 84	3.6%
Total PCBs	130	ND (0.85)	ND (1.3)	0 / 84	0%

NOTES:
[1] *Dredged Material Evaluation Framework, Lower Columbia River Management Area* (November 1998)
-- No screening level available
Bold Indicates result exceeds screening level
ND Analyte not detected, the method detection limit (MDL) is shown in parentheses as applicable

Samples were collected from location PTCE-SB02 within the proposed channel and from stations PTCE-SG01 and PTCE-SG02, which were adjacent to the proposed channel. Although the adjacent samples were not collected from the proposed channel itself, due to their proximity, the data from all three stations are useful for providing an initial indication of the material to be dredged. Sediment sampling in the proposed winter and summer dumping zones and around Flaxman Island was conducted to provide chemical and physical information on the pre-development or "baseline" conditions. A primary sample and four replicate samples were collected from each location, with two of the replicates designated for archival at the laboratory in the event that additional analyses are needed. It should be noted that as dredging is not anticipated in the proposed dumping zones and near Flaxman Island, comparing results to dredged material screening levels is contrary to the intended use of the screening levels. However, since many of the detected analytes occur naturally in sediment, using the screening levels provides a simple method of identifying background concentrations. Three field duplicate samples were also collected during the summer phase.

- The physical and chemical characteristics of the nine surface sediment samples collected in the channel excavation area were similar in composition to samples collected from the proposed ocean dumping zones and near Flaxman Island.
- All CoCs from the nine channel excavation samples were below screening levels.
- All CoCs from the proposed dumping zones and near Flaxman Island were below screening levels with the exception of one phenol sample collected from the proposed winter dumping zone that was slightly above the screening level.

3.1 PHYSICAL PROPERTIES

- Fine-grained sediments were concentrated south of Flaxman Island and in the deeper water south of the Maguire Islands and west of Mary Sachs Entrance.

- Percent fines for the nine samples collected from the proposed channel excavation area ranged from 15.9 to 33.0 with a mean of 24.2, indicating that the material is not excluded from further testing. According to *Dredged Material Evaluation Framework (Corps et. al., 1998*), material that is less than 20% fines and that has a total volatile solids content less than 5.0% does not require chemical or biological testing due to its low potential to contain pollutants.

- Percent fines (the sum of silt and clay) for the samples in the proposed dumping zones and near Flaxman Island ranged from 0.19 to 88.9 with a mean of 30.2.

3.2 CHEMICAL PROPERTIES – METALS

- Relationships between metal concentrations and percent fines were found to be roughly proportional (see Appendix F). These correlations are similar to those of previous investigations in the region where metal concentrations were typically higher in fine-grained sediments because of their greater surface area. Since the concentrations of metals were found to increase with increased percentage of fine-grained sediments, areas sheltered from wave action and current tend to have higher metals concentrations.

- Correlation of concentrations of barium, chromium, iron, lead, nickel, and zinc demonstrated various levels of proportionality, with the strongest correlations existing between barium, chromium, nickel, and zinc (see Figures 3-1 through 3-4).

- Although below the regulatory screening level of 0.41 milligrams per kilogram (mg/Kg), the reported concentration of total mercury for sample PTFI-SG01-A2 of 0.17 mg/Kg appears anomalously high. Figure 3-5 presents the relationship between mercury and percent fines and shows that the anomalous result is associated with low percent fines and very low corresponding replicate sample concentrations. Thus, it is concluded that PTFI-SG01-A2 is a statistical outlier and is not representative of the site.

- Barium and iron were analyzed to establish baseline data for drilling waste related metals. Barium and iron results from samples collected near the Flaxman Island reserve pits do not appear elevated above other results obtained from locations located further from potential drilling waste disposal areas.

3.3 Chemical Properties – Polynuclear Aromatic Hydrocarbons (PAH)

Most detections of PAH were less than the method reporting limit. Figure 3-6 presents total PAH plotted against percent fines (total PAH was calculated by summing the result for each of the compounds, and assigning a value of the method detection limit [MDL] to each non-detect). The figure shows that a linear relationship exists between total PAH and percent fines.

3.4 Chemical Properties – Phthalates

Detections of phthalates were less than the method reporting limit except for bis(2-ethylhexyl)phthalate in one sample. Phthalates are classified by EPA as common laboratory contaminants (EPA, 2001).

3.5 Chemical Properties – Phenols

Phenol, 4-methylphenol, and pentachlorophenol were detected in sediment samples. Phenol was detected in sediment sample PTLA-SG09-A3 (potential ocean dump area sample) at a concentration of 470 micrograms per kilogram (μg/Kg), which exceeds the screening level of 420 μg/Kg. The co-located replicate samples for this location (A1 and A2) had reported concentrations of 9 J and 6.8 J, respectively. (The "J" flag indicates that the detection was less than the method reporting limit yet greater than the detection limit). Following initial reporting, the two archived replicate samples PTLA-SG09-A4 and A5 collected from this location were also analyzed for phenol with results of 10 J and 19 J μg/Kg, respectively. Phenol is used in manufacturing processes as an ingredient in many products, and is also found in nature in animal wastes and decomposing organic material.

- Phenol was detected in each sample associated with this project, including the aqueous laboratory prepared equipment blanks and the field equipment rinsate blanks. Most detections were less than the method reporting limit. Although method and rinsate blank concentrations were extremely low, they appear to indicate that some level of laboratory or field contamination occurred. Detections in the method blanks suggest the presence of laboratory contamination since method blanks are prepared in the laboratory and do not travel to the field. Field rinsate results were similar in concentration to method blanks, suggesting that contributions of field contamination to the samples was minimal or did not occur. Furthermore, no phenol containing materials were known to be present in the field during sampling activities. Although it appears that some low-level laboratory contamination of the aqueous blanks may have occurred, it is very unlikely that laboratory contamination caused the elevated phenol detections reported for sediment samples.

- As presented above, phenol is present in nature in animal wastes and decaying organic matter. The elevated sample was described as silt with organics (organic matter) and benthic organisms. Ammonia as nitrogen is also present in nature in animal wastes and decaying organic matter, and was analyzed in each sediment sample. Although the relationship between phenol and percent fines does not appear proportional (see Figure 3-7), correlating phenol to ammonia as nitrogen displays a linear trend as shown in Figure 3-8 with each of the five phenol detections of 100 µg/Kg or more associated with ammonia as nitrogen concentrations greater than 5 mg/Kg. As there are no known anthropogenic sources near the study area for phenol or ammonia as nitrogen, it appears probable that inclusion of animal wastes or other decomposing organic material could have occurred in some samples. As stated earlier, the grab samples from each location were collected from separate sampler drops, and the distance between co-located samples was likely several feet due to vessel swing on anchor. Intuitively, the amount of animal waste in sediment would vary significantly horizontally and vertically due to mobility of benthic organisms. Thus it appears likely that the sample that exceeded the screening level contained more animal waste or decaying organic matter than co-located samples, perhaps causing in the elevated phenol and ammonia as nitrogen concentrations.

3.6 CHEMICAL PROPERTIES – PESTICIDES AND POLYCHLORINATED BYPHENYLS (PCBS)

- No PCB compounds were detected in any samples.
- No pesticides were detected in samples collected from the proposed channel excavation area.
- The pesticides aldrin and a-chlordane were detected in one sample each and g-BHC (lindane) was detected in three samples. Except for one of the lindane detections, the reported concentrations were below the method reporting limit. It should also be noted that the two highest lindane results are suspect as the results were not reproduced by the secondary column confirmation.

3.7 CHEMICAL PROPERTIES – CONVENTIONAL CHEMICALS OF CONCERN

- Ammonia as Nitrogen: Concentrations of ammonia as nitrogen ranged from 0.2 to 14.1 mg/Kg. As shown on Figure 3-9, the lowest concentrations were found in samples with the lowest percent fines; however, proportional relationship with percent fines ceased to exist past approximately 15% fines. Spatial correlations could not be distinguished.
- Total Organic Carbon (TOC): TOC ranged from 0.09 to 2.7 percent. The relationship between TOC and percent fines resulted in a linear trend (see Figure 3-10).
- Total Volatile Solids (TVS): TVS ranged from 0.6 to 8.5 mg/Kg. The relationship between TVS and percent fines resulted in a linear trend except for six notable outliers. All three replicate samples collected from stations PTFI-SG02 and PTLA-SG11 had TVS results that appeared abnormally high when compared to their very low percent fines (see Figure 3-11).
- Sulfides: Sulfides were detected in approximately half the samples at concentrations ranging from 0.2 to 88 mg/Kg. As shown on Figure 3-12, most detections of sulfide were extremely low. The detection of 88 mg/Kg appears to be an outlier.

4.0 Initial Analysis

Chemical concentrations appear to be naturally occurring with no evidence of any anthropogenic contribution. This can be attributed to the following factors:

- The relatively low concentrations are usually near the MDL; and
- The relationships between CoCs (metals, hydrocarbons, etc.) are proportional to the increasing percentage of fine-grained sediment.

Results from biased samples located near Flaxman Island drill sites were similar to other sample results.

The proposed ocean dumping zones have been adequately characterized. The winter sampling event will focus on characterizing surficial and subsurface sediment in the proposed channel excavation area.

5.0 REFERENCES

U.S. Army Corps of Engineers, et al. 1998. *Dredged Material Evaluation Framework: Lower Columbia River Management Area.* URL https://www.nwp.usace.army.mil/ec/h/hr/final/toc.htm. November 1998.

U.S. Environmental Protection Agency 2001. Contract Laboratory Program. *National Functional Guidelines for Low Concentration Organic Data Review.* June 2001.

URS 2002a. *Ocean Dumping Evaluative Work Plan, Draft Revision 1.* Prepared for ExxonMobil Production Company and the Point Thomson Unit Owners by URS Corporation. July 3, 2002.

URS 2002b. *Ocean Dumping Evaluative Safety, Health and Environmental Plan.* Prepared for ExxonMobil Production Company and the Point Thomson Unit Owners by URS Corporation. July 15, 2002.

Appendix A

POINT THOMSON GAS CYCLING PROJECT

OCEAN DUMPING EVALUATION WORK PLAN

DRAFT REVISION 1

Prepared for

ExxonMobil

ExxonMobil Production Company
P.O. Box 196601
Anchorage, AK 99519-6601

and

The Point Thomson Unit Owners

July 3, 2002

Prepared by:

URS

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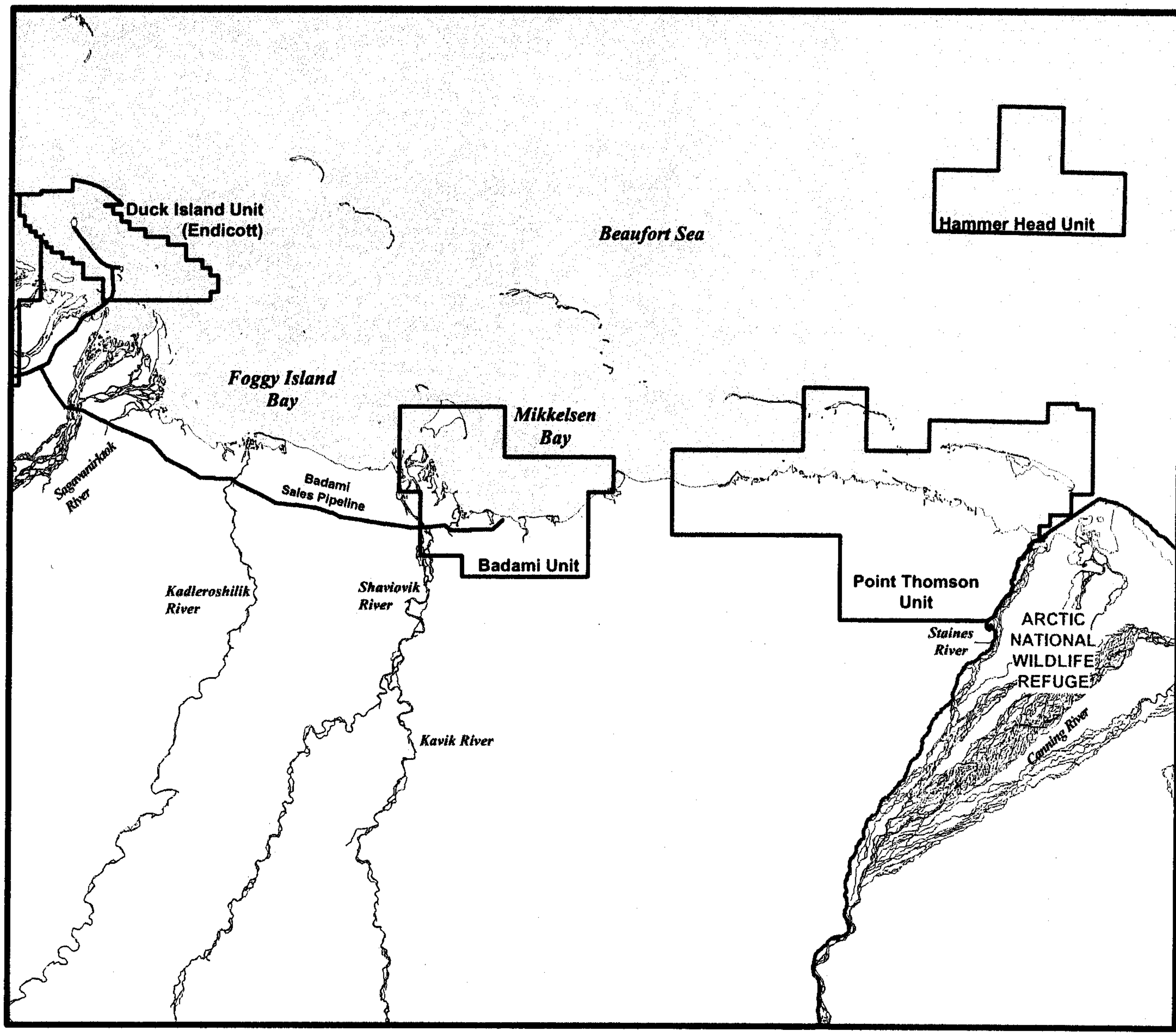
1.0 INTRODUCTION

ExxonMobil Production Company (ExxonMobil) and the Point Thomson Unit Owners plan to develop the Point Thomson Gas Cycling Project for production and transport of sales-quality gas condensate to the Trans-Alaska Pipeline System. The Thomson Sands Reservoir will be developed from four gravel pads, an in-field road system, an airstrip, a gravel mine, and a 750-ft dock, all of which will be situated on the mainland between Brownlow Point and Point Hopson (Figure 1-1). As part of this development, camp and facility modules will be transported to the project site by sea-lift using oceangoing barges and tugs. The end of the Point Thomson dock will be located in relatively shallow waters; therefore, a channel adjacent to the end of the dock must be dredged to allow barges to access the dock.

The Marine Protection, Research, and Sanctuaries Act (MPRSA), otherwise known as the Ocean Dumping Act, specifies that prior to all proposed dumping of dredged material into ocean waters, the potential environmental impact of such activities must be determined. The U.S. Environmental Protection Agency (EPA), requests that ExxonMobil conduct baseline sediment sampling and analyses to support the dredging of a channel extending from the proposed 750-foot (ft) dock and the subsequent ocean disposal of channel spoils. This work plan was prepared to guide field personnel in the sampling and analysis of ocean sediments associated with dredging and dumping activities.



ExxonMobil

Point Thomson Gas Cycling Project

Figure 1-1

Point Thomson Vicinity Map

N

6 0 6

Miles

Base maps provided by BPXA Cartography.

URS Anchorage, Alaska

2.0 OBJECTIVES

The goal of the ocean sediment sampling and analysis is to determine existing background concentrations and variability of selected physical and chemical parameters of sediment anticipated to be excavated and disposed of via ocean dumping, and to characterize surficial sediments within the general area or zone from which a specific ocean dumping site will be considered for designation. This sampling program has three objectives, which are based on the EPA and the U.S. Army Corps of Engineers, Alaska District (Corps) requirements:

- Collect representative samples of the proposed excavated material to ascertain the grain-size distribution, including silt and clay-sized particles to support a modeling effort that would be used to predict suspended sediment transport associated with ocean dumping activities.
- Collect representative sediment chemistry samples of the proposed excavated material to determine if any of the chemicals of concern (CoCs) identified by the EPA exceed regulatory screening levels as presented in the *Dredged Material Evaluation Framework, Lower Columbia River Management Area* (Corps et al. 1998a).
- Collect representative physical properties (i.e., grain-size distribution) and sediment chemistry samples of sediments within the zone from which a specific ocean dumping site will be considered for designation. This data will be used to determine compatibility with the spoil material to be dumped.

3.0 BACKGROUND INFORMATION

The *Point Thomson Gas Cycling Project Environmental Report* (URS 2001a) was submitted to the EPA, Corps and other interested regulatory agencies for review. The environmental report provides extensive background data on the Point Thomson area and should be referenced for information pertaining to meteorology, geomorphology, hydrology, oceanography, marine benthos, vegetation and wetlands, fish, birds, marine mammals, terrestrial animals, threatened and endangered species, cultural resources, and socioeconomic characteristics.

3.1 REGULATORY REQUIREMENTS

The Marine Protection, Research and Sanctuaries Act of 1972, as amended (MPRSA), also known as the Ocean Dumping Act, was passed in recognition of the fact that the disposal of material into ocean waters could potentially result in unacceptable adverse environmental effects. The MPRSA criteria state that final ocean-disposal-site designation must be based on environmental studies of each site and on historical knowledge of the impact of dredged material disposal on areas similar to such sites in physical, chemical, and biological characteristics. Related federal statutes applicable to the ocean-disposal-site designation process include the National Environmental Policy Act of 1969 (NEPA), as amended; the Coastal Zone Management Act of 1972, as amended; the National Historic Preservation Act and the Endangered Species Act of 1973, as amended.

In most dredging and disposal activities throughout the United States, a previously designated Ocean Dredged Material Dump Site (ODMDS) is typically available for use. For the Point Thomson Unit area and other areas across the North Slope, no designated ODMDS has been established in the Beaufort Sea. Therefore, in order to complete the proposed Point Thomson disposal activities, ExxonMobil must go through the regulatory process (40 Code of Federal Regulations [CFR] 228) that leads to the designation of an ODMDS.

General criteria and specific factors that must be considered prior to site designation are described and evaluated per 40 CFR 228.5-6. As required by Section 104(a)(3) of the MPRSA, ocean disposal of dredged material can occur only at a site that has been designated to receive dredged material. Pursuant to Section 102(c), the EPA has the responsibility for site designation. Section 103(b), while encouraging use of EPA-designated sites where feasible, does provide for alternative site selection by the Corps when a suitable EPA-designated site is not available. However, the same Ocean Dumping Criteria (40 CFR 228.5-6) are used in the evaluation process that leads to alternative site selection and the EPA must concur with the selection. To determine the potential environmental impact of ocean dredging and dumping, environmental evaluations must be conducted in accordance with the criteria set forth in these regulations.

3.1.1 Disposal Site Designation

To initiate the process that will ultimately designate an ODMDS for project use, an area or zone must first be established from which an ODMDS could be located within an operationally and economically feasible distance from the dredging activities. The economic and operational constraints near the Point

Thomson area were evaluated to determine a feasible working zone from which a disposal site could be designated. Separate summer and winter disposal zones (Figure 3-1) were established. Ocean sediment sampling, outlined in this work plan, will be focused within these zones.

3.2 SITE ACTIVITIES AND POTENTIAL SOURCES OF CONTAMINATION

3.2.1 Past Activities

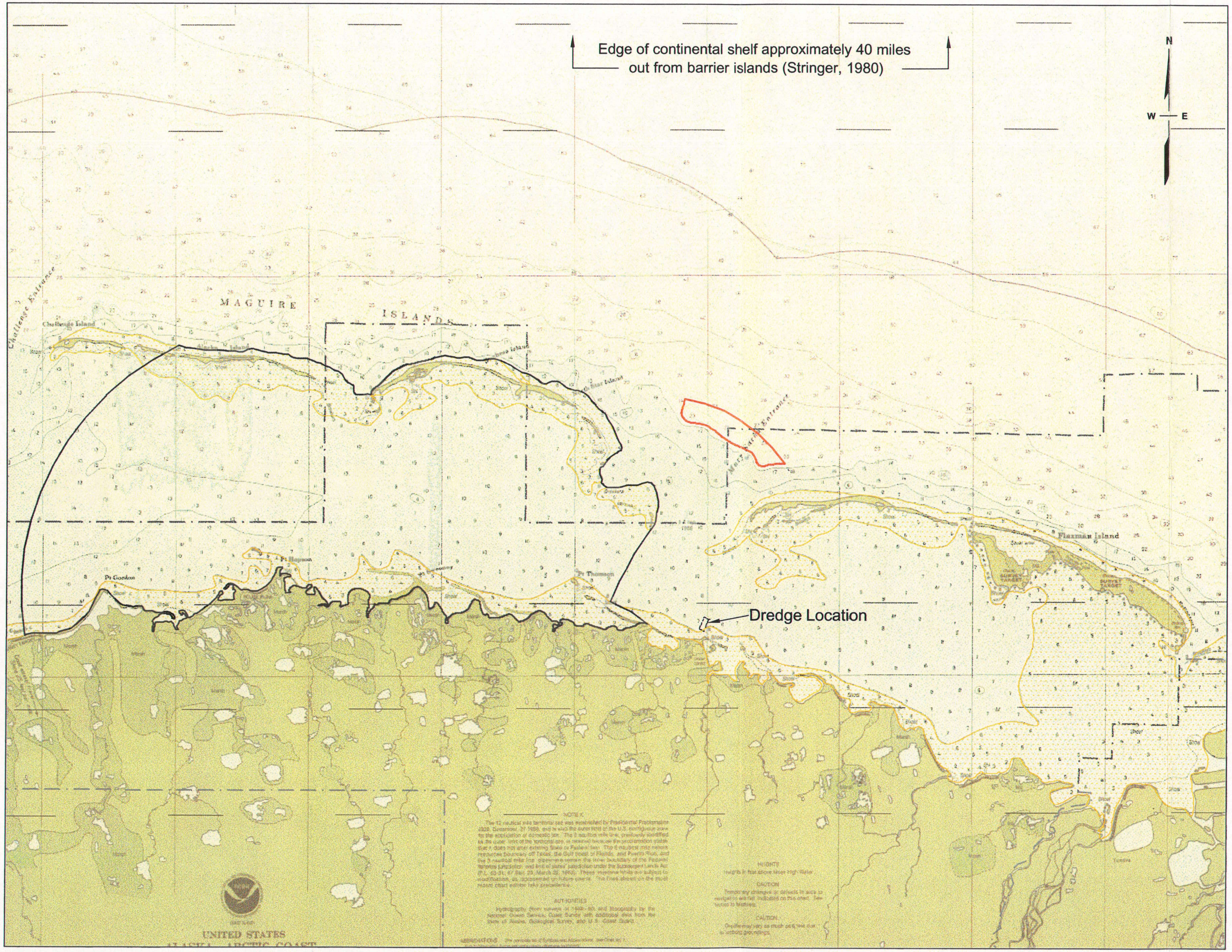
Active petroleum exploration on the barrier islands and mainland shoreline occurred between 1970 and 1982. Available records are incomplete regarding the ocean disposal of drilling muds and cuttings, and sanitary and domestic wastewater for all exploration wells; however, permits at the time of drilling typically allowed for ocean discharge of these wastes. Records available for the Point Thomson #3 exploration well, located immediately south of the proposed dock, indicated that reserve pits were used to store drilling wastes; therefore, it is unlikely that wastes were discharged into the ocean.

Past military activities along the Arctic coastal plain were typically associated with air defense radar and related communication systems. Technological improvements allowed the U.S. Department of Defense (DoD) to abandon several of the communication sites in recent years, including the Bullen Point facility located between the Point Thomson Unit and the Badami Development. There is no indication of any other DoD related activities conducted within the project area.

With the possible exception of drilling muds and cuttings, and sanitary and domestic wastewater discharged in the 1970s and the early 1980s during exploration drilling, there is no other known past potential sources of contamination.

3.2.2 Present Activities

Access to the lagoon system, known as Lions Bay, and the Point Thomson area is limited to marine vessels during the brief summer open-water season and tundra (ice road) travel vehicles during the winter. During autumn freeze-up and spring ice breakup there is virtually no surface accessibility. Prevailing currents produce a net westward drift, placing the Badami Development and the Prudhoe Bay coastal oil production facilities down current of Lions Bay. The local Native population occasionally uses Lions Bay as a pass-through area during subsistence hunting and fishing. With the exception of the 2001/2002 winter ice road, and occasional geophysical exploration surveys, there are no industrial activities operating within Lions Bay, its associated barrier islands, or along the immediate mainland shore. In the winter, an ice road can be constructed to connect ongoing activities within the Point Thomson Unit (including Flaxman Island) to the Badami Facility and the Prudhoe Bay in-field road system. To date, there is no record of spills occurring along the ice road route.



ExxonMobil

Point Thomson Gas Cycling Project

Figure 3-1
Ocean Dumping Siting Zones

LEGEND

Summer Zone of Siting Feasibility

Winter Zone of Siting Feasibility

Bottom-fast Ice (0-6 foot isobath)

Unit Boundary

0 3750 7500 15000
SCALE IN FEET

Source: Base map from the National Oceanic and Atmospheric Administration (NOAA) nautical chart No. 16045, revised in 1996

URS Anchorage, Alaska

Pt_Thomson_ZSF.dwg SRJ 6-11-02

4.0 PROGRAM DESIGN

4.1 SEDIMENT QUALITY RANKING

The EPA and Corps have not promulgated guidance for environmental evaluation of dredging activities specific to Alaska. However, such guidance does exist for the Lower Columbia River and other Pacific Northwest estuaries in the document titled *Dredged Material Evaluation Framework, Lower Columbia River Management Area* (Corps et al., 1998a). In this document, the EPA, Corps, and state participants developed a ranking scheme that classifies proposed dredged materials as a function of known chemical and physical properties (Table 4-1). EPA Region 10 directed that these classifications be used for the design of this sampling program.

Table 4-1. Management Area Ranking Definitions (Corps et al. 1998)

Ranking	Parameters
Exclusionary	Available data indicate coarse-grained sediment with at least 80 percent sand retained in a No. 230 sieve and a total volatile solids content of less than 5.0 percent. Locations sufficiently removed from potential sources of sediment contamination based on historical information and/or best professional judgment. Typical locations include the mouth and mainstream channel of the Lower Columbia River.
Low	Available data indicate low concentrations of CoCs and/or no significant response in biological tests. Locations with higher percentage of finer-grained sediments and organic material but few sources of potential contamination. Typical locations include adjacent entrance channels, rural marinas, navigable side sloughs, and small community berthing facilities.
Low-Moderate	Available data indicate a "low" rank may be warranted but data are not sufficient to validate the ranking.
Moderate	Available data indicate moderate concentrations of CoCs in sediments in a range known to cause adverse response in biological tests. Locations where sediments are subject to several sources of contamination, or where existing or historical use of the site has the potential to cause sediment contamination. Typical locations include urban marinas, fueling and ship berthing facilities, areas downstream of major sewer or stormwater outfalls, and medium-sized urban areas with limited shoreline industrial development.
High	Available data indicate high concentrations of CoCs in sediments and/or significant adverse responses in at least one of the last two cycles of biological tests. Locations where sediments are subject to numerous sources of sediment contamination, including industrial runoff and outfalls, or where existing or historical use of the site has the potential to cause sediment contamination. Typical locations include large urban areas and shoreline areas with major industrial development.

Application of these ranking definitions to the sediments proposed for excavation corresponds to the low ranking. The low rank is based on available site-specific sediment chemistry data collected by Battelle (1987) and A.D. Little (1990), and supported with recent findings from sediment quality studies for the Northstar (URSGWC 1999) and Liberty Developments (URS 2001). All of these studies indicated low concentrations of the CoCs.

HLA (1982) delineated surficial sediment deposits within Lions Bay and immediately seaward of Mary Sachs Entrance. Based on the HLA (1982) investigation, Holocene deposits of marine clay, silt and sand (QHi) characterize the surficial sediments at the proposed excavation site and within the lagoon system (winter disposal zone). The summer disposal zone is located seaward (north) of Mary Sachs Entrance where the surficial sediments are characterized as Pleistocene marine clay, silt and sand (QPm). The age of the Holocene and Pleistocene sediments differ along with the percentages of clay, silt, and sand; however, the general compositions of the Holocene and Pleistocene units are very similar. Since the compositions of the Holocene and Pleistocene sediment units are very similar, sample distribution was not chosen based on sediment unit boundaries. For the purposes of this sampling program, the summer disposal zone and the winter disposal zone will be treated as a single unit of sediments.

4.2 SAMPLING APPROACH AND LOCATIONS

4.2.1 Sampling Approach

A phased approach is proposed to collect of the required samples. As such, the sampling will occur during two seasons. Initial sampling will be conducted during the 2002 summer season with follow-up sampling to be conducted during the 2002/03 winter sampling season. Specific schedule dates are presented in Section 6.0. The phased approach will result in the most efficient and cost-effective sampling program. Key benefits of this phased approach are as follows:

- Results from initial summer sampling can help to direct and potentially minimize or eliminate further winter sampling; and,
- A second attempt can be made to collect required samples not obtainable during the initial summer sampling phase.

4.2.2 Proposed Dredge Location

To satisfy the first and second objectives of this sampling program (i.e., obtain representative physical properties and chemistry data for the proposed excavated material), surface and subsurface samples will be collected from within and around the proposed dredge site. The *Dredged Material Evaluation Framework, Lower Columbia River Management Area* (Corps et al. 1998a) document prescribes that homogeneous sediments with a low ranking require one sample for every 100,000 cubic yards (cy) of excavated material within a sediment unit. The proposed project anticipates excavating approximately 30,000 cy; therefore, according to this guidance, at least one sample must be collected.

To obtain the most representative data set for the proposed excavation material, a total of five sample stations have been identified for this sampling program (Figure 4-1). Three of the sample stations are located within the proposed excavation area and two are located just outside of the area. Two primary surface samples will be collected from the two stations outside the proposed excavation area (one surface sample from each station). Three primary surface and six primary subsurface samples will be collected from the three stations inside the proposed excavation area (one surface and two subsurface samples from each station). Section 4.2.5 presents the required number of QA/QC and archival samples associated with these primary samples.

4.2.3 Proposed Dumping Zones

To satisfy the third objective of this sampling program, i.e., obtain representative physical properties and chemistry data for the proposed summer and winter dumping zones from which a specific ocean dumping site will be considered for designation, surface samples will be collected from within each proposed zone. In 1992 the EPA developed sampling design guidelines based on statistical methods summarized by Gilbert (1987). Both Gilbert (1987) and EPA (1992) provide a descriptive review of various sampling designs and their applicability for estimating chemical distributions and trends. The 1992 EPA guidance document developed standardized tables to quantify the statistical performance of a sampling program, in terms of:

- *Confidence Level*: The confidence level is 100 minus α, where α is the percent probability of taking action when no action is required (i.e., false positive result–α is the probability of a type I error)
- *Power*: Power is 100 minus β, where β is the percent probability of not taking action when action is required (i.e., false negative result–β is the probability of a type II error)
- *Minimum detectable relative difference (MDRD)*: MDRD is the percent difference required between site and background concentration levels before the difference can be detected statistically.

Grain-size distribution results from samples collected during earlier geotechnical investigations (HLA 1982; NORTEC 1984) were used to determine the sample size for this study. The sample population was constrained to the study area as defined by the zone of siting feasibility (Fig 4-1) and restricted to surficial (0-2 ft bss) sediments. The coefficient of variation was estimated to be 30 percent for material retained on the No. 200 sieve, which consists of sand and larger particles. Coincidentally, grain-size distributions from Foggy Island Bay (about 30 miles west of Lions Bay) resulted in a similar coefficient of variation value (URS 2001b: Liberty Development 2001 Sediment Quality Study). Following the example found in EPA (1992) for baseline sample design, and based on Lions Bay grain-size sample results, the minimum sample size is determined to be 15 samples based on:

- Coefficient of Variance = 30%
- Confidence Level = 80% (i.e., false positive error = 20%)
- Power = 95% (i.e., false negative error = 5%)
- MDRD = 20%.

A conservative approach will be used in this sampling design to assure that sufficient samples are collected from this remote site. Thus, it is proposed that 20 samples will be collected to characterize the area.

The 20 primary samples will be collected from the surface of the ocean floor at 20 sample stations that have been placed throughout the winter and summer zones so as to best represent differing water depths, ocean currents, and potential ice conditions (bottom fast vs. floating sea ice) that occur within the proposed dumping zones (Figure 4-1). Sample stations placed in less than 6 feet of water were positioned to correspond with locations that could accommodate winter disposal of dredge spoils in long, thin lifts (required to avoid sediment mounding). Section 4.2.5 presents the required number of QA/QC and archival samples associated with these primary samples.

4.2.4 Additional Sample Stations

The EPA has directed that four additional sample stations be included in this sampling program from which four surface samples will be collected. The sample stations are located to represent the current conditions of the Flaxman Island reserve pit excavation sites and the former reserve pit excavation material hauling route from Flaxman Island to the mainland. This is the only recent activity that could have introduced hydrocarbon and metal pollutants into the study area.

4.3 Number and Type of Samples

As outlined in Table 4-2, a total of 29 sample stations will result in 35 discrete primary sediment samples (excluding archival and quality assurance/quality control [QA/QC] samples such as split and replicate samples) from within the proposed excavation site, the two proposed zones from which a specific ocean dumping site will be considered for designation, and the Flaxman Island area.

Table 4-2. Number of Primary Samples to be Collected

Sampling Area	Sample Stations‡	Proposed Number of Surface Samples†	Proposed Number of Subsurface Samples†
Proposed Excavation Site	5	5	6
Proposed Dumping Zones	20	20	0
Flaxman Island Area	4	4	0
Total:	**35**	**29**	**6**

† The proposed number of samples does not include quality control/quality assurance sampling or archival sampling.
‡ Multiple grabs or step-out boreholes could be required to collect sufficient sample volume at a specific sample station

Primary, field replicate, and split samples will be collected as part of this sampling program. Table 4-3 summarizes the types of samples and field quality control (QC) samples and blanks to be collected for the subsurface and surface sediment quality sampling effort.

Table 4-3. Total Number of Samples to be Collected

Sample/Blank Type	Study Total	Proposed Excavation Site	Proposed Dumping Zones	Flaxman Island Area
Sediment				
Primary Sediment Samples	35	11	20	4
Field Replicates (initial analysis)	70	18	40	8
Field Split (Duplicate) Sample	6	3	2	1
Matrix Spike/Matrix Spike Duplicate	2	1	1	0
Archive Samples	55	7	40	8
Sub-Total: Sediment	**168**	**40**	**103**	**21**
Water				
Field Blank	10	2	6	2
Rinsate Blank	10	2	6	2
Sub-Total: Water	**20**	**4**	**12**	**4**
Total Samples	**188**	**44**	**115**	**25**

Table 4-4 presents sample IDs, depth intervals, and required analyses for each sample. Table 4-5 lists out each chemical constituent, and corresponding analytical method, that will be analyzed from each sediment sample.

Table 4-4. Sample ID, Depth Interval, and Analyses

Station ID	Sample ID	QA/QC Sample ID	Depth Interval	Suite of Analyses
1. Proposed Excavation Site				
PTCE-SB01	PTCE-SB01-A1	PTCE-SB01-A2	0.0 to 0.5 ft	Full EPA Suite
		PTCE-SB01-A3		
		PTCE-SB01-S1		
	PTCE-SB01-B1	PTCE-SB01-B2	1.0 to 2.0 ft	
		PTCE-SB01-B3		
	PTCE-SB01-C1	PTCE-SB01-C2	2.5 to 3.5 ft	
		PTCE-SB01-C3		
	PTCE-SB01-D1	--	3.5 to 5.0 ft	Archive
PTCE-SB02	PTCE-SB02-A1	PTCE-SB02-A2	0.0 to 0.5 ft	Full EPA Suite
		PTCE-SB02-A3		
	PTCE-SB02-B1	PTCE-SB02-B2	1.0 to 2.0 ft	
		PTCE-SB02-B3		
		PTCE-SB02-S1		
	PTCE-SB02-C1	PTCE-SB02-C2	2.5 to 3.5 ft	
		PTCE-SB02-C3		
	PTCE-SB02-D1	--	3.5 to 5.0 ft	Archive
PTCE-SB03	PTCE-SB03-A1	PTCE-SB03-A1 (MS/MSD)	0.0 to 0.5 ft	Full EPA Suite
		PTCE-SB03-A2		
		PTCE-SB03-A3		
	PTCE-SB03-B1	PTCE-SB03-B2	1.0 to 2.0 ft	
		PTCE-SB03-B3		
	PTCE-SB03-C1	PTCE-SB03-C2	2.5 to 3.5 ft	
		PTCE-SB03-C3		
		PTCE-SB03-S1		
	PTCE-SB03-D1	--	3.5 to 5.0 ft	Archive
PTCE-SG01	PTCE-SG01-A1	PTCE-SG01-A2	0.0 to 0.5 ft	Full EPA Suite
		PTCE-SG01-A3		
	PTCE-SG01-A4	--		Archive
	PTCE-SG01-A5			
PTCE-SG02	PTCE-SG02-A1	PTCE-SG02-A2	0.0 to 0.5 ft	Full EPA Suite
		PTCE-SG02-A3		
	PTCE-SG02-A4	--		Archive
	PTCE-SG02-A5			
2. Proposed Dumping Zone – Summer				
PTME-SG01	PTME-SG01-A1	PTME-SG01-A2	0.0 to 0.5 ft	Full EPA Suite
		PTME-SG01-A3		
	PTME-SG01-A4	--		Archive
	PTME-SG01-A5			

Table 4-4. (Continued)

Station ID	Sample ID	QA/QC Sample ID	Depth Interval	Suite of Analyses
2. Proposed Dumping Zone – Summer (Continued)				
PTME-SG02	PTME-SG02-A1	PTME-SG02-A2	0.0 to 0.5 ft	Full EPA Suite
		PTME-SG02-A3		
	PTME-SG02-A4	--		Archive
	PTME-SG02-A5			
PTME-SG03	PTME-SG03-A1	PTME-SG03-A2	0.0 to 0.5 ft	Full EPA Suite
		PTME-SG03-A3		
	PTME-SG03-A4	--		Archive
	PTME-SG03-A5			
PTME-SG04	PTME-SG04-A1	PTME-SG04-A2	0.0 to 0.5 ft	Full EPA Suite
		PTME-SG04-A3		
		PTME-SG04-S1		
	PTME-SG04-A4	--		Archive
	PTME-SG04-A5			
PTME-SG05	PTME-SG05-A1	PTME-SG05-A2	0.0 to 0.5 ft	Full EPA Suite
		PTME-SG05-A3		
	PTME-SG05-A4	--		Archive
	PTME-SG05-A5			
3. Proposed Dumping Zone – Winter				
PTLA-SG01	PTLA-SG01-A1	PTLA-SG01-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG01-A3		
	PTLA-SG01-A4	--		Archive
	PTLA-SG01-A5			
PTLA-SG02	PTLA-SG02-A1	PTLA-SG02-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG02-A3		
	PTLA-SG02-A4	--		Archive
	PTLA-SG02-A5			
PTLA-SG03	PTLA-SG03-A1	PTLA-SG03-A1 (MS/MSD)	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG03-A2		
		PTLA-SG03-A3		
	PTLA-SG03-A4	--		Archive
	PTLA-SG03-A5			
PTLA-SG04	PTLA-SG04-A1	PTLA-SG04-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG04-A3		
	PTLA-SG04-A4	--		Archive
	PTLA-SG04-A5			
PTLA-SG05	PTLA-SG05-A1	PTLA-SG05-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG05-A3		
	PTLA-SG05-A4	--		Archive
	PTLA-SG05-A5			
PTLA-SG06	PTLA-SG06-A1	PTLA-SG06-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG06-A3		
		PTLA-SG06-S1		
	PTLA-SG06-A4	--		Archive
	PTLA-SG06-A5			

Table 4-4. (Continued)

Station ID	Sample ID	QA/QC Sample ID	Depth Interval	Suite of Analyses
3. Proposed Dumping Zone – Winter (Continued)				
PTLA-SG07	PTLA-SG07-A1	PTLA-SG07-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG07-A3		
	PTLA-SG07-A4	--		Archive
	PTLA-SG07-A5			
PTLA-SG08	PTLA-SG08-A1	PTLA-SG08-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG08-A3		
	PTLA-SG08-A4	--		Archive
	PTLA-SG08-A5			
PTLA-SG09	PTLA-SG09-A1	PTLA-SG09-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG09-A3		
	PTLA-SG09-A4	--		Archive
	PTLA-SG09-A5			
PTLA-SG10	PTLA-SG10-A1	PTLA-SG10-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG10-A3		
	PTLA-SG10-A4	--		Archive
	PTLA-SG10-A5			
PTLA-SG11	PTLA-SG11-A1	PTLA-SG11-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG11-A3		
	PTLA-SG11-A4	--		Archive
	PTLA-SG11-A5			
PTLA-SG12	PTLA-SG12-A1	PTLA-SG12-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG12-A3		
	PTLA-SG12-A4	--		Archive
	PTLA-SG12-A5			
PTLA-SG13	PTLA-SG13-A1	PTLA-SG13-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG13-A3		
	PTLA-SG13-A4	--		Archive
	PTLA-SG13-A5			
PTLA-SG14	PTLA-SG14-A1	PTLA-SG14-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG14-A3		
	PTLA-SG14-A4	--		Archive
	PTLA-SG14-A5			
PTLA-SG15	PTLA-SG15-A1	PTLA-SG15-A2	0.0 to 0.5 ft	Full EPA Suite
		PTLA-SG15-A3		
	PTLA-SG15-A4	--		Archive
	PTLA-SG15-A5			
4. Flaxman Island Area				
PTFI-SG01	PTFI-SG01-A1	PTFI-SG01-A2	0.0 to 0.5 ft	Full EPA Suite
		PTFI-SG01-A3		
	PTFI-SG01-A4	--		Archive
	PTFI-SG01-A5			

Table 4-4. (Continued)

Station ID	Sample ID	QA/QC Sample ID	Depth Interval	Suite of Analyses
4. Flaxman Island Area (Continued)				
PTFI-SG02	PTFI-SG02-A1	PTFI-SG02-A2	0.0 to 0.5 ft	Full EPA Suite
		PTFI-SG02-A3		
	PTFI-SG02-A4	--		Archive
	PTFI-SG02-A5			
PTFI-SG03	PTFI-SG03-A1	PTFI-SG03-A2	0.0 to 0.5 ft	Full EPA Suite
		PTFI-SG03-A3		
		PTFI-SG03-S1		
	PTFI-SG03-A4	--		Archive
	PTFI-SG03-A5			
PTFI-SG04	PTFI-SG04-A1	PTFI-SG04-A2	0.0 to 0.5 ft	Full EPA Suite
		PTFI-SG04-A3		
	PTFI-SG04-A4	--		Archive
	PTFI-SG04-A5			

Table 4-5. EPA Full Suite of Physical and Chemical Analyses

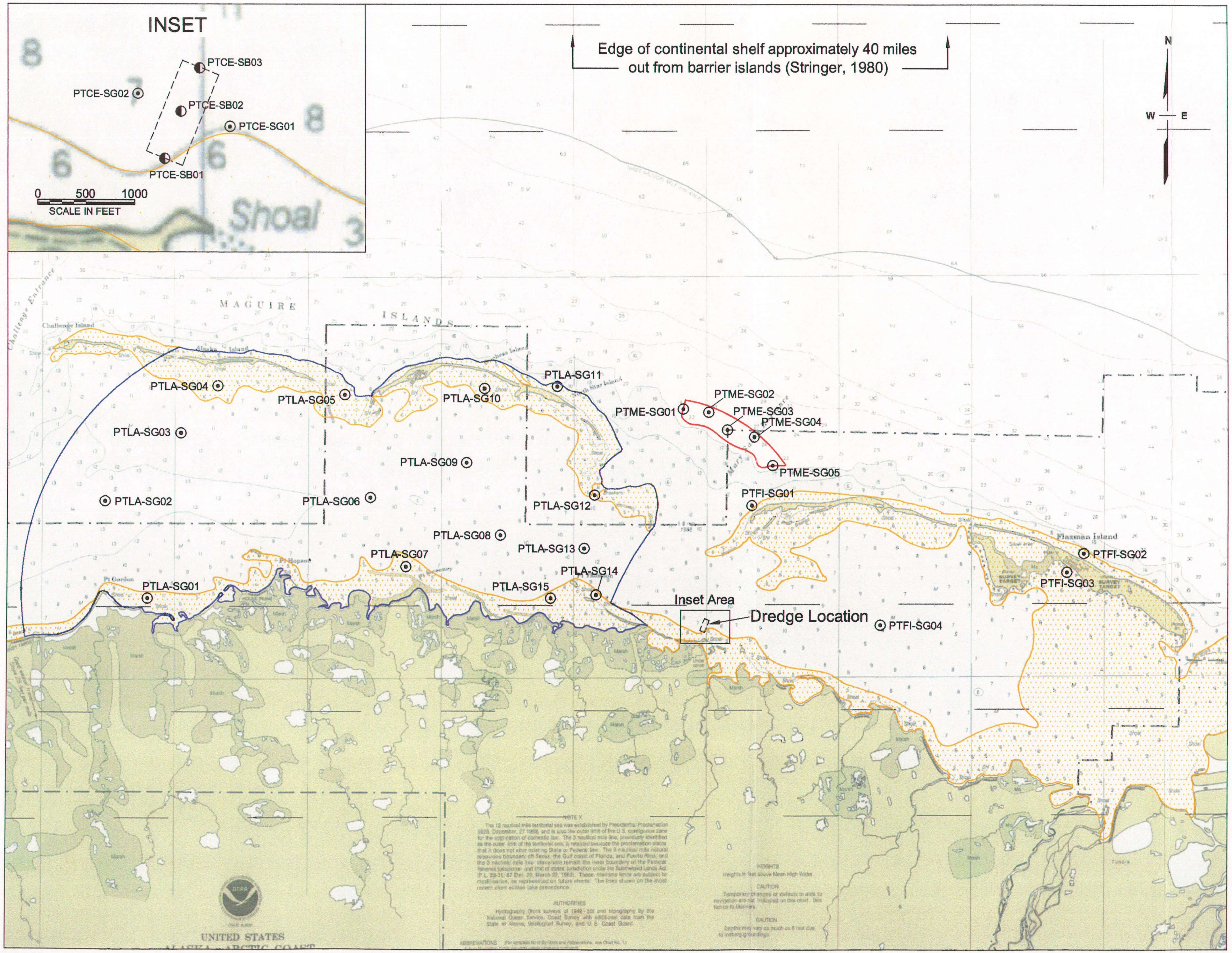
Parameter	Prep Method (Recommended)	Analysis Method (Recommended)	Sediment MDL[1]	Analytical Laboratory MDL Variance
Conventionals:				
Total Solids (%)	NA	160.3M	0.1	--
Total Volatile Solids (%)	NA	160.4M	0.1	--
Total Organic Carbon (%)	NA	ASTM D4129M	0.1	--
Total Sulfides (mg/kg)	NA	SW9030	1	2
Ammonia (mg/kg)	NA	Plumb 1981	1	--
Grain Size (%)	NA	ASTM D422	NA	--
Metals (ppm):				
Antimony	SW3050	SW6020	2.5	--
Arsenic	SW3050	SW6020	2.5	--
Barium[2]	SW3050	SW6020	0.1	--
Cadmium	SW3050	SW6020	0.3	--
Chromium	SW3050	SW6020	0.3	--
Copper	SW3050	SW6020	15.0	--
Iron[2]	SW3050	SW6010B	2.0	--
Lead	SW3050	SW6020	0.5	--
Mercury	NA	SW7471	0.02	--
Nickel	SW3050	SW6020	2.5	--
Silver	SW3050	SW6020	0.2	--
Zinc	SW3050	SW6020	15.0	--
Organics (ppb):				
LPAH				
Naphthalene	SW3550	SW8270SIM	20	--
Acenaphthylene	SW3550	SW8270SIM	20	--
Acenaphthene	SW3550	SW8270SIM	20	--
Fluorene	SW3550	SW8270SIM	20	--
Phenanthrene	SW3550	SW8270SIM	20	--
Anthracene	SW3550	SW8270SIM	20	--
2-Methylnaphthalene	SW3550	SW8270SIM	20	--
Total LPAH	--	--	--	--

Table 4-5. (Continued)

Parameter	Prep Method (Recommended)	Analysis Method (Recommended)	Sediment MDL[1]	Analytical Laboratory MDL Variance
HPAH				
Fluoranthene	SW3550	SW8270SIM	20	--
Pyrene	SW3550	SW8270SIM	20	--
Benzo(a)anthracene	SW3550	SW8270SIM	20	--
Chrysene	SW3550	SW8270SIM	20	--
Benzofluoranthenes	SW3550	SW8270SIM	20	--
Benzo(a)pyrene	SW3550	SW8270SIM	20	--
Indeno(1,2,3-c,d)pyrene	SW3550	SW8270SIM	20	--
Dibenzo(a,h)anthracene	SW3550	SW8270SIM	20	--
Benzo(g,h,i)perylene	SW3550	SW8270SIM	20	--
Total HPAH	--	--	--	--
Chlorinated Hydrocarbons				
1,3-Dichlorobenzene	NA	SW8260	3.2	--
1,4-Dichlorobenzene	NA	SW8260	3.2	--
1,2-Dichlorobenzene	NA	SW8260	3.2	--
1,2,4-Trichlorobenzene	SW3550	SW8270SIM	6	--
Hexachlorobenzene (HCB)	SW3550	SW8270SIM	12	--
Phthalates				
Dimethyl phthalate	SW3550	SW8270SIM	20	--
Diethyl phthalate	SW3550	SW8270SIM	20	--
Di-n-butyl phthalate	SW3550	SW8270SIM	20	--
Butyl benzyl phthalate	SW3550	SW8270SIM	20	--
Bis(2-ethylhexyl)phthalate	SW3550	SW8270SIM	20	123
Di-n-octyl phthalate	SW3550	SW8270SIM	20	--
Phenols				
Phenol	SW3550	SW8270SIM	20	--
2 Methylphenol	SW3550	SW8270SIM	6	--
4 Methylphenol	SW3550	SW8270SIM	20	--
2,4-Dimethylphenol	SW3550	SW8270SIM	6	15.1
Pentachlorophenol	SW3550	SW8270SIM	61	--
Miscellaneous Extractables				
Benzyl alcohol	SW3550	SW8270SIM	6	--
Benzoic acid	SW3550	SW8270SIM	100	--
Dibenzofuran	SW3550	SW8270SIM	20	--
Hexachloroethane	SW3550	SW8270SIM	20	--
Hexachlorobutadiene	SW3550	SW8270SIM	20	--
N-Nitrosodiphenylamine	SW3550	SW8270SIM	12	--
Pesticides				
Total DDT	--	--	--	--
p,p'-DDE	SW3540	SW8081	2.3	--
p,p'-DDD	SW3540	SW8081	3.3	--
p,p'-DDT	SW3540	SW8081	6.7	--
Aldrin	SW3540	SW8081	1.7	--
Chlordane	SW3540	SW8081	1.7	--
Dieldrin	SW3540	SW8081	2.3	--
Heptachlor	SW3540	SW8081	1.7	--
Lindane	SW3540	SW8081	1.7	--
Total PCBs	SW3540	SW8082	67	--

[1] Dry Weight Basis
[2] Drilling waste related chemicals of concern

NA Not Applicable



ExxonMobil

Point Thomson Gas Cycling Project

Figure 4-1
Proposed Sediment Quality Sampling Locations

LEGEND

- Summer Zone of Siting Feasibility
- Winter Zone of Siting Feasibility
- Bottom-fast Ice (0-6 foot isobath)
- Potential Ocean Disposal Location
- Dredge Material Location
- Unit Boundary

0 3750 7500 15000
SCALE IN FEET

Source: Base map from the National Oceanic and Atmospheric Administration (NOAA) nautical chart No. 16045, revised in 1996

URS Anchorage, Alaska

Pt_Thomson_ZSF.dwg SRJ 10-31-02

5.0 FIELD METHODS

5.1 NAVIGATION AND SAMPLE POSITIONS

The sampling vessels (boat in the summer and drill rig in the winter) will be equipped with an autonomous global positioning system (GPS) receiver used to navigate to each sample station. Horizontal positions will be based on the North American Datum of 1927 (NAD27), using either State Plane Coordinate System (in ft) or latitude/longitude coordinates. The position accuracy is anticipated to be approximately ±30 meters.

5.2 SUMMER SAMPLING METHODS

The following sampling techniques can be employed during the summer phase of the sampling program. Water depth, current, sediment type, and desired sediment depth and quantity should be considered to choose the most appropriate technique.

5.2.1 Van Veen Sampler

The Van Veen sampler is used to collect surface grab samples. It is best used in marine environments in deep water or strong currents, as such, it is heavy and requires the use of a winch. It is useful for the collection of sand, silt and clay. It is adequate on most substrates that are not compacted and can obtain a large, intact sample, which permits subsampling. The Van Veen sampler can obtain samples up to 30 centimeter below seafloor surface (bss).

During deployment, the Van Veen grab sampler safety pin will be released (pulled) just after the device is clear of the vessel. The Van Veen grab sampler will be lowered at a controlled rate of approximately 4 feet per second with the line nearly perpendicular to the water surface. The Van Veen grab sampler will not be allowed to free fall to the bottom as this may result in premature triggering, an excessive bow wake, or improper orientation upon contact with the bottom. As the Van Veen grab sampler descends, water will be able to pass freely through the closed, upper-screened doors to minimize the bow wake. The rate of descent will be slowed to about 1 ft per second as the sampler nears the bottom to minimize disturbance of the surface sediments. The line operator will be supplied with bottom depth information to reduce the rate of descent. To improve the sample recovery, the line will remain taut (no slack) once the sampler reaches the bottom.

After the sampler has been tripped, it will be raised slowly off the bottom to allow for proper closure without spillage. Once clear of the bottom, the ascent rate can be increased to approximately 4 ft per second. Retrieval of the sampler will be continuous. While ascending, the design of the upper door flaps of the Van Veen grab should seal tightly to minimize sample disturbance. The Van Veen grab sampler will be handled carefully, especially during rough weather, to minimize sample disturbance.

During retrieval, one crewmember will watch for the appearance of the sampler, and alert the line operator and the vessel skipper when the sampler is first visible below the surface. The line operator will minimize swinging before the grab sampler is brought onboard. Hard hats, gloves, safety glasses, and all other OSHA required personal protection equipment (PPE) will be appropriately worn and used during field sampling.

The depth to which surficial samples are collected will be from mudline (sediment surface – 0 inches) to approximately 4 inches (10 centimeters). The field sampler may choose to subsample a shallower depth within the Van Veen grab if the sediments appear to have been disturbed by the sampling device, such that the lower material comes into contact with the jaws of the Van Veen grab sampler.

After the grab sampler has been secured onboard, the upper doors will be opened and the sample examined for acceptability as follows:

- The sampler is not overfilled, which could be indicative of sample loss;
- Overlying water is present indicating sample integrity;
- The sediment surface appears to be relatively undisturbed; and
- The desired sample depth has been achieved (ideally, at least ½ to 1 inches [1 or 2 cm] should remain at the bottom of the sampler after the upper layer has been subsampled).

It should also exhibit minimal leakage when coming on board, which is a good indication that the sample was collected in its entirety. Grabs that exhibit leakage when the Van Veen reaches the water line will be discarded and another sample will be collected. If the Van Veen grab sampler is unable to collect sufficient sediment at a station, then the vessel will move approximately 100 ft (~30 meters) north or south of the original station position.

If sample acceptability criteria are met, overlying water is carefully siphoned off. During or before the sample material is removed, field observations will be noted and recorded. Observations include a determination of visual/textural soil characteristics, the presence of debris, and evidence, such as oil sheen, suggesting the presence of contaminants.

In accordance with United States Coast Guard regulations, sediment retrieved from grab samples that exhibits evidence of contamination such as a strong odor or visible sheen should not be disposed of overboard. The sediment should be contained and removed off site for proper disposal.

5.2.2 Ekman Sampler

The Ekman sampler is used to collect surface grab samples. It is best used in shallow marine environments but is restricted to low current conditions. The small Ekman is lighter than the Van Veen and handles easily without a winch or crane. The Ekman is useful for the collection of soft sediments such and silt and sand and is better suited to collect coarse gravelly material than the Van Veen sampler. The small Ekman can obtain samples up to 5 centimeters bss. Guidance for deployment of the Van Veen sampler should be followed when using the Ekman sampler.

5.2.3 Core Barrel and Slide Hammer

A core barrel and slide hammer is used to collect undisturbed subsurface samples. It can be used in shallow marine environments but is restricted to low current conditions. The core barrel and slide hammer can be operated by hand but can be cumbersome as additional extension rods are added. The core barrel and slide hammer is useful for the collection of soft to medium compacted sediments, but is restricted to sediments with smaller grain size. The core barrel and slide hammer can obtain an intact sample up to a maximum depth of about 90 cm from which subsamples can be collected. The depth of sample that can be obtained decreases as the sediment becomes more compact.

Based on the depth of sample desired, a 1 to 3 ft core barrel will be attached to extension rods of sufficient length to reach the sea floor. A slide hammer will then be attached to the top of the extension rods. The coring device will be lowered slowly by hand from the bow of the boat to the sea floor. A one-way valve at the top of the core barrel will allow seawater to flow through as the core barrel is lowered. The coring device will then be pushed or pounded into the bottom sediments to the desired depth. The extension rods will be marked so that the depth of the coring device can be determined from the bow of the boat. The coring device will then be pulled from the soil and brought up out of the water on to the boat. The bottom of the core barrel will contain a sand-catcher basket that will prevent sediments from falling out of the barrel as it is withdrawn from the seafloor.

Multiple boreholes may be necessary to collect adequate sediment volume for the required analysis at a specific location. Initial borings will be completed to 2.5 ft or 5.0 ft bss in order to record a visual log of each boring based on the USCS. To collect these visual samples, the core barrel may be lined with a transparent Lexan liner that can slide out of the core barrel. Grain-size samples will also be collected from this sediment core.

A second borehole will be completed approximately 5 to 10 ft away from the initial borehole, for collection of sediment chemistry samples. To collect undisturbed samples at discrete depths, the core barrel will be lined with brass or stainless steel sleeves or Lexan liners that, when removed from the core barrel, can be immediately capped and prepared for shipment to the laboratory.

5.3 WINTER SAMPLING METHOD

The following sampling technique can be employed during the winter phase of the sampling program.

5.3.1 Auger Drill

An auger drill is used to collect undisturbed subsurface samples. It can be used in marine environments and is not affected by current as it is operated from frozen sea ice. The auger drill can efficiently collect subsurface samples but is restricted to sediments with small to medium grain sizes (less than the diameter of the core).

A drill rig and working deck will be mounted on a sled and enclosed in a fabric structure for towing by a rollagon to each sampling location. Various coring methods are currently under consideration, including a continuous coring option that would use Lexan liners up to 5-inches wide by 2.5-ft long. If the continuous coring method is ineffective or inefficient, hollow-stem auger and split-spoon sampler lined with sleeves or core liners will be considered.

Multiple boreholes may be necessary to collect adequate sediment volume for the required analysis at a specific location. Initial borings will be completed to 5.0 ft bss to provide a visual field description of the soils. Grain-size samples will be collected from this boring. A second borehole will be completed approximately 5 to 10 ft away from the initial borehole, for collection of sediment chemistry samples. It is hoped that continuous cores will be recovered. In the event that continuous coring is not effective, a split-spoon sampler lined with sleeves or core liners will be used to collect the samples. All of the cores will be capped, labeled, wrapped, and secured in the field. The cores will be allowed to freeze in ambient conditions and stored outside the enclosed sled. The sediment sample sleeves or liners will then be transported in a frozen state to a dry, warm work area (staging area) where core logging and sub-sampling will be performed.

Sub-sampling must be conducted in an area separate from the panachek sled because the interior of the sled contains lubricants and is warmed by propane heaters, and therefore presents the possibility that contamination of sediment chemistry samples could occur if the cores are sub-sampled in the sled. Consequently, sediment chemistry sub-sampling will be deferred until it can be conducted in a controlled environment. After the core thaw, the core will be removed from the liner. If sufficient sediment is recovered, sub-samples will be collected from material that was not in direct contact with the liner or within 1 inch from either end of the core.

5.4 Sample Collection and Handling Procedures

The following descriptions and procedures are based on guidance derived and adapted for use in the Beaufort Sea, Alaska from the following:

- *Dredged Material Evaluation Framework: Lower Columbia River Management Area* (Corps et al 1998a)
- *Recommended Guidelines for Sampling Marine Sediment, Water Column, and Tissue in Puget Sound* (PSEP 1997)
- *Dredged Material Evaluation and Disposal Procedures – A Users Manual for the Puget Sound Dredged Disposal Analysis (PSDDA) Program* (Corps et al 1998b)

5.4.1 General Sample Collection Procedures

To minimize the potential for cross-contamination, all samples will be collected using disposable or decontaminated tools. Sampling tools may include, but are not limited to, split spoons, mixing spoons, bowls, and trays. Disposable gloves appropriate for the site contaminants will be worn and changed between sample intervals. Samples will be placed in containers in the order of volatilization sensitivity as outlined in Table 5-2.

Table 5-1. Standard Order Of Preferred Sample Collection for Typical Baseline Studies

Order	Analyte to be Sampled
1	Volatile organics
2	Total organic halogens, total organic carbon, and total phenols
3	Extractable organics (e.g., semi-volatiles, pesticides, herbicides)
4	Anions, cations (e.g., CN-, SO_4^{2-}, Cl^{-}, NO_3^{2-}, and NH_4^{2+})
5	Metals (total and dissolved)
6	Radionuclides

5.4.2 Volatiles and Sulfides Sub-sampling Procedures

The goal of the sediment chemistry-sampling portion of this study is to describe the natural concentrations and variability of selected physical and chemical parameters within the study area. Samples collected for volatile analysis will be undisturbed. The sample material for volatile organic or sulfide compound analysis will be collected first from the soil core; no mixing will be performed. One 2-ounce unpreserved container with septa will be completely filled with sample sediment for volatiles. No headspace should be allowed to remain in the container. Jars should be filled as tightly as possible, eliminating obvious air pockets. Threads on the sample container and lid will be wiped clean prior to closure to prevent leakage. For sulfides sampling, sediment will be placed in a 2-ounce sampling container preserved with zinc acetate.

The volatiles and sulfides sampling containers will be clearly labeled with the project name, sample/composite identification, type of analysis to be performed, date and time, and initials of person(s) preparing the sample, and referenced by entry into the logbook. The sulfides sampling jars will indicate that zinc acetate has been added as a preservative. The sample containers will be refrigerated or stored on ice or blue ice until delivered to the analytical laboratory.

5.4.3 Compositing Procedures

Following the collection of soil samples for volatile analysis, the remaining portion of the sample will be transferred to a large container (i.e., a decontaminated stainless-steel mixing bowl) for homogenization before being placed into the remaining sample jars for extractable organics, metals, and conventional analyses. Sample material will be thoroughly homogenized prior to splitting into separate sample containers.

After compositing is performed, sediment will be placed in one 8-ounce unpreserved container for extractable organic analysis. One 16-ounce unpreserved sample container will be filled with sediment for metals and conventional analyses. Both containers will be completely filled to the top with sediment, and will be labeled with the project name, sample/composite identification, type of analysis to be performed, date and time, and initials of person(s) preparing the sample, and referenced by entry into the logbook. The sample containers will be refrigerated or stored on ice or gel ice until delivered to the analytical laboratory.

5.4.4 Field Decontamination Procedures

Field decontamination of sediment sampling equipment and associated utensils will be conducted between sampling intervals. The following sequence of activities will be used to decontaminate sampling equipment prior to use and between samples.

- Scrub with wire brush to remove large soil particles
- Wash with sodium triphosphate or Alconox® solution
- Rinse twice with potable water
- Rinse with deionized water
- Air dry in a hydrocarbon-free environment.

5.4.5 Field Quality Control (QC)

The following describes the field QC blanks and samples associated with this project.

Field Blank: A field blank is a sample of analyte-free water that is supplied by the laboratory. The field blank will be generated by opening the analyte-free water container at the sampling location and transferring an aliquot to another laboratory-supplied container. The field blank will be analyzed for polynuclear aromatic hydrocarbon (PAH) and metal analytes for which associated samples are being analyzed. Field blank results will be used to measure and document any possible on-site contamination.

Rinsate (Equipment) Blank: A rinsate blank is a sample of analyte-free water that has been used to rinse sampling equipment after prescribed decontamination. The analyte-free water will be supplied by the laboratory. The rinsate blank will be analyzed for PAH and metal analytes for which the samples are being analyzed. Analysis of the rinsate blank will be used to measure and document the effectiveness of field decontamination of sampling equipment and possible carry-over of contamination to samples collected after the rinsate blank.

Temperature Blank: A temperature blank is a plastic container of water that is kept in the sample cooler with analytical samples between sub-sample collection and delivery. The temperature of this water will be measured and recorded when samples are received at the analytical laboratory. Measurement of the temperature blank will be used to indicate whether proper sample temperature was maintained between sample collection and delivery to the analytical laboratory.

Field Split (Duplicate) Sample: A field split sample consists of an actual sample for which twice as much volume as necessary to fill the sample containers has been collected. Aliquots of this sample will be equally distributed in two sets of sample containers. This division results in two (theoretically) equivalent samples collected from one sampling location. The field split sample will be analyzed for the same set of analytes for which the original sample is being analyzed.

Field Replicate Sample: A field replicate consists of additional samples grab(s) that will be collected using the same sampling methods used to obtain the first sample. Two field replicates and a spare replicate sample will be collected at the same sampling station and as soon after the original sample as possible. The field replicate samples will be analyzed for the same set of analytes as the original sample. Analysis of the field replicate is used to measure and document the repeatability of field sampling methods as well as the heterogeneity of the sample matrix. Statistical analysis of numerical analytical results (mean and standard deviation) of the original sample and multiple replicates may also be performed to calculate the likely range of analyte concentrations at a given sampling location.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample: A matrix spike is a solution of the target analytes at known concentrations that is spiked into a field sample before sample preparation and analysis. Two aliquots of the sample are spiked for the duplicate analysis. The results of the duplicate spiked samples are used to measure the percent recovery of each spiked compound and compare the recovery between samples, which provides estimates of the accuracy and precision of the method. The frequency for the MS/MSD analysis is five percent of samples analyzed for each method where spikes are performed (i.e., one MS/MSD per analytical batch of 20 samples).

5.4.6 Sample Containers and Labels Procedures

Soil samples will be collected in precleaned glass and/or plastic containers provided by the analytical laboratory. The containers will have screw-type lids to assure adequate sealing of the bottles. The lids will include Teflon® inserts to prevent sample reaction with the lid and to improve the quality of the seal. Table 5-3 summarizes the amount of sediment and types of containers required for different types of analyses. If the same laboratory is to perform a number of the analyses, it is not necessary for each type of analysis to have a separate sediment sample jar. Two or more sediment sub-samples from the same station may be combined in a single sample jar as long as the required container types are the same and the sample preservation methods and maximum holding times are compatible. Table 5-3 identifies which sub-samples are appropriate to combine in the same jar.

Self-adhesive labels will be attached to the outside of all sediment sample containers. The following information will be provided in waterproof ink on each sample label:

- A unique sample number which includes the station identification
- Sampling date and time
- Sampling personnel
- Preservative (if appropriate)

5.4.7 Sample Transport and Chain-of-Custody Procedures

Sample transport and chain-of-custody procedures will include the following guidelines:

- Samples will be packaged and shipped in accordance with U.S. Department of Transportation regulations as specified in 49 CFR 173.6 and 49 CFR 173.24
- Individual sample containers will be packed to prevent breakage and transported in a sealed ice chest or other suitable container
- Ice will be placed in separate plastic bags and sealed, or blue ice used to maintain an ambient sample temperature of approximately 4°C until delivery to the analytical laboratory

- Each cooler or container containing sediment samples for analysis will be shipped to the laboratory within 24 hours of being sealed
- A sealed envelope containing chain-of-custody forms will be enclosed in a plastic bag and taped to the inside lid of the cooler
- Signed and dated chain-of-custody seals will be placed on all coolers prior to shipping
- The shipping containers will be clearly labeled with sufficient information (name of project, time and date container was sealed, name of the person sealing the container, and consultant's office name and address) to enable positive identification
- Upon transfer of sample possession to the analytical laboratory, the chain-of-custody form will be signed by the persons transferring custody of the sample containers. The shipping container seal will be broken and the condition of the samples will be recorded by the receiver
- Chain-of-custody forms will be used internally in the lab to track sample handling and final disposition.

Table 5-2. Holding Times and Minimum Container Sizes for Physical and Chemical Analyses

Sample Type	Holding Time	Minimum Sample Size[b]	Container Size	Preservative
Physical/Chemical Analyses				
Grain size	6 months	100-200 g (75-150ml)	32 oz wide-mouth glass jar	None
Total solids	14 days	125 g (100 ml)	8 oz wide mouth glass jar	
Total volatile solids	14 days	125 g (100 ml)		
Total organic carbon	14 days	125 g (100 ml)		
Ammonia	7 days/extraction 28 days/analyze	25 g (20 ml)		
Metals (except mercury)	6 months (28 days)	125 g (100 ml)		
Total sulfides	7 days	50 g (40 ml)	2 oz wide-mouth glass jar	Zinc Acetate
Volatile organic compounds	14 days	50 g (40 ml)	2 oz wide-mouth jar with septa[c]	None
Semivolatile organic compounds	14 days	150 g (120 ml)	8 oz wide-mouth jar[d]	None
Pesticides	14 days	150 g (120 ml)		
Polynuclear aromatic hydrocarbons	14 days	150 g (120 ml)		
Archive sample	6 months	300 g (250 ml)	8 oz wide-mouth jar[e]	None

[a] During transport to the analytical laboratory, samples will be stored on ice. The archived samples will be frozen immediately upon receipt at the laboratory.
[b] Recommended field sample sizes (wet weight basis) for one laboratory analysis. If additional laboratory analyses are required (e.g., laboratory replicates, allowance for having to repeat an analysis), the field sample size should be increased accordingly. For some chemical analyses, smaller sample sizes may be used if comparable sensitivity can be obtained by adjusting instrumentation, extract volume, or other factors of the analysis.
[c] No headspace or air pockets should remain.
[d] Container to be filled to the top.
[e] Sample to be frozen at the laboratory. Freezing sample extends hold time for SVOCs, pesticides, and PCBs to 6 months.

5.5 FIELD DOCUMENTATION

The following descriptions and procedures are based on guidance derived from and adapted for use in the Beaufort Sea, Alaska from the following:

- *Dredged Material Evaluation Framework: Lower Columbia River Management Area* (Corps et al 1998a)
- *Recommended Guidelines for Sampling Marine Sediment, Water Column, and Tissue in Puget Sound* (PSEP 1997)
- *Dredged Material Evaluation and Disposal Procedures – A Users Manual for the Puget Sound Dredged Disposal Analysis (PSDDA) Program* (Corps et al 1998b)

This section provides guidance for documenting sampling and data gathering activities. Documentation of field activities provides important project information and data that can act as support to data generated by laboratory analyses. Project data validation may require reporting field data to verify sample identification, sampling locations, correct sampling techniques. It may also be necessary to validate results of field analyses and measurements.

Field Notes: Field notes will be maintained for all field activities, whether collecting samples or gathering environmental data. Field notes will be kept on water-resistant paper, all field documentation will be recorded in indelible black ink, and errors will be crossed out with a single line, initialed and dated by the data recorder. Information recorded in field notes include, but is not be limited to:

- Name of recorder
- Sample and station number
- Data or sample station locator information
- Sample elevation (water depth of the sampler bottle)
- Date and time of sample or data collection (all times should be recorded for multiple sampler deployments)
- Ambient weather conditions such as air temperature, cloud cover, and precipitation
- Sample elevation (water depth above the surface of the sediment)
- Sampling interval (i.e., 0 to 10 cm)
- Positioning information required to calculate the location of the station
- Physical characteristics such as gross particle size distribution, debris, odor, or evidence of contamination such as a visible sheen or discoloration
- Record of splits, duplicates and sub-samples taken

Other information that may be recorded in field notes includes sampling methods and any deviations from established sampling protocols. Additional anecdotal information pertaining to observations of unusual sampling events or circumstances may be recorded in field notes. A field book should be unique to the project or, at the very least, to a class of field events, such as marine sediment sampling. It is also advisable to keep record of all personnel involved in each sampling event, including the time each individual boarded and departed the research vessel or rollagon.

6.0 FIELD SCHEDULE

6.1 SUMMER SCHEDULE

Summer field sampling is tentatively scheduled for early to mid-August and depends on the location of summer floating and pack ice. Near-shore heavy ice conditions and/or rough sea conditions could delay or prohibit summer sampling in the offshore area. It is unlikely that sampling would be prohibited in Lions Bay due to ice, however, rough weather conditions could delay or prohibit sampling. All summer field operations will be completed by August 31, 2002.

6.2 WINTER SCHEDULE

The field sampling program is dependent on the ability to deploy rollagons onto the floating landfast sea ice and grounded sea ice within Lions Bay. Thin ice and/or open water conditions could delay or prohibit sampling this winter. However, typical sea ice conditions allow heavy equipment deployment on or around February 1, lasting until approximately May 1. Winter sampling will be performed to collect any subsurface samples that were not able to be collected during the summer season, and to collect samples from any new locations that arise to fill data gaps. Sampling would begin around mid-February 2003 when land-fast ice has had time to reach maximum thickness.

7.0 REFERENCES

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Appendix B

POINT THOMSON GAS CYCLING PROJECT

OCEAN DUMPING EVALUATION SAFETY, HEALTH AND ENVIRONMENTAL PLAN

Prepared for:

ExxonMobil

ExxonMobil Production Company
P.O. Box 196601
Anchorage, AK 99519-6601
and
The Point Thomson Unit Owners

July 15, 2002

Prepared by:

URS

URS Corporation
2700 Gambell Street, Suite 200
Anchorage, AK 99503
74-38877200.00

SHE "SHORT FORM" INTERFACE DOCUMENT

1. CONTRACTOR: URS Corporation **2. CONTRACT #: 53551**

3. WORK SCOPE (materials & services, organization, personnel & supervision, location(s), customer(s), etc.):

The work performed by URS Corporation consists of seafloor sediment sampling within the proposed channel excavation area and potential ocean dumpsites within the Point Thomson Unit. The purpose of the work is to collect sufficient environmental baseline sediment data to support a NEPA evaluation and permit applications for the proposed project (Point Thomson Gas Cycling Project) design. Seafloor sampling of potential dumpsites and initial sampling at the proposed channel excavation will occur during the Summer 2002 open-water season from a vessel provided and operated by Alaska Clean Seas (ACS). Deeper sediment samples will be collected from the proposed channel excavation during the Winter 2003 season on floating land-fast sea ice using a conventional drill rig and coring equipment provided and operated by Discovery Drilling; winter transportation will be via Rollagon provided and operated by Catco.

The duration of the Summer 2002 work is expected to be approximately ten days and will be staffed by five employees (three URS and two ACS). The duration of the Winter 2003 work is expected to be approximately three days and will be staffed by eight employees (4 URS, 2 Discovery Drilling, and 2 Catco). The employees will have attended NSTC training prior to deployment. Summer employees will have personal flotation in addition to personal safety equipment such as safety glasses, work gloves, hard hats, steel-toed boots, and rain gear. Additionally, the ACS vessel will be equipped with modern radio communication equipment, a life raft, survival suits for all passengers, and an electronic position indicating beacon (EPIRB). All winter field personnel will have full arctic gear and safety gear including: arctic parka, arctic bibs, pack boots or bunny boots, mittens, face mask/balaclava, hard hat liner, hard hat, respirator and cartridges, ski goggles and safety glasses.

4. COMMUNICATION:

XOM: Alan Maki	URS Corporation: Sharon Sullivan	Badami Environmental Advisor: Koreen Burrow/Vic Farris
(907) 564-3702	(907) 261-6709	(907) 659-1243

5. SPECIFIC SHE HAZARDS:

With the possible exception of drilling mud and cuttings, and sanitary and domestic wastewater discharged in the 1970s and the early 1980s during exploration drilling, there are no other known chemical hazards within the study area ice, water, and sediment. Prevailing currents produce a net westward drift, placing the Badami Development and the Prudhoe Bay coastal oil production facilities down-current of Lions Bay. Physical hazards will include cold stress and cold injuries associated with working in the arctic, working around heavy machinery, working over water, and encounters with wild animals such as foxes and bears.

6. ASSURANCE SYSTEMS:

URS Corporation Health and Safety Program
Site Specific Safety, Health and Environmental Plan (Attachment A)
ExxonMobil, U.S. Production Safety Manual

7. SIGNATURES:

The contents of this document are the product of a desktop hazard assessment by management. The undersigned agree that to the best of their knowledge this document is an accurate depiction of the scope of work provided by the contractor; safety, health and environmental risks known about that work scope; and management systems in place to mitigate risks. This document also identifies additional actions to further mitigate risks and the undersigned agree to review these and implement as appropriate.

[signature] 7/30/02
XOM Project Manager Date

[signature] for July 15 2002
URS Health and Safety Officer Date
MARK Litzinger

Category	Hazard/Activity	Safeguards in Place to Manage the Hazard/Activity	Interfaces		
			Management System	Whose System	Responsible Person
NORTH SLOPE SAFETY HAZARDS	1. Remote camp hazards 2. Fire hazards 3. Cold related injuries 4. Foul weather 5. Travel by truck on ice roads and rollagon on land-fast sea ice 6. Noise exposure 7. Bear and other wildlife encounters 8. Working around heavy equipment 9. Boat / over water work	1. North Slope Orientation Training (NSTC: Unescorted) for all field personnel. Site/Facility Orientation (Badami). 2. Fire extinguishers available at camp and on vehicles and rig; training in use of extinguishers and evacuation procedures. 3. Use of appropriate cold-weather gear; training in signs of hypothermia and frostbite. Stop-work if symptoms present. 4. Stop work, follow evacuation procedures prescribed by Emergency Response Plan. 5. Radio, flares, signal horn and first aid kit carried in vehicles and rig. 6. Hearing Conservation Program. Use of Ear Protection if warranted by noise levels. 7. Bear Training. Bear observation notification procedures.	ARCO/BPXA "Alaska Safety Handbook" within operated areas. XOM Policy, Recommended Practices, and SOPs Handbook: North Slope Field Guide for Visitors and Contractors	Contractor. BPXA within operated areas (Badami & PBU).	Contractor Project Manager responsible to ensure their personnel receive required orientation training and follow XOM rules and procedures applicable to their work scope.
			Contractor's SHE Management System	Contractor	Contractor Project Manager

Category	Hazard/Activity	Safeguards in Place to Manage the Hazard/Activity	Interfaces		
			Management System	Whose System	Responsible Person
NORTH SLOPE SAFETY HAZARDS (Continued)		8. Stay out of the way of all heavy machinery. Maintain eye contact with rollagon and rig operators when crossing work areas. Use of orange/reflective clothing. Situational awareness. 9. Follow boat safety procedures. Captain provides boat work safety orientation and survival suits on board. Wear a personal floatation device and other PPE appropriate for work performed.	Contractor's SHE Management System	Contractor	Contractor Project Manager
PERMIT AND PROCEDURE CONTROLLED HAZARDS	1. Work within BPX(A) operated areas (Badami & PBU). 2. Flammable and Combustible Fluid Transfer (engine oils, gasoline)	1. North Slope Orientation Training for all personnel before initiating work (in Badami & PBU). 2. Fluid Transfer Procedure	ARCO/BPXA "Alaska Safety Handbook" within operated areas. XOM Policy, Recommended Practices, and SOPs	Contractor. BPXA within operated areas.	Contractor Project Manager responsible for ensuring personnel receive training and follow rules and procedures applicable to their activities.
ENVIRON-MENTAL IMPACT HAZARDS	1. Spills (fluid transfer, improper liner use etc.) 2. Wildlife Encounters 3. Waste Management and Disposal	1. Training on fluid transfer procedure (NS Orientation). 2. Personnel to avoid all contact with wildlife. 3. Contractor to minimize, segregate, containerize, and label solid waste, and ensure personnel are trained appropriately. All solid waste to be removed from site and properly disposed.	ARCO/BPXA "Alaska Safety Handbook" within operated areas. XOM Policy, Recommended Practices, and SOPs	Contractor. BPXA within operated areas.	Contractor Project Manager responsible for ensuring personnel receive training and follow rules and procedures applicable to their activities.

Category	Hazard/Activity	Safeguards in Place to Manage the Hazard/Activity	Interfaces		
			Management System	Whose System	Responsible Person
	1. First Aid, Medical Treatment, Medevac	1. Contractor personnel to be First Aid/CPR trained. For serious accidents/illnesses, BPXA/North Slope to provide medical stabilization or treatment and medevac to Anchorage (reimbursed by contractor).	BPXA	BPXA	Contractor. BPXA within operated areas.
EMERGENCY AND MEDICAL	2. Incident Reporting and Investigation a)Investigation of Incidents b)Emergency Response 3. Reporting SHE Data to XOM PM as required. 4. Return to work after illness/injury.	2. Report all incidents to XOM PM. XOM to investigate incidents per SOP (contractor to participate). In addition, Contractor to contact BPXA for environmental incidents occurring within BPXA operated areas (Badami & PBU).	XOM SHE Plan, Emergency Management Plan, and Contingency Plans (BPXA plans in operated areas)	XOM (BPXA in operated areas)	Contractor Project Manager responsible for ensuring personnel receive training and follow rules and procedures applicable to their work
	5. Fitness 6. OSHA Documentation	3. Contract Language. 4. Contractors Return to Work Policy. 5. Contractors Medical surveillance program. Medical monitoring, pre-job physicals, Doctor release. 6. Contractor OSHA 300 Log	Contractor's SHE Management System	Contractor	Contractor Project Manager

Category	Hazard/Activity	Safeguards in Place to Manage the Hazard/Activity	Interfaces		
			Management System	Whose System	Responsible Person
MANAGEMENT SYSTEMS	1. Communications: Points of contact with XOM 2. Competency (SHE and Work Program) 3. Roles and Responsibilities 4. Safety management 5. Fatigue 6. Drug and alcohol program	1. Site Specific SHE plan 2. Training Programs, Competency System, Performance Evaluations, Continuing Education 3. Job descriptions 4. Contractor Safety Management Policy and Procedures Manual 5. Budget 12-hour days 6. Contractor's program	Contractor defines points of contact. Contractor's SHE Management System as provided Contractor	Contractor	Contractor Project Manager to ensure personnel receive site orientation and contact list
WORK PRACTICES AND CONTROLS	1. Work Programs and Procedures 2. Pre-work Risk Assessment 3. Management of Change (design, equipment, chemical, procedure) 4. Information/ Documentation	1. Written work procedures, standards, drawings 2. Contractors pre-work SHE plan 3. Contractors Management of Change procedure 4. Information reporting and documentation to management (daily, job, etc.)	Contractor & XOM agree to all Contractor's SHE Management System Contract Language	Shared Contractor	Contractor & XOM Project Managers agree to work scope and written work procedures before commencing work.
CONTRACTOR SUPPLIED EQUIPMENT	1. Hand-tools 2. Trucks/Vehicles 3. Materials and Services in compliance with applicable industry standards and specifications 4. Maintenance and operability of equipment	1. Inspection program. 2. Licenses, driver competency. 3. Inspection program, record keeping. 4. Inspection and records.	Contractor's Work Plan Contractor's SHE Management System	Contractor	Contractor management to ensure personnel receive briefing on Safety Plan and Work Plan.

ATTACHMENT A

SAFETY, HEALTH AND ENVIRONMENTAL PLAN

URS

SAFETY, HEALTH AND ENVIRONMENTAL (SHE) INTERFACE DOCUMENT

CONTRACTOR: **URS Corporation** **CONTRACT#** **53551**

WORK SCOPE:

ExxonMobil Production Company and the Point Thomson Unit owners plan to develop the Point Thomson Gas Cycling Project for production and transport of sales-quality gas condensate to the Trans-Alaska Pipeline System. The Thomson Sands Reservoir will be developed from four gravel pads, an in-field road system, airstrip, dock, and gravel mine situated on the mainland between Brownlow Point and Point Hobson. The project includes an elevated common-carrier pipeline that will extend westward and connect to the Badami Sales Oil Pipeline.

An environmental evaluation of the Point Thomson Gas Cycling Project is being conducted and includes the evaluation of channel dredging and ocean dumping activities, including the base case (preferred) and other alternatives. These alternatives incorporate either summer or winter construction and provide various locations to dispose of dredged spoils. The construction permits require that physical properties and chemical characteristics of sediment samples related to channel excavation and disposal activities be evaluated for potential impacts to the surrounding environment. Since there are no sediment analyses for the excavation area and disposal alternatives, sampling is required and will be performed as part of this environmental baseline study work scope.

Based on the need to perform sediment sampling in support of construction permits for the proposed Point Thomson Gas Cycling Facility, investigative coring and sampling will be performed within the channel excavation area and potential disposal areas. The drilling and sampling work will be performed in order to collect sufficient environmental baseline physical (i.e., grain size) and chemical surface and subsurface seafloor sediment data to support the NEPA evaluation and permit applications for the proposed Point Thomson Gas Cycling Facility.

The proposed channel excavation and ocean dumping sites are located due north of the proposed Point Thomson Central Processing Facility, in the lagoon system (Lions Bay) between Bullen Point and Brownlow Point and off-shore of Mary Sachs Entrance, along the Alaska Beaufort Sea coast. The study area is approximately 46 miles east of Prudhoe Bay. Seafloor sampling of potential dumpsites and initial sampling at the proposed channel excavation will occur during the Summer 2002 open-water season from a vessel provided and operated by Alaska Clean Seas (ACS). Deeper sediment samples will be collected from the proposed channel excavation during the Winter 2003 season on floating land-fast sea ice using a conventional drill rig and coring equipment provided and operated by Discovery Drilling; winter transportation will be via Rollagon provided and operated by Catco.

TRANSPORTATION AND COMMUNICATIONS:

Summer 2002

Transportation of field crews and equipment to the investigation area during Summer 2002 will occur via an ACS vessel. The vessel will be equipped with a lifesaving skiff, survival suits, modern radio equipment, and an electronic position indicating radio beacon. Should a situation arise such as a serious injury or a mechanical problem with the vessel, help will be summoned using the radio. Procedures to be followed for emergency use of the radio will be posted conspicuously near the radio. The EPIRB switch will always be in the "armed" position (which will automatically begin transmitting if submerged), unless a serious enough situation arises that the switch is turned to "on" to summon help immediately.

The captain is in complete charge of the vessel and passengers at all times and shall conduct a thorough emergency briefing with each passenger. During the emergency briefing, all personnel will don and doff survival suits and the procedure for issuing a "Mayday" call will be discussed. Additionally, safety meetings will be held each morning, prior to departure, focusing on the potential hazards for the day and the safe plan of action for each hazard. Should a "near miss" occur or a new hazard be identified during the workday, work will be stopped, the situation discussed, and the hazard mitigated. The following safety procedures and requirements, at a minimum, will be practiced by field personnel when traveling and working onboard:

- The captain will file a float plan, including proper manifesting of passengers (name and employer) and cargo, each day with Badami security.
- Personnel will smoke only in the area designated by the captain.
- Passengers must transfer to and from the vessel under the direction of the captain, only after the vessel has been secured or otherwise determined to be safe to transfer.
- Personal flotation device(s) will be worn at all times outside the cabin.
- No one will work or travel alone outside the cabin.
- Radio communication with Badami will be maintained and tested periodically.
- Each field team member has the right to return to shore or refuse to travel if conditions seem unsafe.

Winter 2003

Transportation of field crews and equipment to the investigation area during Winter 2003 will occur via light truck on ice roads and Rollagon beyond the ice road system. Rollagon operations will be conducted by authorized crew members only, and at least two Rollagons will travel together. The Rollagons will be equipped with a built-in radio communication system. Field personnel will also be equipped with hand-held radios and cellular phones to allow communications within the drilling sled or in trucks.

When traveling by vehicle, field personnel will follow these safety procedures and requirements at all times:

- Have a valid and appropriate driver's license for the vehicle being operated.
- Circle the vehicle before operation to check vehicle condition and to identify any unkown or hidden obstacles.

- Drive defensively, safely, courteously, and responsibly.
- All passengers to wear seat belts and ANSI approved safety glasses while the vehicle is in motion.
- Comply with all posted speed limits and drive according to the conditions.
- Have headlights on whenever the vehicle is being driven.
- Where possible, park the vehicle in a manner that will eliminate the need to back the vehicle upon departure. If baking is necessary, the driver should ensure that the path of travel is clear before backing.
- Do not initiate cell phone calls while driving a vehicle. Drivers may acknowledge incoming cell phone calls bust must defer conversation until the vehicle can be brought to a full stop in a safe location.
- All accidents shall be reported immediately to the appropriate security department and the ExxonMobil and URS project managers will be notified.

SITE SPECIFIC HEALTH AND SAFETY INFORMATION:

URS Safety Management Standards (SMSs) for hazards anticipated during this field program are included as Attachment 1. The SMSs included in Attachment 1 are as follows:

- Regulatory Inspections (SMS #001)
- Worker Right to Know (SMS #002)
- Emergency Action Plans (SMS #003)
- Corrosive and Reactive Materials (SMS #009)
- Flammable and Combustible Liquids and Gasses (SMS #015)
- Hand Tools and Portable Equipment (SMS #016)
- Hazardous Waste Operations (SMS #017)
- Heat Stress (SMS #018)
- Heavy Equipment Operations (SMS #019)
- Medical Screening and Surveillance (SMS #024)
- Noise and Hearing Conservation (SMS #026)
- Work Over Water (SMS #027)
- Personal Protective Equipment (SMS #029)
- Remote Travel Health and Safety (SMS #036)
- Respiratory Protection (SMS #042)
- Back Injury Prevention (SMS #045)
- Subcontractor Health and Safety Requirements (SMS #046)
- Biological Hazards (SMS #047)
- DOT Shipping (SMS #048)
- Injury, Illness, and Incident Reporting (SMS #049)
- Marine Safety and Boat Operations (SMS #053)
- Office Ergonomics (SMS #054)
- Health and Safety Training (SMS #055)
- Drilling Safety Guidelines (SMS #056)
- Vehicle Safety Program (SMS #057)
- Cold Stress (SMS #059)

All field personnel will carefully read and understand this Safety, Health and Environmental Plan as well as the applicable sections in XOM's *U.S. Production Safety Manual*:

- General Safety
- Emergency Preparedness and Survival
- First Aid
- Fire Safety
- Personal Protective Equipment
- Water Operations
- Transportation

In addition, the on-site team leader will conduct daily field safety briefings before personnel travel out to the work site. The meetings will discuss safety concerns and mitigation measures concerning the project. Up-to-date observations of weather, wind chill, and wildlife presence will be discussed among the field team leader and field crew personnel.

Chemical Hazards

The potential chemical hazards associated with this project are minimal. The sediment samples to be collected during coring are not likely to be contaminated with diesel, weathered crude oil, or other components of drilling waste. However, there may be an odor of diesel or other hydrocarbons due to the boat engine exhaust and/or within the enclosed sled work area as a result of coring activities. Where fumes are strongly evident, where air circulation is not sufficient, or where employees feel uncomfortable with the potential exposure, air monitoring using a photo-ionization detector (PID) will be conducted (see below). If air monitoring results or physical symptoms (such as headache or nausea) indicate strong odors are present in the breathing zone, engineering controls (open door to ventilate work area) and/or personal protective equipment (respirators) will be put into place. Dermal exposure to contaminated core materials will be minimized through the use of gloves. Eating, drinking, and smoking will not be allowed during sampling activities.

Additionally, some chemicals will be used to preserve samples, calibrate equipment, or decontaminate equipment, including methanol, acids (hydrochloric and nitric), isobutylene gas, and Alconox®. The material safety data sheets (MSDS) for these and all other potentially hazardous chemicals will be kept onsite at all times. Gloves and other appropriate PPE will be used when handling chemicals, and filed team members will familiarize themselves with the hazards and risks listed in the MSDS. The URS Safety Management Standard (SMS) for flammable and combustible liquids and gases (isobutlyene and methanol) is included in Attachment 1.

Physical Hazards

The physical hazards associated with the project scope include working over water, working around heavy equipment in a small area, being struck by a vehicle or equipment, hypothermia and frostbite associated with cold weather exposure, encounters with wildlife, and slips and falls.

Over Water Work. Work on board a boat has the same risks associated with land-based activities with the additional risks of drowning, hypothermia, and the energy of wave action. The Safety Management Standards SMS #027 and #053 detail the safety requirements associated with over water work and boat operations (Attachment 1), which are highlighted as follows:

- Follow the captain's direction at all times when on board the vessel. It is the captain's responsibility to ensure marine safety requirements are met including the availability of proper first aid, survival, and navigation equipment, as well as operations and maintenance procedures including but not limited to fueling, boat loading/unloading, and fire and safety drills.
- Passengers must ride in the cabin, unless the captain is specifically aware of and grants authorization to ride in the wheelhouse or outside the cabin.
- All personnel must wear an appropriate PFD when outside the cabin, and have a PFD readily available when inside the cabin. A type V PFD, or "mustang suit", is preferred when working in arctic environments when cold water is a threat. The wearing of type V PFDs is required when the air temperature and the water temperature combined are less than 100 degrees F and when working from a small craft, less than 26 feet in length (e.g., sampling shallow locations from the skiff).
- Take special precautions on board a moving boat especially around doors, hatches, and hinges to prevent injury to hands and fingers.
- Do not move about the boat with both hands occupied; one hand should be free for support.
- Adequate ventilation must be maintained for passengers occupying closed compartments. Proper corrective measures should be taken at once when exhaust fumes are noticed.

Heavy Equipment and Other Vehicles. URS Field personnel assigned to this project will not be operating heavy equipment (drill rig). However, a portion of the sampling will take place alongside the drill rig in an enclosed Panacheck sled; therefore the following requirements for rig-based personnel must be met:

- Personnel must wear steel-toed boots and hard hats when working within the Panacheck sled.
- Sampling personnel will stay outside the drill rig work zone. The work zone is identified during the initial tailgate meeting on the rig before the work begins. If it is necessary for samplers to approach the rig, they must wait until the rig operators have given signal that it is appropriate to approach the rig.
- Ground personnel shall never walk or position themselves between a fixed object and running equipment or between two running pieces of equipment (e.g., between the moving jack and floor, between the rollagon and trailer, and underneath the drill rig).

In addition, a unit work permit and a facility hot work permit (if applicable) will be obtained, as applicable, prior to performing such work. All permit stipulations will be followed and all active permits will be closed out at the time the work is completed.

Hypothermia and Cold Injuries. Safety Management Standard SMS #059, Cold Stress (Attachment 1), details the symptoms of, treatment for, and how to avoid cold injuries such as frostbite and hypothermia. To avoid cold injuries during sampling activities, workers will wear approved arctic gear including pac boots and mitts. Should the beginning signs of either hypothermia or frost bite be observed, the affected worker will immediately proceed to the vehicle to warm up. Indication of adverse effects includes, but is not limited to:

- Uncontrolled shivering,
- Slurring of speech,
- Loss of motor skills, and

- Burning or tingling extremities (frost nip or frostbite).

To avoid cold injuries, workers will:

- Wear, or have readily available, appropriate clothing for the potential weather conditions.
- Constantly monitor team members for signs of cold stress.
- Warm up in the nearest available shelter (i.e., truck, wheelhouse cabin) at regular intervals, before cold stress symptoms occur.
- Immediately change into dry clothes when current clothing becomes wet (e.g., by perspiration, precipitation, or splashing).

If an individual observes the beginning signs of hypothermia or frostbite, the affected worker will immediately proceed to the warm-up shelter. If more than one team member experience symptoms, work will be stopped until conditions improve or engineering controls are put into place.

Encounters with Wildlife. Encounters with polar bears are possible any time of year in Beaufort Sea coastal areas. Brown bears as well as caribou, musk ox, and insects may be encountered in the summer. Heightened awareness for possible bear encounters will form the basis of personnel control and safety. During day-to-day activities, all personnel will be reminded to be constantly alert to bears in the nearby vicinity. Food and other items that might attract bears will be controlled and removed from the site at the end of each day's activities.

When conducting fieldwork, team members must frequently look up from their activity and scan the area for approaching bears. This practice will help to prevent surprise encounters with bears and, if a bear is sighted, allow the field team to assess the situation. When traveling away from the safety of the boat or drill rig, field personnel will work in pairs and will carry hand-held radios to communicate with the boat/rig.

If a bear is seen or recent bear sign identified, team members will go directly to the boat/vehicle and depart the location, leaving sampling equipment and other personal effects behind if necessary. Personnel will immediately notify the on-site team leader of the bear's location and direction of travel. They will also notify the URS and XOM Project Managers. Work will not continue until the bear leaves the area or an authorized bear hazer is on site.

Foxes, although not as immediately dangerous as bears, are of great concern due to rabies. Infected animals often lose their fear of humans and may be more likely to approach field personnel. Any physical contact, as well as the observation of sick animals must be reported to XOM Project Manager. If a fox touches your clothing, do not touch that part of your clothing, as you could become contaminated yourself. Wildlife must not be approached, fed, harassed, or harmed.

Other large animals, such as caribou or musk ox, may also be encountered during work. Field personnel shall take care not to startle any large animal, and should back away in a non-confrontational manner. It will not likely be necessary, however; work should be stopped for a short while if the animal appears to be threatened by worker activity.

During summer fieldwork, personnel may encounter a wide variety of insects including bees and mosquitoes. Field personnel are encouraged to use head nets, and/or insect repellent when mosquitoes or other biting insects are present. Insect repellent containing DEET should be applied only to clothing and should not be applied directly to the skin. Citronella insect repellent can be applied to the skin.

Slips and Falls. Most falls on the ice occur within 7 feet from exiting a vehicle. Caution should be used when walking on the ice; do not take long strides and attempt to keep your centerline over your mid-stride. Do not attempt to change direction quickly. Wear ice cleats when necessary.

Falls can occur on boats due to the swaying and listing motion of the boat. Caution should be used while on board a vessel; use handrails whenever possible, always keep one hand free for support at all times, and walk and stand with your feet about shoulder distance apart for optimum balance. Keep the boat deck clear of equipment and other objects to minimize tripping hazards. Field personnel should assist each other in boarding or leaving the boat.

PERSONAL PROTECTIVE EQUIPMENT:

The initial level for all activities is **Level D.**

INITIAL PPE LEVELS

Activity	Level of Protection	Equipment Requirements
Collection of sediment samples.	D	Winter - arctic gear consisting of down coveralls or parka and bibs with reflective tape, Arctic grade pack boots or bunny boots, safety glasses, hard hat, hard hat liner, and water resistant arctic mitts with polypropylene or silk liners. Summer – rain/cold weather gear as appropriate, steel-toed boots, hard hat, work gloves, and personal flotation device. Safety glasses. Hearing protection if warranted due to heavy equipment.

EXPOSURE MONITORING:

A PID will be used to monitor the breathing zone at locations as determined by the field team leader/site safety officer. Upgrade to level C (half or full face respirator with organic vapor cartridges) will proceed as directed in the following table:

TOXICITY ACTION LEVELS
FUELS OTHER THAN GASOLINE, METHANOL AND JET B

Instrument	Calibration Gas	Action Upgrade to Level C[1] (ppm)	Evacuate (ppm)
Photo-ionization meter (10.0 to 10.2 eV lamp)	HNU calibration gas or Benzene	20	100[2] 600[3]
Photo-ionization meter (10.0 to 10.2 eV lamp)	Isobutylene	35	200[2] 600[3]
Flame ionization meter (OVA-128)	Methane	100	300[2] 600[3]

[1]Sustained in the breathing zone for 1 minute.
[2]For workers wearing half-face respirators.
[3]For workers wearing full-face respirators.
ppm = parts per million

EMERGENCY RESPONSE:

The purpose of this section is to provide guidance in preparing for contingency or emergency situations during field activities. Accidents can, and do, happen. However, with adequate planning and preparedness, resulting consequence can be minimized or prevented.

Emergency preparedness starts with advanced planning. It requires anticipation of potential problems or hazards. Proper emergency preparedness involves use of the project health and safety plan that may address emergency situations. It involves training, site orientation of personnel, medical information of personnel, and availability of emergency equipment and services.

Emergency Action Plan

This section describes the steps to be taken if an emergency occurs. In the event of an emergency, the contact list (Attachment 2) provides contact numbers for the nearest medical, environmental, and emergency response team services to the Point Thomson Study area.

- Communications – Radio equipment will be installed in the vessel and the Rollagons and cellular phones will be carried to the work site to communicate any fire, medical, or environmental emergencies. Radio communication tests will be performed daily with the Badami facility and CATCO base office to ensure equipment is working properly before departing to the field.

- Fire – All vehicles, the boat, and the drill rig are equipped with fire extinguishers. Personnel should first notify Badami of the fire, by radio or telephone (659-1200), and then if they can fight the fire comfortably, do so. If not, communicate needs with rescuers using the radio or telephone. Personnel should make sure that they have arctic gear/survival suits and move to a safe distance to wait for pick up.

- Medical – All vehicles and the boat are equipped with First Aid kits. If the injury requires further medical attention, call for help on the radio. The nearest medical support facility to Point Thomson is the Badami Medical Clinic (659-1327). If an injury occurs in a camp or at a hotel, go to the desk for assistance. All injuries, no matter how small, must be reported for medical attention (see reporting procedures below).

- Environmental Spills – A positive impact on the environment is the goal of all XOM participants. A spill is any incident that releases a contaminant into the environment. Nothing may be poured into the water or on the tundra and all food and containers must be taken back to the camp area for disposal. If field personnel create or witness an emergency situation, Spill Response (659-1200) must be contacted. Spill Response will then contact the proper departments.

Emergency Equipment/First Aid

The emergency equipment to be located on site in the boat or the drill rig and Rollagon includes a first aid kit, air horn, emergency eyewash, an ABC-type fire extinguisher, potable water, anti-bacterial soap, and radio equipment.

URS

Spill and Release Contingencies

If a small spill occurs, the release will be handled using on-site spill containment materials. All spills will be reported to the XOM Project Manager. BPXA will be contacted at 659-1243 if a spill occurs in an operated area.

Incident Reporting and Investigation

Any work-related incident, accident, injury, illness, exposure, or property loss must be reported to the XOM Project Manager (907-564-3702) and the URS Project Manager (907-261-6709) following the procedures in SMS #049, Incident Injury Reporting (Attachment 1). Motor vehicle accidents must also be reported. A URS Incident Report Form, (attached to this plan), must also be filled out and forwarded to the URS Project Manager. In addition, the incident will be reported to BPXA HSE Shared Resource through the BPXA Badami contact (659-1243) for incidents that occur in an operated area.

[signature]
XOM CONTRACT ACCOUNTABLE MANAGER
DATE: 7/30/02

Sharon J. Sullivan
CONTRACTOR'S ACCOUNTABLE MANAGER
DATE: 7/30/02

ATTACHMENT 1

SAFETY MANAGEMENT STANDARDS

URS SAFETY MANAGEMENT STANDARD
Inspections by Regulatory Agencies

1. Applicability

This program applies to URS office and field operations.

2. Purpose and Scope

Representatives of regulatory agencies may have statutory authority to evaluate URS operations for compliance with health and safety regulations. URS personnel are to cooperate with all such inspections. This procedure provides guidelines for responding to the inspector and for documenting inspection activities.

3. Implementation

Office Locations	Implementation of this procedure is the responsibility of the Office Manager.
Field Activities	Implementation of this procedure is the responsibility of the Project Manager.

4. Requirements

A. Obtaining Positive Identification

Request formal identification (photo identification card) from any regulatory agency representative. Call the agency if there is any question regarding the identity of the individual (independently obtain the agency's number; don't use a number provided by the representative). Obtain a business card from the inspector for URS records.

B. Warrants

Do not require an inspector to obtain a warrant prior to conducting an inspection.

C. Health and Safety Notification

Contact the local URS Health and Safety Representative or URS Health and Safety Manager immediately upon confirming the identification of the representative.

D. Opening Conference

1. Request an opening conference if one is not initiated by the inspector.

2. Use the opening conference to determine why the inspector is conducting the inspection.

3. Take good notes during the conference.

E. Inspection Activities

1. Escort the inspector at all times, taking him/her directly to the area of interest.

2. Answer all questions honestly, but do not volunteer information.

3. Do not argue with or attempt to mislead the inspector.

4. Resolve violative conditions immediately, while the representative is on site, if possible.

5. Make sure the inspector has appropriate qualifications to enter high hazard areas.

6. Take good notes during the inspection and take pictures where the inspector takes pictures.

7. Inspectors generally have the right to interview employees if they do not interrupt operations.

F. Closing Conference

1. Request a closing conference if one is not initiated by the inspector.

2. Use the closing conference to determine what regulatory violations the representative found, if any.

3. Do not try to negotiate during the closing conference.

4. Take good notes during the conference.

G. Post-Inspection Activities

1. Immediately contact URS Health and Safety Manager and communicate the results of the inspection. The URS Health and Safety Manager will provide additional instructions regarding the inspection.

2. Debrief any employees who were contacted by the representative; all discussions should be reduced to notes.

3. All follow-on activities associated with the inspection will be coordinated by the Group Health and Safety Manager and appropriate legal counsel. Local URS employees are not to conduct any follow-on activities without the express consent of the URS Health and Safety Representative.

5. Documentation Summary

Provide the following documents to the URS Health and Safety Manager:

A. Inspector's business card.

B. All materials provided by the inspector.

C. All notes relating to the inspection, opening conference, closing conference, and debriefings.

D. All photos from the inspection, with explanatory notes.

6. Resources

U.S. OSHA - Field Inspection Reference Manual

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URS SAFETY MANAGEMENT STANDARD

Worker Right-to-Know (Hazard Communication)

1. Applicability

This procedure applies to URS office and field operations.

2. Purpose and Scope

The worker right-to-know program provides URS personnel with information and training about safety and health hazards associated with the chemicals they might encounter in the workplace. This procedure describes how chemical safety hazards are communicated to URS personnel working in offices and at field site locations, and how information is to be provided to employees of other employers working at the location. The requirements include steps to acquire this information, maintain it, and train everyone to use it.

3. Implementation

Office Locations: Implementation of this program is the responsibility of the Office Manager.

Field Activities: Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. Hazardous Material Inventory

1. Maintain a hazardous material inventory that lists all of the hazardous materials used at this workplace. Use chemical names consistent with the applicable MSDS's.
2. File a copy of the chemical inventory in the Safety Filing System.

B. Material Safety Data Sheets (MSDS's)

1. Obtain a MSDS for each chemical before it is used.
2. Review each MSDS when it is received to evaluate whether the information is complete and to determine if existing protective measures are adequate.
3. Maintain a collection of all MSDS's where they are accessible at all times.

4. Replace MSDS sheets when updated sheets are received. Communicate any significant changes to those who work with the chemical.

5. MSDS's are required for all hazardous materials used on site by project personnel.

C. Labels

Label all chemical containers with:

1. Identity of the hazardous chemical(s),

2. Appropriate hazard warnings, and

3. Name and address of the chemical manufacturer, importer, or other responsible party.

D. Hazardous Nonroutine Tasks

Periodically, employees are required to perform hazardous non-routine tasks. Prior to starting work on such projects, provide each employee with information about hazards to which they may be exposed during such an activity.

This information will include:

1. Specific chemical hazards.

2. Protective/safety measures which must be utilized.

3. Measures that have been taken to lessen the hazards including ventilation, respirators, presence of another employee and emergency procedures.

E. Informing Contractors/Subcontractors

Provide contractors/subcontractors the following information on chemicals used by or provided to URS personnel:

1. Names of hazardous chemicals to which they may be exposed while on the jobsite.

2. Precautions the employees may take to lessen the possibility of exposure by usage of appropriate protective measures.

3. Location of URS MSDS's and written chemical inventory.

F. Training

1. Conduct training of all employees potentially exposed to hazardous materials on the following schedule:

   a. Before new employees begin their jobs.

   b. Whenever new chemicals are introduced into the workplace, or

   c. Annually thereafter.

2. This training will include:

   a. Applicable regulatory requirements.

   b. Names of those responsible for implementing this program.

   c. Location of the program, inventory and MSDS 's.

   d. Chemicals used, and their hazards (chemical, physical and health).

   e. How to detect the presence or release of chemicals.

   f. Safe work practices.

   g. How to read an MSDS.

3. Document the training.

5. Documentation Summary

A. File these records in the Office Safety Filing System

1. Chemical Inventory.

2. Location of the MSDS inventory.

3. Training records.

4. Contractor/Subcontractor notifications.

B. File these records in the Project Safety File.

1. Chemical Inventory.
2. Location of the MSDS inventory.
3. Training records.
4. Contractor/Subcontractor notifications.

6. Resources

A. U.S. OSHA Technical Links - Hazard Communication (http://www.osha-slc.gov/SLTC/hazardcommunications/index.html)

B. U.K. - Control of Substance Hazardous to Health - Regulations

URS SAFETY MANAGEMENT STANDARD

Emergency Action Plans

1. Applicability

This procedure applies to URS office and field operations.

2. Purpose and Scope

This procedure establishes policy, assigns responsibilities, and provides guidance to URS offices/field projects regarding emergency action. It includes general information on actions to be taken by URS management and employees in the event of a fire or other emergency that may endanger life or property.

The objectives of this procedure are to:

A. Promote a fast, effective reaction in coping with emergencies.

B. Save lives and avoid injuries and panic.

C. Restore order and conditions back to normal levels with a minimum of confusion and as promptly as possible.

3. Implementation

Office Locations- Implementation of this program is the responsibility of the Office Manager.

Field Activities- Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. Emergency Action Plan Development

1. Gather Information

Each URS office/project must develop an emergency Action Plan tailored to its specific situation. Office Managers will check with their building manager or landlord regarding evacuation procedures they may have in place and incorporate these procedures into the emergency Action Plan. Project EAPs must comply with client requirements and specifications. The Plan must contain the following:

a. Reporting Fires and Other Emergencies

Describe the procedures that personnel should follow to report emergencies. List emergency telephone numbers for fire, paramedics and police. Include local prefixes on emergency numbers, if required, such as 9-911.

b. Alarm System

Describe the emergency alarm system for the building/site as applicable. Include the description and location of fire alarm pull boxes, and visual and audible alarms. If a public address (PA) system is used to notify occupants of emergencies, include the procedures to activate the PA system, such as calling the receptionist or building manager's office, and a description of the announcements that will be made.

c. Evacuation Routes and Procedures

Develop a map or description of the evacuation routes and emergency exits to be use. A description of the building emergency lighting system and exit signs may also be included. Evacuation route maps may be posted in the offices. There should be a primary and alternate evacuation route and exit from each work area.

Describe procedures regarding the use of elevators, if applicable. In most cases elevator use is prohibited during an emergency. The building manager should be consulted for these procedures.

Include procedures to determine that no employees have been inadvertently left behind.

d. Critical Equipment/Operations Procedures

Designate personnel responsible for shutting down critical equipment and the procedures for doing so, if applicable.

e. Assisting Disabled Personnel

Describe the provisions that have been made for notifying and assisting personnel with disabilities during an emergency. Such provisions are to accommodate personnel in wheelchairs or those who are temporarily disabled, such as personnel on crutches.

f. Personnel Accounting Procedures

Designate a primary and alternate assembly area for personnel who are evacuating. Require sufficient distance so that personnel will not be exposed to fire or debris hazards, or traffic, nor interfere with emergency responders.

Designate an individual and an alternate with the assigned responsibility for taking a headcount in the assembly area and reporting missing personnel to emergency responders.

Define the procedures on how employees will be informed that it is safe to re-enter the building or to leave for home.

g. Rescue and Medical Duties

Include the statement that "URS does not expect or encourage its employees to engage in firefighting, medical treatment, rescue, or other emergency response. Such activities should only be performed by properly equipped and trained emergency responders. URS recognizes that some of its personnel may have received training in first aid and cardiopulmonary resuscitation (CPR) and may wish to perform these duties on injured personnel."

B. Posting

1. Post the Emergency Action Plan where it is available to all employees.
2. Post evacuation maps at all exits and points of egress.

C. Training

Train all employees regarding the requirements of the Emergency Action Plan.

5. Documentation Summary

A. Office

File these records in the Office Safety Filing System:

1. Emergency Action Plan

2. Evacuation Maps

3. Training records

B. Field

File these records in the Project Safety File.

1. Emergency Action Plan

2. Evacuation Maps

3. Training records

6. References

A. U.S. OSHA Standard - Emergency Action Plans - 29 CFR 1910.38

B. U.S. OSHA Fact Sheet - Responding to Workplace Emergencies

URS SAFETY MANAGEMENT STANDARD

CORROSIVE AND REACTIVE MATERIALS

1. Applicability

This program applies to URS office and field operations where corrosive or reactive materials are stored or used.

2. Purpose and Scope

This program provides information regarding the proper methods to store, handle and work with corrosive and reactive materials. This procedure considers a corrosive material as one that has a pH less than 2.0 (acid), or greater than 12.5 (base). A reactive material is a chemical that may be sensitive to shock, or may react with air or water depending upon its makeup.

3. Implementation

Office Locations - Implementation of this program is the responsibility of the Office Manager.

Field Activities - Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. Appoint a responsible person who will:

1. Inspect storage areas periodically.
2. Monitor the quantity of corrosive and reactive materials on site as well as those incoming materials.
3. Review work practices utilizing corrosive and reactive materials.

B. Require that all employees working with corrosive or reactive materials, or who are working in close proximity to where such materials are being used or handled, are trained in accordance with SMS 2, "Worker Right to Know".

C. Control the use of corrosive and reactive materials by URS personnel.

1. Order only those materials and quantities that are needed to complete a job.
2. Check incoming corrosive and reactive materials for proper labeling.

a. Label materials if needed upon arrival on site.

b. Mark reactive materials containers with the date of receipt of the chemical.

3. Check incoming corrosive and reactive materials for materials safety data sheets. If MSDS are not already on file, order them from the manufacturer, distributor or vendor.

4. Add incoming corrosive and reactive chemicals to the hazardous materials inventory - if not already on the inventory following procedures set forth in SMS 2, "Worker Right to Know".

5. Do not store any quantity of corrosive or reactive materials except consumer products in an office. These materials are to be stored off-site or at an on-site laboratory or storage area.

D. Store corrosive and reactive materials appropriately.

1. Store corrosives and reactive materials as indicated on the Material Safety Data Sheet. In general, store these materials:

a. In a cool, dry environment, free from extremes of temperature and humidity.

b. In a manner that separates them from other materials (including flammables and oxidizers) and from each other.

1. Separate acids and bases.

2. Separate reactive materials from acids and bases, and protect from contact with water.

c. On materials that are acid resistant (Teflon-coated, plastic, etc.) for small containers.

d. Covered, not stacked on one another on acid resistant material - for carboys (approximately 5 gallons/22 liters) in the same manner as small containers.

e. On individual racks or securely blocked on skids with closure (plug) facing upward to prevent leakage for drums.

E. Require that labeling & signage are in place.

Label containers with the appropriate warning word to indicate the hazard: DANGER; WARNING; CAUTION; CORROSIVE; OXIDIZER.

F. Use corrosive and reactive materials appropriately.

1. Safe-handling procedures will vary with each operation and type and concentration of the chemical, in all cases review the Material Safety Data Sheet and product information before use.

2. Use SMS 29 - Personal Protective Equipment when working with or around corrosive and reactive materials.

   a. Review the MSDS for the chemical used to determine the type of PPE needed.

   b. Wear the following PPE as a minimum when working with corrosives and reactive materials:

      1. Chemical splash goggles.

      2. Chemical resistant gloves.

      3. Chemical resistant apron.

3. Obtain medical care immediately in the event of:

   a. Skin or eye exposure (e.g., splash) to corrosive liquids.

   b. Inhalation of vapors of corrosive liquids that cause respiratory discomfort.

4. Require an eyewash to be located in all areas where acids or bases are used. Safety showers should be nearby if significant acid or base quantities are involved.

   a. Place emergency eyewashes and showers in accessible locations that require no more than 10 seconds to reach and are in a travel distance no greater than 25 feet (7.5 meters) from the hazard.

   b. Mark emergency eyewashes and showers with a highly visible sign.

   c. Require the area around emergency eyewashes and showers to be well lighted and visible.

d. Require emergency showers to deliver a minimum 20 gallons (85 liters) per minute for 15 minutes.

e. Require emergency eyewashes to be capable of delivering to the eyes not less than 1.5 liters per minute for 15 minutes.

G. Be prepared to clean up spills of corrosive and reactive materials.

1. Have a written spill response plan in place before materials are stored on site.

2. Have commercially-available spill kits available for clean up of small quantities of materials.

3. Clean up or respond to spills promptly.

4. Do not use combustible organic materials (sawdust, excelsior, wood chips and shavings, paper, rags or burlap bags) to absorb or clean up spills.

H. Dispose of corrosive and reactive materials appropriately.

1. Segregate organic acids, inorganic acids, and basic wastes.

2. Contract hazardous waste disposal services should be obtained to dispose of waste materials. All waste must be appropriately packaged for off-site transportation.

I. Inspect corrosive and reactive storage and use areas periodically.

1. Inspect office settings quarterly.

2. Inspect field related project sites at least once a week.

3. Use the inspection sheet provided as Attachment 9-1 to inspect sites.

5. Documentation Summary

A. File these records in the Office Safety Filing System:

1. Completed Corrosive and Reactive Material Inspection Sheets.

2. Worker Right to Know training documentation.

B. For field operations, file these records in the Project Safety File.

1. Completed Corrosive and Reactive Material Inspection Sheets.
2. Worker Right to Know training documentation.

6. Resources

A. ANSI Z358.1-1990 American National Standard for Emergency Eyewash and Shower Equipment

B. U.S. OSHA Technical Links - Personal Protective Equipment

C. U.S. OSHA Technical Links - Hazard Communication

D. Australian Standards AS 3780 - 1994. The Storage and Handling of Corrosive Substances

E. Attachment 9-1 - Inspection Sheet

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URS SAFETY MANAGEMENT STANDARD

Flammable and Combustible Liquids and Gases

1. Applicability

This procedure applies to URS office and field operations where flammable and combustible liquids and gases are stored or used.

2. Purpose and Scope

The purpose of this procedure is to provide information regarding the proper storage, handling and work practices associated with flammable and combustible liquids and gases.

3. Implementation

Office Locations- Implementation of this program is the responsibility of the Office Manager.

Field Activities- Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. Appoint a Responsible Person who will:

1. Inspect storage areas periodically.
2. Monitor the quantity of flammable and combustible liquids and gases on the site.
3. Review work practices.

B. Control flammables, combustibles, and flammable gases entering the site.

1. Order only those materials and quantities that are needed to complete a job.
2. Check compliance with SMS 2, "Worker Right to Know".

C. Storage

1. Store flammable and combustible materials in appropriate tanks and containers. See Attachment 15-1.
2. Limit building storage outside of a flammable storage cabinet or storage room per Attachment 15-1.

3. Store oxidizers separately from flammables.

4. Segregate gas cylinders for storage based on their hazard (keep oxygen and acetylene cylinders stored separately).

D. Labeling and Signage

1. Post a "NO SMOKING OR OPEN FLAME" sign in all areas where flammable and combustible materials are stored, handled, and processed.

2. Require all containers and cylinders to be labeled with the contents and hazard-warning label.

E. Use of Materials on Site

1. Use flammable, combustible, and compressed gases in a manner that is consistent with the label and material safety data sheet for the product.

2. Use only those amounts of materials needed for the job. Transfer of flammables, combustibles, oxidizers to ready use containers is encouraged.

3. Use personal protective equipment stated on the product label and material safety data sheet.

F. Spill Control

1. Have a written spill response plan in place before materials are stored on site.

2. Clean up or respond to spills promptly.

G. Disposal

1. Keep solvent waste and flammable liquids in fire resistant, covered containers until they are removed from the worksite.

2. Do not place flammable or combustible waste in municipal garbage.

3. Dispose of flammable hazardous materials with a licensed hazardous material disposal company.

H. Inspection

1. Periodically inspect flammable and combustible storage and use areas; gas storage areas and oxidizer storage areas:

    a. Office settings inspect quarterly.

    b. Field related projects, inspect once a month.

2. Use the inspection sheet provided as Attachment 15-2 to inspect the storage areas.

I. Training

Require that Hazard Communication training includes specific hazard information for the flammables, combustibles and oxidizers used.

5. Documentation Summary

A. File these records in the Office Safety Filing System:

1. Location of the MSDS inventory.

2. Completed Flammable and Combustibles Inspection Checklist.

B. File these records in the Project Safety Filing System:

1. Attach program to Project Safety Action Plan.

2. File these records in the Project Safety File.

    a. Location of the MSDS inventory

    b. Completed Flammable and Combustible Inspection Checklist.

6. Resources

A. National Fire Protection Association - Standard 58

B. Regulations of the U.S. Coast Guard

C. U.S. OSHA Standard - Flammable and Combustible Liquids - 29 CFR 1910.106

D. U.K. - "Highly Flammable Liquids" and "Liquid Petroleum Gases" Regulations

E. Australian Standards AS 1940-1993. The Storage and Handling of Flammable and Combustible Liquids

F. Attachment 15-1 - Flammable and Combustible Liquid Classifications

G. Attachment 15-2 - Flammable, Combustible, Oxidizer & Compressed Gas Inspection Sheet

URS SAFETY MANAGEMENT STANDARD

Hand Tools and Portable Equipment

1. Applicability

This procedure applies to URS operations involving the use of hand tools and/or power equipment, including chain saws, brush cutters, powder-actuated tools, and similar high-hazard implements.

2. Purpose and Scope

The purpose of this standard is to provide guidelines for the safe use and handling of hand tools and power equipment.

3. Implementation

Office/Facility Locations -	Implementation of this program is the responsibility of the Office Manager.
Field Locations -	Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. General

1. Keep hand and power tools in good repair and used only for the task for which they were designed.
2. Remove damaged or defective tools from service.
3. Keep surfaces and handles clean and free of excess oil to prevent slipping.
4. Do not carry sharp tools in pockets.
5. Clean tools and return to the toolbox or storage area upon completion of a job.
6. Wrenches must have a good bite before pressure is applied.
    a. Brace yourself by placing your body in the proper position so that in case the tool slips you will not fall.
    b. Make sure hands and fingers have sufficient clearance in the event the tool slips.

c. Always pull on a wrench, never push.

7. When working with tools overhead, place tools in a holding receptacle or secure when not in use.

8. Do not throw tools from place to place, from person to person, or drop from heights.

9. Use non-sparking tools in atmospheres with fire or explosive characteristics.

10. Inspect all tools prior to start-up or use to identify any defects.

11. Powered hand tools should not be capable of being locked in the on position.

12. Require that all power fastening devices be equipped with a safety interlock capable of activation only when in contact with the work surface.

13. Do not allow loose clothing, long hair, loose jewelry, rings and chains to be worn while working with power tools.

14. Do not use cheater pipes.

15. Make provisions to prevent machines from automatically restarting upon restoration of power.

B. Grinding Tools

1. Inspect work rests and tongue guards for grinders.

   a. Work rest gaps should not exceed 1/8 inch (3 mm).

   b. Tongue guards gap should not exceed ¼ inch (6 mm).

2. Do not adjust work or tool rests while the grinding wheel is moving.

3. Inspect the grinding wheel for cracks, chips or defects. Remove from service if any defects are found.

4. Wear goggles when grinding. A clear full face shield may be worn with the goggles.

5. Do not use the side of a grinding wheel unless the wheel is designed for side grinding.

6. Always stand to the side of the blade, never directly behind it.

7. Use grinding wheels only at their rated speed.

8. Grinding aluminum is prohibited.

9. For U.K. operations:

    a. No grinding wheels exceeding 55mm are to be used.

    b. All wheels are to be marked with their safe maximum speed.

    c. Abrasive wheels will only be operated by personnel who have been specifically trained and specified competent by URS.

    d. Abrasive wheels will only be operated by persons specified as competent, under the 'Abrasive Wheels" Regulations.

    e. Abrasive wheels must only be operated if the manufacturer's guard is fitted and they are in good working order.

C. Power Saws

1. Require that circular saws are fitted with blade guards.

2. Remove damaged, bent or cracked saw blades from service immediately.

3. Require that table saws are fitted with blade guards and a splitter to prevent the work from squeezing the blade and kicking back on the operator.

4. Require guards that cover the blade to the depth of the teeth on hand held circular saws. The guard should freely return to the fully closed position when withdrawn from the work surface.

D. Wood Working Machinery

1. Do not use compressed air to remove dust, chips and from wood working machinery.

2. Locate the on-off switch to prevent accidental start up. The operator must be able to shut off the machine without leaving the work station.

3. Guard planers and joiners to prevent contact with the blades.

4. Use a push stick when:

   a. The cutting operation requires the hands of the operator to come close to the blade.

   b. Small pieces are being machined.

5. Adjust saw blades so they only clear the top of the cut.

6. Automatic feed devices should be used whenever feasible.

E. Pneumatic Tools and Equipment

1. Require that pneumatic tools have:

   a. Tool retainers to prevent the tool from being ejected from the barrel during use.

   b. Safety clip or tie wire to secure connections between tool/hose/compressor if they are of the quick connection (Chicago fittings) type.

2. Do not lay hose in walkways, on ladder or in any manner that presents a tripping hazard.

3. Never use compressed air to blow dirt from hands, face or clothing.

4. Compressed air exhausted through a chip guarded nozzle shall be reduced to less than 30 psi. Proper respiratory, hand, eye and ear protection must be worn.

5. Never raise or lower a tool by the air hose.

F. Powder Actuated Fastener Tools

1. Use powder actuated tools that comply with the requirements of the American National Standards Institute (ANSI) standard A 10.3 - 1970.

2. Use only individuals that have been trained by a manufacturer's representative and possess the proper license to operate, repair, service and handle powder actuated tools.

3. Never use a powder actuated tool in a flammable or explosive atmosphere.

4. Require the use of goggles or a full face shield as well as safety glasses during operation of powder actuated tools.

5. Powder actuated tool must not be able to be fired unless the tool is pressed against the work surface.

6. The tool must not be able to fire if the tool is dropped when loaded.

7. Firing the tool should require two separate operations, with the firing movement being separate from the motion of bringing the tool to the firing position.

8. Never fire into soft substrate where there is potential for the fastener to penetrate and pass through, creating a flying projectile hazard.

9. Do not use powder actuated tools in reinforced concrete if there is the possibility of striking the re-bar.

10. Do not use on cast iron, glazed tile, surface hardened steel, glass block, live rock or face brick.

11. Never load and leave a powder actuated tool unattended. It should only be loaded prior to intended firing.

12. Test tools each day prior to loading by testing safety devices according to manufacturer's recommended procedure.

G. Chain Saws

1. Inspect the saw prior to each use and periodically during daily use.

2. Operate the chain saw with both hands at all times.

3. Never cut above chest height.

4. Require that the idle is correctly adjusted on the chain saw. The chain should not move when the saw is in the idle mode.

5. Start cutting only after a clear escape path has been made.

6. Shut the saw off when carrying through brush or on slippery surfaces. The saw may be carried no more than 50 feet (15 meters) while idling.

7. Require applicable protective gear. This may include, but is not limited to:

    a. Loggers safety hat.

    b. Safety glasses.

    c. Steel-toed boots.

    d. Protective leggings.

    e. Hearing protection.

8. Inspect saws to require that they are fitted with an inertia break and hand guard.

9. *Never* operate a chain saw when fatigued.

10. Do not allow others in the area when chain saws are operated.

11. Make sure there are no nails, wire or other imbedded material that can cause flying particles.

12. Do not operate a chain saw that is damaged, improperly adjusted, or is not completely and securely assembled. Always keep the teeth sharp and the chain tight. Worn chains should immediately be replaced.

13. Keep all parts of your body away from the saw chain when engine is running.

14. For U.K. operations, only personnel specifically trained and certified as competent by URS can operate chain saws.

H. Hand Operated Pressure Equipment

1. Pressure equipment such as grease guns, paint and garden sprayers shall be directed away from the body and other personnel in the area. The person operating any equipment such as this, which has a potential for eye injury, must wear protective goggles.

2. The noise produced when using certain types of pressure equipment may require the use of hearing protection.

3. Never allow the nozzle of a pressurized tool to come in contact with any body parts while operating. There is potential for injection of a chemical directly into the user's body, resulting in severe injury or death.

I. Gasoline Powered Tools

1. Never pour gasoline on hot surfaces.

2. Never fuel around open flame or while smoking.

3. Shut down the engine before fueling.

4. Provide adequate ventilation when using in enclosed spaces.

5. Use only OSHA approved safety cans to transport flammable liquids.

J. Inspection

Inspect all hand tools on a regular basis. Defective tools shall be immediately removed from service, tagged or destroyed to prevent further use.

5. Documentation Summary

Place in the Project Safety File:

A. Site briefings regarding tool use.

B. Records of tools removed from service.

C. Copies of powder actuated tool licenses (as applicable).

D. Tool inspection documentation.

6. Resources

A. U.S. OSHA Standard - Hand and Portable Power Tools - 29 CFR 1910, Subpart P

B. U.S. OSHA Standard - Construction Tools - Hand and Power - 29 CFR 1926, Subpart I

C. ANSI A10.3 – 1970

D. National Association of Demolition Contractors (http://www.demolitionassociation.com/)

E. U.K. - 'Abrasive Wheel' Regulations

F. U.K. - 'Wood-Working Machine' Regulations

G. U.K. - 'Provision and Use of Work Equipment' Regulations

H. Australian Standards Collection 26 - Occupational Health & Safety - Powered Machining and Tools

URS SAFETY MANAGEMENT STANDARD

Hazardous Waste Operations

1. Applicability

This standard applies to URS field operations involving the investigation or remediation of sites impacted with hazardous wastes or hazardous materials including those associated with underground storage tanks.

Investigation projects for real estate transactions conducted to confirm that a site is "clean" are not covered under this standard. Reference related Safety Management Standards for such operations.

2. Purpose and Scope

The purpose of this standard is to provide guidance designed to minimize hazardous chemical exposures to URS personnel while URS is conducting hazardous waste field operations.

Investigation techniques included under this standard include, but are not limited to, hand auger, soil gas evaluation, test pits, and all types of power drilling, including direct push. Remediation techniques included under this standard include, but are not limited to, excavation, groundwater treatment, soil gas treatment, containment, and landfarming and similar insitu methods.

3. Implementation

Field Activities - Implementation of this procedure is the responsibility of the Project Manager or Superintendent.

4. Requirements

A. Project Evaluation

Assess the technical and field aspects of every hazardous waste site project to evaluate:

1. Risk of exposure to hazardous chemicals, with particular attention to suspected or known human carcinogens.
2. Personal protective equipment requirements.
3. Air monitoring requirements.
4. Emergency services requirements.
5. Hazards addressed by other URS Safety Management Standards.

6. Logistical considerations, such as access, distance from population centers.

7. Other safety and health hazards associated with site operations.

B. Client/Contract Evaluation

1. Review contract documents to determine whether the client has any special internal or regulatory requirements for hazardous waste site operations.

2. Implement client requirements in addition to those of this standard. Those requirements that are the most protective (e.g., most stringent) will be used.

C. Site-specific Health and Safety Plan

1. Prepare a site-specific Health and Safety Plan (HSP) for every project under this standard.

2. HSPs must be written or reviewed by a URS Health and Safety Regional Health and Safety Manager (RHSM) or a safety professional specifically approved by the RHSM.

3. Evaluate client and agency requirements prior to preparing the HSP, particularly if the client or an agency will approve the HSP prior to implementation.

D. Training

Verify that each assigned URS employee has completed required training. In general, the following are required for operations within North America:

1. 40-hours of initial training from an approved training provider.

2. 3-days of on-the-job training.

3. 8-hours of refresher training completed within 12 months of the initial or subsequent refresher training.

4. 8-hours of Site Safety Officer (Supervisor) training for directing the activities of any other URS employee.

5. Additional training for the Site Safety Officer as described below.

E. Site Safety Officer

1. Appoint a Site Safety Officer (SSO) with appropriate qualifications for the specific hazardous waste project.

2. Assure that the SSO for complex projects, such as those with complicated remediation activities, has no duties other than site safety and health.

3. Verify that the SSO has completed basic supervisor training, and has additional required training and experience as applicable:

   a. Advanced respiratory protection training is required for projects where supplied air respirators may be used.

   b. Heavy equipment/construction safety.

   c. Personal air monitoring.

F. Exposure Monitoring

Require that exposure monitoring is conducted in accordance with the HSP on all hazardous waste projects.

G. Project Equipment

1. Provide all health and safety equipment as described by the project Health and Safety Plan.

2. Provide all personal protective equipment as described by the project Health and Safety Plan.

H. Medical Surveillance

Verify that each URS employee assigned to the project meets the minimum requirements of the URS Medical Surveillance Program. This typically includes:

1. Baseline examination.

2. Annual examination.

3. Appropriate clearance for respirator use.

5. Documentation Summary

In the Project Safety File:

A. Completed Health and Safety Plan.

B. Completed and signed HSP approval form.

C. Signed HSP acceptance form.

D. Completed H&S field forms that are included in each HSP.

E. Training and Medical Surveillance Clearance documentation for project personnel.

6. Resources

A. U.S. OSHA Technical Links - Hazardous Waste Operations

The following documents are PDF files which must be read with Adobe Reader:

B. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities - NIOSH 85-115

C. USACE EM 385-1-1 - Hazardous, Toxic and Radioactive Waste

URS SAFETY MANAGEMENT STANDARD

Heat Stress

1. Applicability

This procedure applies to URS field projects where ambient (not adjusted) temperatures exceed 70°F (21°C) for personnel wearing chemical protective clothing, including Tyvek coveralls, and 90°F (32°C) for personnel wearing normal work clothes.

2. Purpose and Scope

The purpose of this procedure is to protect project personnel from the effects of heat related illnesses.

3. Implementation

Field Activities - Implementation of this procedure is the responsibility of the Project Manager.

4. Requirements

A. Monitor ambient temperatures and conduct Heat Stress Monitoring when threshold temperatures (see Section 1) are reached.

B. Conduct initial monitoring to determine first rest break.

1. Measure the air temperature with a standard thermometer with the bulb shielded from radiant heat; this yields T (actual).

2. Estimate the fraction of sunshine by judging what percent time the sun is not shielded by clouds that are thick enough to produce a shadow. 100 percent sunshine - no cloud cover = 1.0; 50 percent sunshine - 50 percent cloud cover = 0.5; 0 percent sunshine - full cloud cover = 0.0.

3. Plug these variables into the following equation to determine the adjusted temperature:

   T (adjusted) = T (actual) + (13 x fraction sunshine)

C. Body Temperature Monitoring

1. Monitor oral body temperature to determine if employees are adequately dissipating heat buildup. Ear probe thermometers which are adjusted to oral temperature are convenient and the

preferred method of measurement. Determine work/rest regimen as follows:

a. Measure (oral adjusted) temperature at the end of the work period.

b. If temperature exceeds 99.6 °F (37.5°C)., shorten the following work period by 1/3 without changing the rest period.

c. If temperature still exceeds 99.6 °F (37.5°C), shorten the following work period by 1/3.

d. Do not allow a worker to wear impermeable PPE when his/her oral temperature exceeds 100.6 °F (38.1°C).

2. Oral temperatures are to be obtained prior to the employee drinking water or other fluids.

D. Pulse Rate Monitoring

1. Take the radial (wrist) pulse as early as possible in the rest period.

a. If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third.

b. If the heart rate still exceeds 110 beats per minute at the next rest cycle, shorten the following work cycle by an additional one-third.

E. Record monitoring results on Heat Stress Monitoring Form (Attachment 18-2).

F. Investigate the use of auxiliary cooling devices in extreme heat conditions.

G. Conduct briefings for employees regarding health hazards and control measures associated with heat stress whenever conditions require the implementation of heat stress monitoring. Review the information provided in Attachment 18-3.

H. Provide water and electrolyte replacement drinks fluids as described in Attachment 18-3.

I. Allow employees who are not accustomed to working in hot environments appropriate time for acclimatization (see Attachment 18-3).

J. Provide break areas as described in Attachment 18-3.

5. Documentation Summary

File these records in the Project Safety File.

A. Heat Stress Monitoring Forms.

B. Employee Safety Briefing Verification Forms.

6. Resources

A. NIOSH - "Working in Hot Environments"

B. AFL-CIO Building Trades Division - "Heat Stress in Construction"

The following documents are PDF Files that must be read with Adobe Reader.

C. Attachment 18-1 - Initial Work Monitoring Cycles

D. Attachment 18-2 - Heat Stress Monitoring Record

E. Attachment 18-3 -Informational Supplement

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URS SAFETY MANAGEMENT STANDARD

Heavy Equipment Operations

1. Applicability

This procedure applies to URS field projects where heavy equipment is in operation.

2. Purpose and Scope

The purpose of this procedure is to require that heavy equipment is operated in a safe manner, that the equipment is properly maintained and that ground personnel are protected.

3. Implementation

Field Activities - Implementation of this procedure is the responsibility of the Project Manager.

4. Requirements

A. Authorized Operators

1. Evaluate operators through documentable experience (resume) and a practical evaluation of skills.
2. Allow only qualified operators to operate equipment.
3. Prohibit equipment from being operated by any personnel who have not been specifically authorized to operate it.
4. Maintain a list of operators for the project and the specific equipment that they are authorized to operate.
5. Require operators to use seat belts at all times in all equipment and trucks.
6. Operators shall maintain three points of contact whenever entering and exiting a piece of equipment.
7. Brief operators on the following rules of operation:
    a. Operators are in control of their work area.
    b. Equipment will be operated in a safe manner and within the constraints of the manufacturer's Operation Manual.

c. Operators will stop work whenever unauthorized ground personnel or equipment enter their work area and only resume work when the area has been cleared.

B. Ground Personnel

1. Require that ground personnel on the site have received training and comply with the following rules of engagement:

   a. All ground personnel must wear orange protective vests when in work areas with any operating equipment.

   b. Ground personnel will stay outside of the swing zone or work area of any operating equipment.

   c. Ground personnel may only enter the swing or work area of any operating equipment when:

      1. They have attracted the operator's attention and made eye contact.

      2. The operator has idled the equipment down and grounded all extensions.

      3. The operator gives the ground personnel permission to approach.

   d. Ground personnel shall never walk or position themselves between any fixed object and running equipment or between two running pieces of equipment.

C. Equipment

1. Maintain operations manuals at the site for each piece of equipment that is present on the site and in use.

2. Require that operators are familiar with the manual for the equipment and operate the equipment within the parameters of the manual.

3. Require that all equipment is provided with roll-over protection systems (ROPS). Tracked excavators are exempt from ROPS requirements but must have a cab which provides protection from overhead hazards

4. Verify that seatbelts are present and functional in all equipment.
5. Prohibit the use of equipment which has cab glass which is cracked, broken or missing.
6. Require that backup alarms are functional on all trucks and equipment. Tracked excavators must have bidirectional alarms or the operator must be provided with a spotter whenever tracking in either direction.
7. Require all extensions such as buckets, blades, forks, etc. to be grounded when not in use.
8. Require brakes to be set and wheels chocked (when applicable) when not in use.

D. Inspection and Maintenance

1. Require daily inspections of equipment by operators using Attachment 19-1.
2. Prohibit use of equipment deemed to be unsafe as a result of daily inspection until required repairs or maintenance occur.
3. Conduct maintenance as prescribed by the manufacturer in the Operations Manuals for each piece of equipment.
4. During maintenance/repair, require that:
    a. Motors are turned off.
    b. All extensions are grounded or securely blocked.
    c. Controls are in a neutral position.
    d. Brakes are set.

5. Documentation Summary

File the following documents in the Project Health and Safety File.

A. List of authorized operators.

B. Operator qualifications.

C. Daily Equipment Inspection Logs.

D. Site Briefing documentation for operator rules and ground personnel "rules of engagement".

6. Resources

A. U.S. OSHA Standard - Motorized Vehicles and Mechanized Equipment - 29 CFR 1926, Subpart O

B. National Association of Demolition Contractors – Safety Manual

C. Queensland Workplace Health and Safety - Competency Standard for Users & Operators of Industrial Equipment

D. Attachment 19-1 - Equipment Inspection Form

URS SAFETY MANAGEMENT STANDARD

Medical Screening & Surveillance

1. Applicability

This program applies to employees assigned to work environments where there is a potential for exposure to chemical, biological, and/or physical hazards. Individuals will be selected for medical screening based on regulatory standards, project health and safety plan assessments, the expected use of personal protective equipment, and client contract requirements.

2. Purpose and Scope

The overall goal of this program is to prevent occupational illness and injury by early identification of exposure-related health effects before they result in disease. Medical examinations will be performed in order to determine if employees are capable of safely performing assigned tasks, to verify protective equipment and controls are effectively providing protection, and to comply with governmental regulations. Included are provisions for emergency medical consultation and treatment.

3. Implementation

Office/laboratory locations – Implementation is the responsibility of the Office Manager.

Field activities – Implementation is the responsibility of the Project Manager.

Program Administration – The Occupational Health Specialist (OHS) is responsible for development and administration of this program in coordination with the URS Medical Service Provider (MSP). The OHS will maintain current injury and illness data and participate with Corporate Health & Safety Managers in evaluation of this program. The MSP will provide board certified occupational medicine oversight for the program and will approve medical surveillance protocols.

The United States and Canada locations will follow all requirements of this program.

International locations will follow sections B.1,2,3,5,6,7,8; G.3; and H.1 of this program.

4. Requirements

A. Selection of program participants.

1. The Medical Surveillance Evaluation (MSE) form provides the primary guidance for determining whether medical screening is required for an employee and the frequency of periodic exams. The MSE is to be completed by the employee and their supervisor at time of hire for any employee who may work outside an office environment and is to be reviewed for accuracy at each annual performance review. Other reviews are required whenever there is a change in job tasks.

2. Additional site/project specific biological monitoring or toxicological screening may be required in addition to this program's core exam schedule. These medical tests will be specified by the project-specific health and safety plan and will be authorized by the MSP on the exam appointment protocol. Note: See section D.2 if employee will have an initial assignment at a HAZWOPER site.

B. Types of medical screening and surveillance exams

1. A baseline or preassignment baseline exam will be conducted prior to the start of work assignments requiring medical surveillance.

2. Periodic exam schedules are established by the MSP using the following criteria:

   a. Employees performing the following types of work will receive annual exams: construction activities in the exclusion zone of HAZWOPER sites, field work activities in the exclusion zone of HAZWOPER sites for 30 or more days per year, projects involving exposure to OSHA-regulated materials at or above established action levels.

   b. Employees performing the following types of work will receive biennial exams: field work activities at HAZWOPER sites less than 30 days per year; waste disposal activities; non-HAZWOPER environmental sampling; chemistry laboratory, pilot plant projects, or bench scale operations for 30 or more days per year.

3. Employees currently participating in an examination program will receive exit exams when they leave their work assignment as identified in the Exit Exam Determination. In the event an employee declines the exit exam, the employee will be requested to sign a Waiver of Exit Medical Surveillance Exam.

4. Department of Transportation (DOT) exams will be conducted biennially when an employee is assigned to drive a vehicle with a gross weight rating of more than 10,000 pounds or when driving a placarded vehicle of any size used to transport hazardous chemicals. DOT exam certification can be added to a routine baseline or periodic exam protocol when scheduling with the MSP.

5. When noise levels in the employee's work environment equal or exceed an 8-hour time-weighted average of 85 decibels as measured on the A-scale (dBA), annual audiograms will be performed. For employees involved in construction activities or management of construction, enrollment in this program will be required if more than 50% of their time is spent in an active construction area.

6. Individual radiation dose monitoring will be conducted as required by the site-specific health and safety plan with approval by a Radiation Safety Officer. Personal dosimetry (film badges) are typically required, however, depending on the specific radiation hazard, additional excretory monitoring or thyroid scans may be required.

7. In order to determine an employee's ability to wear a respirator, a medical evaluation will be performed before an employee is fit tested or assigned to wear a respirator.

8. Employees assigned to work environments with airborne concentrations of asbestos fibers at or above the established action level will receive asbestos-specific baseline and annual exams. Exit exams will be performed if an exam has not been performed within the past 6 month period or if an employee has medical complaints related to asbestos exposure.

C. Exam protocols

1. The Medical Screening & Surveillance Exam Protocol identifies the medical exam components of this program.

D. Scheduling of exams

1. The Office or Project Manager, usually with assistance of the local H&S Representative, is responsible for contacting the MSP when baseline, exit, and project specific exams are required. The MSP maintains an employee scheduling database for tracking periodic

exams and will contact the employee for scheduling the month their exam is due. These steps are detailed in the Medical Surveillance Exam Process.

2. Construction Services Division employees hired with an initial assignment to work at a OSHA HAZWOPER site whose work duties require passing a physical exam or who have an essential job function of wearing a respirator, will receive a job offer contingent upon passing a preassignment baseline exam. See HAZWOPER & Respirator Preassignment Baseline Exam Process. In the event of an urgent business necessity a temporary clearance to begin work the day of the exam, issued by the local physician and good for 14 days until the MSP physician final clearance is received, may be requested at the time a baseline exam is scheduled through the MSP.

3. If an exam becomes due during an employee's pregnancy, it is advised to defer the exam until after delivery and the employee returns to work from family/medical leave status.

E. Exam Follow Up

1. Following each exam, the MSP will issue a physician's written opinion (Health Status Medical Report) to the site Health & Safety Representative which will include any medical restrictions and address the employee's ability to use personal protective equipment. See Exam Follow Up Procedures.

2. The MSP will mail the exam invoice to the site H&SR who will approve the charge and forward the invoice to the accounts payable department for payment.

3. The MSP will mail an exam results letter that is confidentially addressed to the employee at their home address within 30 days of the exam date.

F. Emergency Medical Care

1. Preplanning is essential to a prompt and proper response to a medical emergency. Site specific emergency procedures will be provided in the site Health & Safety Plan. See Field First Aid Kit Supply List for recommended supplies. The contents of the first aid kit shall be checked prior to being sent out to each site/project and periodically thereafter to ensure the expended items are replaced.

2. A MSP occupational physician can be reached 24 hours a day for phone consultation at 1-800-455-6155.

3. A workers' compensation claim should be filed by the Human Resource Representative with St. Paul Fire and Marine Insurance (1-800-787-2851) for an injured employee who receives professional medical care or who is disabled from working beyond the initial date of injury.

4. In order to comply with OSHA reporting regulations, immediately notify the OHS or a Division Health & Safety Manager if there is a work-related hospitalization or death.

G. Medical Records

1. Medical records are maintained and preserved in confidential, locked files in the custody of the MSP for at least the duration of employment plus 30 years. Only information regarding the employee's ability to perform the job assignment will be provided to company representatives.

2. Upon request, each employee (or designated representative) will have access to the employee's medical record. Prior to the release of health information to the employee (or designated representative), a specific written consent must be signed by the employee.

3. International records (excluding the United States and Canada) will be maintained in country at the local clinic.

H. Program evaluation

1. The OHS and Division Health & Safety Managers will evaluate this program annually and as needed. Issues to review include program efficacy and efficiency, employee satisfaction, and cost effectiveness.

2. The MSP will prepare an Annual Medical Trending Report specifying the number and types of exams performed and anonymous statistical exam results in group data format.

3. Each employee is mailed a Post-Exam Evaluation by the MSP. Employee feedback regarding the clinic, medical staff, and exam

procedures are reviewed and corrective actions are identified and acted upon as needed.

5. Documentation Summary

The H&SR will file the Medical Surveillance Evaluation and the Health Status Medical Report in the site health & safety records.

6. Resources

A. U.S. OSHA Technical Links - Medical Screening/Surveillance

B. U.S. OSHA Publication 3162 (1999) Screening and Surveillance: A Guide to OSHA Standards

C. Attachment 24-1 WorkCare Medical History Questionnaire

D. Attachment 24-2 Medical Surveillance Evaluation

E. Attachment 24-3 Medical Screening & Surveillance Exam Protocol

F. Attachment 24-4 Medical Surveillance Exam Process

G. Attachment 24-5 HAZWOPER/Respirator Preassignment Baseline Exam Process

H. Attachment 24-6 Exit Exam Determination

I. Attachment 24-7 Waiver of Exit Medical Surveillance Exam

J. Attachment 24-8 Exam Follow Up Procedures

K. Attachment 24-9 Field First Aid Kit Supply List

L. SMS 8 Asbestos Survey and Oversight Operations

M. SMS 17 Hazardous Waste Operations

N. SMS 42 Respiratory Protection

URS SAFETY MANAGEMENT STANDARD

Noise and Hearing Conservation

1. Applicability

This procedure applies to URS Corporation facilities and field operations where URS Corporation personnel may encounter noise exposures that may exceed 85 dBA as an 8 hour Time Weighted Average.

2. Purpose and Scope

The purpose of this procedure is to protect employees from hazardous noise exposures and to prevent hearing loss.

3. Implementation

Office/Lab locations:	High noise is unlikely to be encountered at URS offices, however, if applicable, the implementation of this program is the responsibility of the Office Manager.
Field Activities:	Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. General

The use of hearing protectors in any location where powered or motorized equipment or any other noise source could reasonably be expected to exceed 85 dBA. Use of hearing protectors may only be discontinued when noise levels are verified to be less than 85 dBA through a properly conducted noise survey. Whenever information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the project manager or location manager will be responsible to enforce the proper use of hearing protectors.

B. Hearing Protectors

1. Require that at least two (2) types of hearing protectors are available to employees free of charge, preferably a plug and a muff type.

2. Minimum Noise Reduction Ratings (NRR)

   Hearing protectors issued must have the following minimum NRR:

Ear Plug	Muffs
29 dBA	27 dBA

3. Require that hearing protectors are used and thus effectively protect hearing.

C. Noise Surveys

1. Noise surveys must be conducted in a manner that reasonably reflects the exposure of the affected employees. Surveys must be conducted under the supervision of a URS Safety Program Representative.

2. Sound level meters and audio dosimeters used to determine employee exposure to noise sources must be Type II (accurate to within +/- 2 dBA), operated in "slow" response, on the "A" scale, and be calibrated to factory guidelines (including periodic factory recalibration).

D. Noise Controls

Eliminate noise sources to the extent possible. Examples of controls that must be considered follow:

1. Addition or replacement of mufflers on motorized equipment.

2. Addition of mufflers to air exhausts on pneumatic equipment.

3. Following equipment maintenance procedures to lubricate dry bearings.

4. Isolation of loud equipment with newer and quieter models.

E. Audiometric Exams

1. Tests

Details on the medical surveillance program (including audiometric testing) are included in <u>SMS 24</u>.

Audiometric tests shall be performed by a person meeting OSHA's 1910.95 (g)(3)'s definition. Within 6 months of an employee's first exposure at or above the action level, a valid baseline audiogram shall be established against which subsequent audiograms can be compared. Testing to establish a baseline audiogram shall be preceded by 14 hours without exposure to noise. Hearing protectors may be used as a substitute for the requirement that baseline audiogram shall be preceded by 14 hours without exposure to workplace noise. The medical surveillance provider shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination. For multi-year projects, an annual audiogram shall be obtained for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.

Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if there is a standard threshold shift (STS). If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer will obtain a retest within 30 days and consider the results in assessing an STS as the annual audiogram. The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. If an STS has occurred, the medical surveillance provider will notify the employee within 21 days of the determination.

2. Standard Threshold Shifts

If an employee's test results show a confirmed STS, their hearing protection will be evaluated and refitted, and a medical evaluation may be required.

F. Training

Verify that each employee who must work in a noisy environment is current on the required Hearing Conservation Training. Training must include the following topics:

1. The effects of noise on hearing.
2. The purpose of hearing protectors.
3. The advantages and disadvantages of various types of hearing protectors.
4. The attenuation of various types of hearing protection.
5. The selection, fitting, care, and use of hearing protectors.
6. The purpose of audiometric testing.

7. An explanation of the audiometric testing procedure.

5. Documentation Summary

A. File these records in the Office Safety Filing System:

1. Noise surveys, when applicable.
2. Training Records.

B. File noise surveys, when applicable, in the Project Safety File:

6. Resources

A. U.S. OSHA Standard – Occupational noise exposure – 29 CFR 1910.95

B. U.S. OSHA Construction Standard – Occupational noise exposure – 29 CFR 1926.52

C. U.S. OSHA Technical Links - Noise and Hearing Conservation

D. American Industrial Hygiene Association: The Occupational Environment – Its Evaluation and Control, Chapter 20. Fairfax, VA: 1997

E. National Hearing Conservation Association web site

F. URS SMS 24 Medical Screening and Surveillance

URS SAFETY MANAGEMENT STANDARD

Work Over Water

1. Applicability

This procedure applies to URS projects where personnel will work above or immediately adjacent to water where a drowning hazard exists. Refer to SMS 053, "Marine Safety and Boat Operations."

2. Purpose and Scope

This procedure is intended to protect employees from drowning while working above or adjacent to water.

3. Implementation

Field Activities - Implementation of this procedure is the responsibility of the Project Manager.

4. Requirements

A. Review the project in the planning phase to determine if any work will occur above or immediately adjacent to water where a drowning hazard exists. In general, a risk of drowning (ROD) is present when:

1. Employees perform work on or under bridges without constant protection from falling into the water, or

2. Working surfaces at riverbanks slope so steeply that an employee could slip or fall into the water when no portable protection (like roping off) is used.

NOTE: Employees working on or under bridges who are constantly protected by guardrail systems, nets, or body belt/harness systems are deemed to be adequately protected from the danger of drowning and are not required to wear life jackets or buoyant work vests.

B. If any activities pose a risk of drowning do the following during the activity:

1. Provide employees with an approved (USCG for U.S. operations) life jacket or buoyant work vest. Employees should inspect life jackets or work vests daily before use for defects. Do not use defective jackets or vests.

2. Post ring buoys with at least 90 feet (27 meters) of line next to the work area. If the work area is large, post extra buoys 200 feet (60 meters) or less from each other.

3. Provide at least one life saving skiff, immediately available at locations where employees are working over or adjacent to water. Require that the skiff is in the water and capable of being launched by one person and is equipped with both motor and oars.

4. Designate at least one employee on site to respond to water emergencies and operate the skiff at times when there are employees above water.

    a. If the designated skiff operator is not within visual range of the water, provide him or her with a radio or provide some form of communication to inform them of an emergency.

    b. Designated employee should be able to reach a victim in the water within three to four minutes.

5. Require that at least one employee trained in CPR and first aid is on site during work activities.

5. Documentation Summary

Records required in the Project Safety File:

Copy of the fall protection plan designed for work activities – (as necessary)

6. Resources

A. U.S. OSHA Standard - Working Over or Near Water - 29 CFR 1926.106

B. U.K. - (Health, Safety & Welfare) Regulations

URS Safety Management Standard

Personal Protective Equipment

1. Applicability

This program applies to URS Corporation laboratory and field operations where the use of Personal Protective equipment (PPE) is warranted. Refer to SMS 42, "Respiratory Protection", for respiratory hazards. Hearing Protection issues are additionally addressed in SMS 26, "Noise and Hearing Conservation."

2. Purpose and Scope

This procedure provides information on recognizing those conditions that require personal protective equipment as will as selecting personal protective equipment for hazardous activities.

3. Implementation

Shop/Lab Locations -	Implementation of this program is the responsibility of the Office Manager.
Field Activities -	Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. Perform hazard assessments for those work activities that are likely to require the use of PPE.

1. Use Attachment 29-1 to perform the assessment.
2. Reevaluate completed hazard assessments when the job changes.

B. Eliminate the hazards identified in Attachment 29-1, if possible, through engineering or administrative controls.

C. Select PPE that will protect employees if hazards cannot be eliminated.

1. See Attachment 29-1 for recommended PPE.
2. Review Material Safety Data Sheets for chemicals used for PPE recommendations.
3. If needed, consult with the URS Health and Safety Representative for assistance in selecting PPE.

D. Provide required PPE to employees free of charge (excluding in some instances components of standard work attire such as steel-toed boots), assuring that it fits properly giving them a choice if more than one type is available.

E. Whenever a hazard is recognized, and PPE is required, the employees will be provided with the appropriate PPE. However, when a PPE is not required, and the employee selects to wear his or her own PPE, the project manager shall ensure that the employee is properly trained in the fitting, donning, doffing, cleaning, and maintenance of his or her employee owned equipment.

F. Conduct and document employee training.

1. Train all employees who are required to wear PPE.
2. Require that training includes:
   a. When PPE is necessary to be worn.
   b. What PPE is necessary.
   c. How to properly don, doff, adjust and wear PPE.
   d. Limitations of PPE
   e. Proper care, maintenance, useful life and disposal of PPE.
3. Training must be conducted before PPE is assigned.
4. Refresher training is needed when:
   a. New types of PPE are assigned to the worker.
   b. Worker cannot demonstrate competency in PPE use.
5. Keep written records of the employees trained and type of training provided, including the date of training.

G. Maintain Protective Equipment

1. Check personal protective equipment for damage, cracks, and wear prior to each use. Replace or repair equipment not found in good condition.

2. Wash off contaminated protective equipment with water and mild soap, if necessary, to prevent degradation of the equipment.

H. Periodically inspect worksites where employees are using personal protective equipment, using Attachment 29-2.

1. Field activities – inspect work sites at least monthly.

2. Office locations – inspect work sites semi-annually.

5.0 Documentation Summary

A. Records required in the Project Safety File:

1. Completed Hazard Assessment Certification Forms (Attachment 29-1)

2. Completed Personal Protective Equipment Inspection Sheet (Attachment 29-2)

3. Documentation of employee training.

B. Records required in the Laboratory Safety Filing System:

1. Completed Hazard Assessment Certification Forms (Attachment 29-1)

2. Completed Personal Protective Equipment Inspection Sheet (Attachment 29-2)

3. Documentation of employee training.

6.0 Resources

A. U.S. OSHA Standards - Personal Protective Equipment -29CFR 1910 Subpart I (http://www.osha-slc.gov/SLTC/lead/index.html)

B. U.S. OSHA Construction Standard - Personal Protective Equipment –29 CFR 1926 Subpart E (http://www.osha-slc.gov/OshStd_toc/OSHA_Std_toc_1926_SUBPART_E.html)

C. U.S. OSHA Technical Links - Personal Protective Equipment (http://www.osha-slc.gov/SLTC/personalprotectiveequipment/index.html)

D. Australian Standards SAA HB9-1994 - Occupational Personal Protection

E. American National Standards Institute, ANSI Z89.1-1986, Protective Headwear
(http://www.ansi.org/cat_top.html)

F. American National Standards Institute, ANSI Z87.1 - 1989, Eye and Face Protection
(http://www.ansi.org/cat_top.html)

G. American National Standards Institute, ANSI Z41.1 - 1991, Foot Protection
(http://www.ansi.org/cat_top.html)

H. SMS 40 - Fall Protection

I. Attachment 29-1 Hazard Assessment Form

J. Attachment 29-2 PPE Inspection Form

URS SAFETY MANAGEMENT STANDARD

Remote Travel Health And Safety

1. Applicability

This program applies to URS personnel traveling to conduct project related work in remote locations and developing countries.

2. Purpose and Scope

The purpose of this program is to protect employees from communicable and non-communicable diseases that may be encountered in the work environment and provide travel safety information when traveling to developing countries.

3. Implementation

Office and Field Locations - Implementation of this program is the responsibility of the employee and the Project Manager.

4. Requirements

A. Travel Health

The goal of the travel health program is to maintain employee health status while traveling and working in developing countries and remote environments. Components include project planning, trip preparation, and personal safety.

1. Project Planning

   a. Prior to travel to developing countries or remote environments determine the necessary disease prevention strategies for all locations to be visited.

   b. Schedule required immunizations as soon as the project is awarded. Some immunizations require several injections spread over several weeks and sometimes months to obtain adequate protection.

   c. Review Attachments 36-1, 36-2, and 36-3 regarding illness prevention with staff as appropriate.

   d. Prepare personal and project first aid kits before traveling.

2. After Return

a. Continue taking anti-malarial medication, if applicable, for 4 weeks after return.

b. Consult a physician if any of these symptoms occur after return: fever, abdominal pain, diarrhea, weight loss, fatigue, cough, skin rash.

B. Travel Safety

1. Accidents are the leading cause of death for travelers, therefore constant attention to safe behavior is in order. Following the recommendations below will decrease chances of having an accident while traveling.

   a. Preventing Traffic Accidents

      1. Hire a qualified driver or guide.

      2. Drive only when you are in good physical condition (not tired, hungover, drunk, etc.).

      3. Try not to drive at night.

      4. Rent a larger rather than smaller vehicle.

      5. Wear your seat belt.

      6. Be sure you are covered by collision and liability insurance.

2. Verify country security status with the State Department and with local contacts before travel.

3. Personal Safety

   a. Avoid small nonscheduled airlines in developing countries.

   b. Don't travel at night.

   c. Carefully select swimming areas and don't swim alone. In many developing countries, serious diseases are contracted by swimming in streams so swim only in chlorinated swimming pools.

   d. Lock your hotel room at all times.

e. Review hotel fire safety rules and locate the nearest exits.

f. Keep valuables and travel documents in the hotel safe.

g. Avoid politically unstable regions where there is civil violence or drug related violence.

h. Keep a photocopy of your passport in a separate location from your original and leave a copy at home.

i. If you wear prescription glasses/contacts, take an extra pair.

j. Use a money belt or a concealed money pouch for passports, cash and other valuables.

k. Use official taxis rather than street taxis, as illegal taxis can be decoys for robbers.

l. Whenever possible, do not travel alone.

5. Resources

A. "Health Information for International Travel". U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, Atlanta, GA 30333

B. Centers for Disease Control and Prevention Traveler's Health Hotline (404) 332-4559, Fax Information line (404) 332-4565

C. United States Department of State Citizens Emergency Center (202) 647-5225

D. CDC Travel Information

E. World Health Organization –

F. U.S. State Department – Travel Warnings and Consular Information Sheets

G. Lonely Planet Traveller's Guides

H. Attachment 36-1 - Food Borne Disease Prevention

I. Attachment 36-2 - Water Borne Disease Prevention

J. Attachment 36-3 - Prevention of Insect Related Disease

URS SAFETY MANAGEMENT STANDARD

Respiratory Protection

1. Applicability

This program defines responsibilities and procedures and is applicable to URS operations that may require the use of respiratory protection including Immediately Dangerous to Life and Health (IDLH) and emergency conditions. This program also addresses the voluntary use of respirators.

2. Purpose and Scope

The purpose of this procedure is to protect those employees performing operations for which exposures can not be controlled by use of conventional engineering or administrative controls and prior to establishing a negative air exposure assessment, and to require that respiratory protective equipment is selected, used, maintained, and stored in accordance with acceptable practices.

3. Implementation

Laboratory/Office/Shop Locations -	Implementation of this program is the responsibility of the Office Manager.
Field Activities -	Implementation of this program is the responsibility of the Project Manager.
Program Administration-	URS Health and Safety Director is responsible for the development and annual review of this program.

URS Health and Safety Program Representatives are responsible to:

- Assist responsible employees in the implementation of the program.
- Assessing local compliance with the program.

4. Requirements

A. Determine if respirators are needed or going to be used for hazardous jobs before assigning that job to an employee.

1. If the determination is that a potential for respiratory hazards exists with any portion of that job activity then, complete Attachment 42-1.
2. Contact a URS Health and Safety Program Representative if any of the questions in Attachment 42-1 are checked "yes."

3. Follow instructions in Attachment 42-2 for employees who wish to voluntarily use dust masks.

4. Follow all the requirements of this procedure for employees who wish to voluntarily use tight-fitting (e.g., air purifying) respirators.

5. Required respirators will be paid for by URS and will be provided without cost to the employee.

B. Select the proper respirator for the job.

1. For those jobs identified in Attachment 42-1, contact a URS Health and Safety Program Representative for assistance in respirator selection.

2. Contact a URS Health and Safety Program Representative for follow up if there are any problems implementing the recommendations made.

C. Require employees who will use respirators to be medically qualified before fit testing and assigning them a respirator.

1. For program details, refer to SMS 24, Medical Screening and Surveillance.

2. Require that employees have a current and accurate Medical Surveillance form (Attachment 24-2)

3. Obtain a copy of the employee's Health Status Medical Report from the Health and Safety Representative. The consulting occupational physician of the medical service provider following each work related examination issues the Health Status Medical Report. Employees cannot be assigned respirators unless they are medically cleared for respirator use.

D. Require respirator users to receive appropriate training.

1. All respirator users must be trained:

   a. Before they are assigned a respirator.

   b. Annually thereafter.

   c. Whenever a new hazard or job is introduced.

d. Whenever employees fail to demonstrate proper use or knowledge.

2. Training must address, at a minimum, the following:

   a. Why the respirator is necessary, and what conditions can make the respirator ineffective.

   b. What the limitations and capabilities of the respirators are.

   c. How to use respirators effectively in emergency situations.

   d. How to inspect, put on and remove, and check the seals of the respirator.

   e. What the respirator maintenance and storage procedures are.

   f. How to recognize medical signs and symptoms that may limit or prevent effective use of the respirator.

E. Require respirator users to be fit tested.

1. Any employee who has been assigned a reusable respirator must be fit tested on an annual basis (no more than one year may elapse between fit tests), or when the employee is assigned a respirator of a different make, type or size from that previously tested.

2. Fit testing can be performed by contract or in house personnel.

3. Obtain a signed written copy of the fit test results. The fit test results should include:

   a. Employee's name and social security number.

   b. Respirator brand, model and size fitted for.

   c. Date fit tested.

   d. Method of fit testing used.

   e. Name and signature of fit tester.

   f. Statement that fit test protocol met the requirements of 29 CFR 1910.134.

g. Manufacturer and serial number of fit testing apparatus.

A fit test results form is available at Attachment 42-5.

F. Provide qualified employees with respirator(s) and adequate amounts of parts and cartridges.

1. Assign employees whose duties require respirators their own respirator for which they have been fit tested.

2. Provide special eyeglass inserts designed for the respirator if an employee must wear eyeglasses with a full facepiece respirator. Contact lenses may be worn when wearing a full facepiece respirator.

G. Require respirators to be used properly.

1. Prohibit facial hair where the respirator-sealing surface meets the wearer's face.

2. Require employees to perform a positive and negative fit check every time the respirator is put on.

3. Employees will leave the area where respirators are being used:

    a. Before removing the facepiece for any reason.

    b. To change cartridges.

    c. If any of the following is detected:

        1. Vapor or gas breakthrough.

        2. Leakage around the facepiece.

        3. Changes in breathing resistance.

4. Use cartridges with End of Service Life Indicators or determine the respirator cartridge changeout schedule. See Attachment 42-4 for Guidance.

H. Require respirators to be cleaned and stored properly.

1. Clean and disinfect respirators after each use.

2. Store respirators in a plastic bag or case and in a clean location.

3. Inspect respirators before use and after each cleaning.

I. Address issues associated with special use respirators self-contained breathing apparatus; air supply respirators; emergency use respirators).

1. Self Contained Breathing Apparatus

Inspect self-contained breathing apparatus and other emergency use respirators monthly and after each use in accordance with manufacturer's instructions.

2. Air Supplied Respirators

a. Air used for atmosphere-supplying respirators must meet or exceed the requirements for Type 1 - Grade D breathing air. Never use oxygen.

1. A certificate of analysis must accompany bottled air.

2. Compressors used to supply breathing air must:

i. Prevent entry of contaminated air into the air supply.

ii. Minimize moisture content.

iii. Have suitable in-line sorbent beds and filter to provide appropriate air quality.

iv. Have a high carbon monoxide alarm that sounds at 10 ppm.

b. Couplings on air hose lines must be incompatible with other gas systems.

J. Require follow up training and medical surveillance to be provided as directed.

1. Provide follow-up physical examinations as directed by the SMS 24-3, Medical Screening and Surveillance Exam Protocol table.

2. Provide follow-up physicals as directed by the Regional Medical Surveillance Administrator.

3. Provide annual refresher training.

4. Provide annual fit testing.

5. Documentation Summary

A. Laboratory

1. File these records in the Laboratory Safety Filing System

a. Completed forms:

1. "Identifying When A Respirator Is Needed" - Attachment 42-1; and,

2. "Respirator Standard Operating Procedure" - Attachment 42-3.;

b. Employee Health Status Medical Report includes clearance for respirator use.

c. Employee Fit Test Records; and,

d. Employee Respirator Training Records.

2. Send a copy of the following records to the Regional Health and Safety Manager:

a. Completed "Voluntary Use of Respirators" form - Attachment 42-2.

b. Employee Fit Test Records.

c. Employee Respirator Training Records.

B. Field

1. File these records in the Project Health and Safety File:

a. Completed forms:

1. "Identifying When A Respirator Is Needed" - Attachment 42-1; and,

2. "Respirator Standard Operating Procedure" - Attachment 42-3.

3. Employee Health Status Medical Report includes clearance for respirator use.;

4. Employee Fit Test Records; and,

5. Employee Respirator Training Records.

2. Send a copy of the following records to the Regional Health and Safety Manager:

   a. Completed "Voluntary Use of Respirators" form - Attachment 42-2;.

   b. Employee Fit Test Records; and,

   c. Employee Respirator Training Records.

6. Resources

A. U.S. OSHA Standard - Respiratory Protection - 29 CFR 1910.134

B. U.S OSHA Technical Links - Respiratory Protection

C. ANSI Z88.6, Respirator Use – Physical Qualifications for Personnel, Current Revision

D. ANSI Z88:2, Respiratory Protection, Current Revision

E. 3M Cartridge Service Life Interactive Program

F. Australian Standards AS/N25 1715 - 1994. Selection, Use, and Maintenance of Respiratory Protection Devices

G. Australian Standards HB9-1994. Occupational Personal Protection

H. AIHA, The Occupational Environment - Its Evaluation and Control

The following documents are PDF files which must be read with Adobe Reader:

I. NIOSH Respirator Decision Logic

J. NIOSH Guide to Industrial Respiratory Protection

K. Attachment 42-1 - Identifying When a Respirator is Needed

L. Attachment 42-2 - Voluntary Use of Respirators

M. Attachment 42-3 - Respirator Standard Operating Procedure

N. Attachment 42-4 - Respiratory Cartridge Change Schedule

O. Attachment 42-5 - Fit Test Results Form

P. Medical Screening and Surveillance Program - SMS 24

URS SAFETY MANAGEMENT STANDARD

Back Injury Prevention

1. Applicability

This procedure applies to URS operations where personnel perform manual lifting.

2. Purpose and Scope

The purpose of this procedure is to prevent back injuries to URS personnel.

3. Implementation

Office Locations - Implementation of this procedure is the responsibility of the Office Manager.

Field Activities - Implementation of this procedure is the responsibility of the Project Manager.

4. Requirements

A. Safe Lifting Practices in the Office

1. Require that personnel receive the training described in (C) below.
2. Evaluate all assignments that involve lifting, such as moving boxes of files and paper, computer equipment, and the like to see that the task can be completed without risk of back injury to assigned personnel.
3. Provide material handling devices, such as carts and dollies, to assist in the safe moving of materials.
4. Obtain outside assistance, such as contract movers, if the job cannot be safely accomplished by URS personnel.
5. Require that heavier items are stored on lower shelving units.

B. Safe Lifting Practices in the Field

1. Recognize that field assignments tend to be lifting-intensive, and that URS has a duty to provide the means by which personnel can perform lifting duties without risk of injury.
2. Require that personnel receive the training described in (C) below.

3. Evaluate all field assignments that involve lifting to see that the tasks can be completed without risk of back injury to assigned personnel.

4. Provide material handling devices, such as carts, dollies, trucks with lift gates, to assist in the safe moving of materials. If required, assign additional personnel to the task.

5. Direct field personnel not to assist in lifting tasks that are normally undertaken by subcontractor personnel.

6. Contact a URS Health and Safety Program Representative when assistance is necessary to evaluate a lifting task that may pose a back injury risk to assigned personnel.

C. Training

1. Require that personnel who may have lifting as part of their duties receive training that includes the following topics:

   a. Showing personnel how to avoid unnecessary physical stress and strain.

   b. Teaching personnel to become aware of what they can comfortably handle without undue strain.

   c. Instructing personnel on the proper use of equipment.

   d. Teaching personnel to recognize potential hazards and how to prevent or correct them.

2. This training must be completed prior to an employee being assigned to a task that involves lifting.

D. Office Moves and Relocations

1. Utilize professional movers (who are appropriately insured) to move office furniture such as desks, file cabinets, and bookcases, even if such a move is only between offices or cubicles at a particular location (on-site move).

2. Utilize professional movers for intensive moving of file boxes and other heavy materials.

E. Material Packaging

1. Use only smaller size (<18") file ("Banker") boxes for file storage, as the larger (>18") boxes are awkward and readily overloaded.
2. Use only smaller coolers for field samples, as the larger coolers are awkward and readily overloaded.

5. Documentation Summary

File the following documents in the Office Health and Safety File

- Training rosters

File the following documents in the Project Health and Safety File

- Training rosters

6. Resources

A. Work Practices Guide for Manual Lifting, NIOSH

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URS SAFETY MANAGEMENT STANDARD

Subcontractor Health and Safety Requirements

1. Applicability

This procedure is applicable to subcontractors retained by URS to perform construction (including drilling and excavation), alteration, demolition, and/or repair activities utilizing their own workforce or equipment. This procedure is applicable to the operations of subcontractors and sub-subcontractors of any tier.

This procedure does not apply to third party contractor operations where there is no subcontract relationship between the contractor and URS Corporation. Health and safety issues regarding third party contractor operations are governed by project specific contracts and are not covered by this standard.

2. Purpose and Scope

This procedure provides guidelines on the pre-evaluation of subcontractor safety programs. t also provides guidance on contractual risk management, subcontractor safety performance on the job site, and the responsibilities of the Project Manager with respect to subcontractor jobsite safety performance.

It is recommended that each URS Corporation subcontractor be evaluated at least annually using Attachment 46-1, "Subcontractor Safety Evaluation Form," in order to perform work on any new URS Corporation projects.

3. Implementation

Field Activities - Implementation of this procedure is the responsibility of the Project Manager.

4. Guidelines

A. Pre qualification of Subcontractor - The Project Manager shall complete the following procedures for all subcontractors retained on projects covered by this standard (the PM should also require subcontractors to follow these procedures with respect to pre-qualification of sub-subcontractors of any tier):

1. Request all subcontractor candidates to complete the attached "Subcontractor Health and Safety Evaluation Form" (Attachment 46-1).

2. Conduct an assessment of each subcontractor's qualifications with respect to the subcontractor health and safety evaluation criteria contained in Attachment 46-2.

3. Verify that subcontractors meet the insurance requirements as stated in Attachment 46-2 or as approved by Counsel.

4. If the subcontractor has been successfully evaluated within the last 12 months, that evaluation may be substituted.

5. For long term projects, this evaluation should be updated within 12 months of the previous evaluation.

B. Contractual and Risk Management Requirements of Subcontractors

1. Ensure that subcontractor is contractually bound to comply with applicable client and URS Corporation Health and Safety Program requirements.

2. Ensure that subcontractor is contractually bound to develop additional safety procedures for work that is exclusive to their activities on the site and for which they may have superior knowledge.

3. Assess compliance of subcontractor's insurance with the URS Corporation subcontract requirements (including, but not limited to, necessary types and amounts of coverage, URS Corporation additional insured endorsement, etc.).

4. Ensure that URS Corporation has the right in its subcontract, without liability to the subcontractor, to stop the subcontractor's work in the event of any violations of the applicable Health & Safety Plan.

C. Subcontractor Safety Representative

1. Require each subcontractor to appoint a Subcontractor Safety Representative (SSR) who:

   a. Is knowledgeable of the subcontractor's activities.

   b. Understands the safety requirements of the subcontractor's activities.

   c. Has the ability to recognize and the authority to correct safety deficiencies and execute a stop work order should an imminent danger arise.

d. Has the responsibility for the administration of the subcontractor Health and Safety Program.

e. Will serve as the direct contact with URS Corporation regarding resolution of Health and Safety issues.

D. Communication

1. Provide the SSR with information regarding Site Safety Program including but not limited to:

   a. Client Requirements.

   b. URS Corporation Site Safety Program.

   c. Site Hazard Communication Program.

   d. Site Emergency Action Plan.

   e. Any additional safety information from other contractors or subcontractors working on the site.

2. Provide SSR with name of URS Corporation project contact and alternate for addressing site Health and Safety issues.

3. Require the participation of subcontractors in all Site Safety Briefings.

4. Require subcontractor compliance with all safety directives and/or stop work orders issued by the URS Corporation site representatives.

E. Subcontractor Safety Performance

1. To the extent reasonable in light of URS Corporation's scope of work under the client contract, visit the site and periodically observe subcontractors operations (i.e., conduct spot checks) to assess whether subcontractor appears to be conducting its operations in accordance with applicable health and safety requirements. Periodically review any required subcontractor health and safety written documentation for compliance with applicable requirements.

2. In the event that deficiencies are observed immediately bring them to the attention of the SSR for resolution.

3. In the event of observation of an "Imminent Danger" situation (i.e. involving a situation that could result serious injury or death), immediately contact the SSR and stop the work.

4. Investigate all injuries/illnesses related to subcontractor operations to identify causes and effect corrective actions.

5. In the event of serious and/or continuing subcontractor breaches of applicable health and safety requirements contact legal counsel to assess whether formal contractual action is appropriate under the subcontract.

5. Documentation Summary

A. File in the Project Safety File

1. Subcontractor Health and Safety Evaluation Form.

2. Applicable and current Insurance Certificates.

3. Names and telephone numbers of SSR for each subcontractor.

4. Verification of Health and Safety documents transmitted to subcontractors and received from subcontractors.

5. Identified safety deficiencies as applicable for subcontractors and verification of correction of conditions.

6. All other safety related documentation between URS Corporation and subcontractor such as training certifications, etc.

7. Subcontractor safety plan, incident reports and resolution reports.

6. Resources

A. Federal OSHA Workplace Injury and Illness statistics (http://www.osha.gov/oshstats/work.html)

B. Managing Subcontractor Safety, Prepared by The Construction Industry Institute, Safety Task Force, Publication 13-1, The University of Texas at Austin, Austin, Texas, 1991 (http://www.construction-institute.org/)

C. American National Standard Construction and Demolition Operations -- Safety and Health Program Requirements for Multi-Employer Projects, ANSI A10.33-1992, National Safety Council, Itasca, Illinois 60143-3201 (http://www.nsc.org)

D. "Liability, OSHA and the Safety of Outside Contractors," Professional Safety, American Society of Safety Engineers, January 1993 (http://www.asse.org)

E. "Proactive Construction Management; Dealing With the Problem of Subcontractor Safety," Professional Safety, American Society of Safety Engineers, January 1990 (http://www.asse.org)

F. "Design Professional Liability Under OSHA," Presented by Thomas F. Holt, Jr., HWAC Lawyer's Roundtable, June 14, 1995 (to be Published) (http://www.hwac.org)

G. "Occupational Injury and Illness Rates by SIC", Bureau of Labor Statistics, U. S. Department of Labor (http://stats.bls.gov/sahome.html)

H. Attachment 46-1 - Subcontractor Safety Evaluation Form

I. Attachment 46-2 - Subcontractor Evaluation Criteria

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URS SAFETY MANAGEMENT STANDARD

Biological Hazards

1. Applicability

This program applies to job activities performed primarily in outdoor environments.

2. Purpose and Scope

The primary goal of this program is to eliminate or reduce illnesses and injuries transmitted by plants, insects, and animals. Although there are many animals and insects that are potentially harmful to humans (i.e. bees, spiders, bears, and rodents), this safety management standard focuses on four common biological hazards: ticks, poison plants, mosquitoes, and snakes.

3. Implementation

The Project Manager, with support from the URS H&S Regional Managers and Occupational Health Specialist, will be responsible for implementation of this program.

4. Requirements

A. Ticks

1. Precautionary Measures

Background information: Ticks do not jump, crawl, or fall onto a person. They are picked up when clothing or hair brushes a leaf or other object the tick is on. Ticks are generally found within three feet of the ground. Once picked up, they will crawl until they find a likely site to feed. Often they will find a spot at the back of the knee, near the hairline, behind the ears, or at pressure points where clothing presses against the skin (underwear elastic, belts, neckline). The best way to prevent tick borne diseases is not to be bitten by a tick. Ticks can carry a number of diseases including:

- Lyme Disease is an infection caused by the corkscrew-shaped bacteria *Borrelia burgdorferi* that is transmitted by the bite of deer tick (ixodes) and western black-legged ticks. The disease occurs in the forested areas of North America, Europe, and Asia. Symptoms which occur 3-30 days following a tick bite include: a spreading 'bulls-eye" rash, fever, fatigue, headache, and joint and muscle aches. Prompt treatment with antibiotics is essential in order to prevent more serious complications that may occur if left untreated.

- Rocky Mountain Spotted Fever is an infection caused by the bacteria *Rickettsia rickettsii*. The disease occurs in North, Central, and South America. Other Rickettsia organisms cause disease worldwide (Mediterranean, Japan, Africa, North Asia). Symptoms which occur 2-6 days following a tick bite include: fever, nausea, vomiting, diarrhea, rash, muscle and joint pain. The disease is treated with antibiotics.

- Babesiosis is caused by hemoprotozoan parasites of the genus *Babesia*. It is transmitted by the ixodid tick. The geographic distribution is worldwide. Symptoms include fever, chills, fatigue, muscle aches, and an enlarged spleen and liver. The disease is treated with anti-protozoan drugs.

- Ehrlichiosis is caused by several bacteria of the genus *Ehrlichiae*. The geographic distribution is global, primarily in temperate regions. Symptoms which occur 5-10 days following a tick bite include fever, headache, fatigue, muscle aches, nausea, vomiting, diarrhea, confusion, and occasionally a rash. The disease is treated with antibiotics.

a. Avoidance of tick habitats

Whenever possible, persons should avoid entering areas that are likely to be infested with ticks, particularly in spring and summer when nymphal ticks feed. Ticks favor a moist, shaded environment, especially that provided by leaf litter and low-lying vegetation in wooded, brushy, or overgrown grassy habitat. Both deer and rodent hosts must be abundant to maintain the life cycle of the tick.

b. Personal Protective Equipment

1. Wear light colored clothing or white Tyvek® to allow you to see ticks that are crawling on your clothing.

2. Tuck your pant legs into your socks or boots, wear high rubber boots, or use tape to close the opening where they meet so that ticks cannot crawl up the inside of your pant legs.

3. Wear a hat, tie back long hair.

4. Apply repellents to discourage tick attachment. Repellents containing permethrin can be sprayed on boots and clothing and will last for several days. Repellents containing DEET (n,n-diethyl-

m-toluamide) can be applied to the skin, but will last only a few hours before reapplication is necessary. Apply according to Environmental Protection Agency guidelines to reduce the possibility of toxicity.

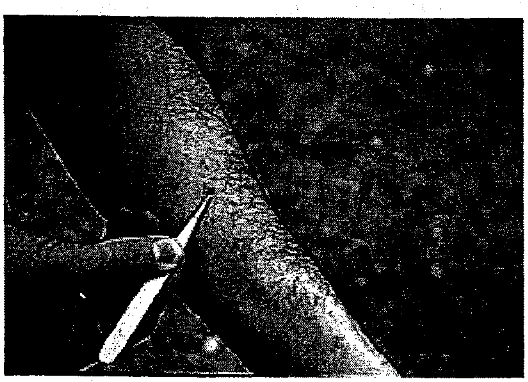
c. Tick Check

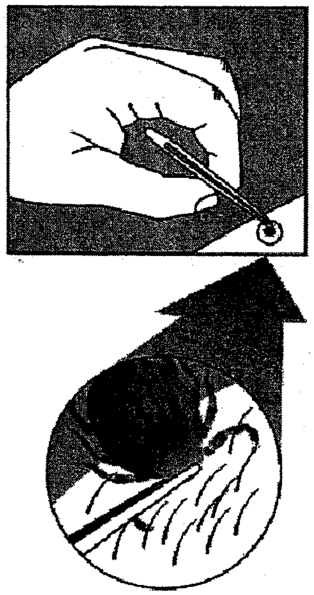
1. Change clothes when you return from an area where ticks may be located.
2. Shower to wash off any loose ticks.
3. Check your entire body for ticks. Use a hand held or full-length mirror to view all parts of your body.
4. Place clothing worn in tick infested areas into the dryer for at least 30 minutes in order to kill any ticks.

2. Tick Removal

Because it takes several hours of attachment before microorganisms are transmitted from the tick to the host, prompt removal of attached or crawling ticks is an important method of preventing disease. Remember, folklore remedies of tick removal to do not work! Methods such as the use of petroleum jelly or hot matches may actually make matters worse by irritating the tick and stimulating it to release additional saliva or regurgitate gut contents, increasing the chances of transmitting disease.

The best method to remove an attached tick is with a set of fine tipped tweezers.





a. Use fine-tipped tweezers. When possible, avoid removing ticks with bare hands.

b. Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Do not twist or jerk the tick; this may cause the mouthparts to break off and remain in the skin. If this happens, remove mouthparts with the tweezers.

c. Do not squeeze, crush, or puncture the body of the tick because its fluids (saliva and gut contents) may contain infectious organisms.

d. After removing the tick, thoroughly disinfect the bite site and wash your hands with soap and water.

e. Disinfect the tweezers.

f. Save the tick for identification in case you become ill. This may help the doctor make an accurate diagnosis. Place the tick in a vial or plastic zip lock bag and put it in the freezer. Write the date of the bite on a piece of paper with a pencil and place it in the bag.

3. Medical Follow-Up

In most circumstances, medical treatment of persons who only have a tick bite is not recommended. However, individuals who are bitten by a tick should seek medical attention if any signs and symptoms of tick borne disease develop over the weeks following the tick bite.

B. Poisonous Plants

1. Background Information

Poison ivy and poison oak plants are the most common cause of allergic contact dermatitis in North America. These poisonous plants can be a hazard for many various outdoor activities at work, home, and play. Skin contact with the oleoresins (urushiol) from these plants can cause an itchy, red, oozing, blistered rash in sensitive individuals. Oil content in the plants is highest in the spring and summer, however the plants are even hazardous in the winter when they have dropped their leaves. There are three types of exposure:

- Direct contact: An initial skin exposure in necessary to "sensitize" the individual. Subsequent contact in a sensitized person will result in a rash appearing within 4 to 48 hours. Approximately 50-70 % of the population is sensitized. Poison plant dermatitis is usually characterized by areas of linear or streaked patches where branches of the plant brushed the skin.

- Indirect contact: Skin exposure can happen indirectly. Clothing, shoes, tools, personal protective equipment and other items can be contaminated with the oils and maintain potency for months.

- Airborne smoke contact: Never burn poison plants. Droplets of oil can be carried by smoke and enter the respiratory system causing a severe internal outbreak.

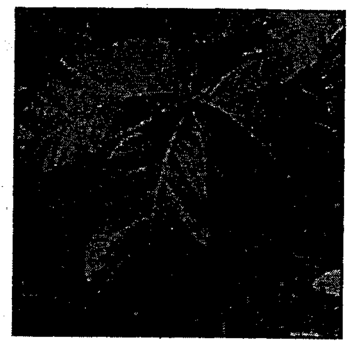
Poison plant rash is not contagious. Skin contact with blister fluid from an affected individual will not cause dermatitis in another sensitized person. Scratching the rash can only spread it to other parts of your body if the oil is still on your skin. After the oil has been washed off or absorbed by the skin, scratching will not spread the rash.

The most distinctive features of poison ivy and poison oak are their leaves, which are composed of three leaflets each and are green in the summer and red in the fall. Both plants also have greenish-white flowers and berries that grow in clusters. All parts of these plants are toxic.

Poison Ivy grows as a small plant, vine, and as a shrub. Leaves always consist of three glossy leaflets.

Poison Ivy

Poison Oak grows as a shrub or vine. It has three leaflets that resemble oak leaves.



Eastern Poison Oak

Poison Sumac grows as a woody shrub or small tree from 5 to 25 feet tall. It has 7 to 13 leaves that grow opposite each other with a leaflet at the tip.

Poison Sumac

1. Precautionary Measures

- The best approach is to learn to identify the plants and avoid them.
- Wear long pants and long sleeves, boots and gloves.
- Barrier skin creams may offer some protection if applied before contact.

- Avoid indirect contact from tools, clothing or other objects that have come into contact with a crushed or broken plant. Don't forget to wash contaminated clothing and clean up contaminated equipment.

- If you can wash exposed skin areas within 3-5 minutes with cold running water, you may keep the urushiol from penetrating your skin. Proper washing may not be practical in remote areas, but a small wash-up kit with pre-packaged alcohol-based cleansing tissues can be effective.

2. Medical Follow-Up

Home treatment: Calamine lotion and an oatmeal (one cup to a tub full of water) bath can help relieve itching. To prevent secondary skin infection, scratching is not helpful and the finger nails should be cut to avoid damage to the skin. Over-the-counter hydrocortisone cream can decrease inflammation and itching, however read the label and use according to directions.

When to see the doctor: Severe cases may require further treatment. A physician should be seen if the rash appears infected, is on the face or other sensitive body areas, or is too extensive to be easily treated at home.

C. Mosquito Borne Diseases

1. Background Information

a. Arboviral encephalitis is a viral illness causing inflammation of the brain and is transmitted to humans by the bite of infected mosquitoes. Globally there are several strains including: Eastern equine, Japanese, La Crosse, St. Louis, West Nile, and Western equine encephalitis. Some of the strains have a vaccine. Symptoms of infection are nonspecific and flu-like: fever, headache, and tiredness. Fortunately, only a small proportion of infected people progress to encephalitis. Treatment is supportive, antibiotics are not effective.

b. Malaria is a serious but preventable disease spread by the bite of an infected anopheline mosquito. It is caused by four species of the parasite *Plasmodium (P. falciparum, P. vivax, P. ovale, and P malariae)*. Malaria-risk areas include primarily tropical areas of Central and South America, Africa, India, Southeast Asia, and the Middle East. Symptoms of malaria which occur 8 days to 1 year after infection include fever, shaking chills, headache, muscle ache, tiredness, jaundice, nausea, vomiting, and diarrhea. Malaria can be cured with prescription drugs.

c. Dengue Fever is a potentially life-threatening viral illness transmitted by the bite of the Aedes mosquito, found primarily in urban areas. The disease is found in most of tropical Asia, the Pacific Islands, Central and South America, and Africa. There are four dengue virus serotypes. Symptoms include sudden onset, high fever, severe headache, joint and muscle pain, rash, nausea and vomiting. There is no specific treatment and no vaccine.

d. Yellow Fever is a viral disease transmitted between humans by mosquitoes. It occurs only in Africa and South America. There is a vaccine that confers immunity lasting 10 years or more. Symptoms begin 3-6 days after the mosquito bite and include fever, nausea, vomiting, headache, slow pulse, muscle aches, and restlessness. Treatment is symptomatic.

2. Precautionary Measures

- Insect Repellent – Use insect repellants that contain DEET. The effect should last about 4 hours. Always use according to label directions. Use only when outdoors and wash skin after coming indoors. Do not breathe in, swallow, or get into the eyes. Do not put on wounds or broken skin.

- Protective Clothing – wear long sleeved shirts and long pants, especially from dusk to dawn. Or avoid going outdoors during these hours.

- Mosquito netting – Travelers who will not be staying in well-screened or air conditioned rooms should use a pyrethroid containing flying insect spray in living and sleeping areas during evening and nighttime hours. Sleep under mosquito netting (bed nets) that have been sprayed with permethrin.

- Malaria prophylaxis medications may be prescribed, however they do not provide complete protection. The type of medication given depends on the area of travel.

D. Poisonous Snakes

1. Background Information

No single characteristic distinguishes a poisonous snake from a harmless one except the presence of poison fangs and glands. Only in dead specimens can you determine the presence of these fangs and glands without danger. Most poisonous snakes have both neurotoxic and hemotoxic venom, however, one type is dominant and the other is weak.

a. Hemotoxic venom. The folded-fang snakes (fangs can raise to an erect position) have venoms that affect the circulatory system, destroying blood cells, damaging skin tissues, and causing internal hemorrhaging.

b. Neurotoxic venom. The fixed-fang snakes (permanently erect fangs) have venoms that affect the nervous system, making the victim unable to breathe.

c. Poisonous snakes in the Americas: copperhead, coral snake, cottonmouth, and rattlesnake.

d. Poisonous snakes in Europe: adder, viper.

e. Poisonous snakes of Africa and Asia: viper, cobra, adder, green mamba.

f. Poisonous snakes in Australia: copperhead, adder, taipan, tiger snake.

2. Precautionary Measures

Bites occur when you don't hear or see the snake, when you step on them, or when you walk too close to them. Follow these simple rules to reduce the chance of accidental snakebite:

- Don't put your hands into dark places, such as rock crevices, heavy brush, or hollow logs, without first investigating.
- Don't step over a fallen tree. Step on the log and look to see if there is a snake resting on the other side.
- Don't walk through heavy brush or tall grass without looking down. Look where you are walking.

- Do not pick up any live snake. If you encounter a snake, walk around the snake, giving it plenty of room. A snake can strike half its length.

- Don't pick up freshly killed snakes without first severing the head. The nervous system may still be active and a dead snake can deliver a bite.

3. Medical Follow-up

If you are bitten by a snake, the primary goal is to get to a hospital as soon as possible to receive professional medical evaluation and possible treatment with antivenom if warranted. Initial first aid should include: Wash the bite with soap and water. Immobilize the bitten area and keep it lower than the heart. Try to remain calm. If you are unable to reach a hospital within 30 minutes, a bandage, wrapped two to four inches above the bite, may help slow the venom. The bandage should not cut off blood flow from a vein or artery, make sure the band is loose enough that a finger can slip under it. A suction device from a commercial snakebite kit may be placed over the bite to help draw venom out of the wound.

Research has shown the following to be potentially harmful, DO NOT: apply ice, use a tourniquet, or make incisions into the wound.

5. Documentation Summary

Complete and distribute a URS Incident Report form 49-1 for all work-related biological exposure incidents.

6. Resources

Centers for Disease Control
http://www.cdc.gov

U. S. Occupational Safety and Health Administration
http://www.osha.gov

U.S. Food and Drug Administration
Treating and Preventing Venomous Snake Bites

URS SAFETY MANAGEMENT STANDARD
DOT Shipping

1. Applicability

Office and field operations that ship hazardous materials (HazMat) must follow this Hazardous Material Shipping Program.

Hazardous materials may include, but are not limited to, compressed gases, laboratory reagents, field samples, hazardous wastes, and materials used for bench scale and pilot plant operations.

2. Purpose and Scope

This program was designed to provide a framework for compliance with the requirements of the U.S. Department of Transportation (DOT) 49 CFR and the International Air Transportation Association (IATA) for shipping hazardous materials by land or air.

3. Implementation

Office Locations -	The Office Manager is responsible for implementing this program at company locations/facilities.
Field Activities -	The Project Manager is responsible for compliance and implementation of this program at project sites.

4. Requirements

A. Staffing

Each project or location must ensure that awareness and function specific trained individuals are involved in the process of preparing hazardous materials for shipment.

Each location where HazMat shipping occurs or where HazMat employees are assigned must identify a local or regional Shipping Specialist.

B. General Procedures

1. Select the best way to ship the HazMat item based on the quantity, hazard(s), and mode of transportation (e.g., air, land, water).

2. Ensure package contents are compatible.

3. Package, mark, and label according to applicable regulations.

4. Complete the bill of lading or shipper's declaration for dangerous goods according to applicable regulations.

5. Follow hazard communication requirements:

   a. Send a copy of the appropriate Emergency Response Guidebook page or material safety data sheet (MSDS) with each shipment.

   b. Include the 24-hour emergency response phone number (CHEMTREC 800-424-9300 domestic, 703-527-3887 international) on the shipping paperwork.

C. Placarding Requirements

1. Placards must be offered to drivers if the amount of hazardous materials being shipped exceeds 1,000 pounds.

2. For extremely hazardous materials (e.g., severe explosives and toxics), any amount requires placarding.

3. "Limited quantities" are excepted from placarding.

4. URS employees transporting hazardous materials meeting DOT tracking and shipping requirements will obtain the proper Commercial Drivers License and endorsement.

D. Training

1. Require employees who package, prepare paperwork, load and/or unload, and transport hazardous materials be trained to the appropriate level of activity:

   a. Training is required prior to performing HazMat shipping activities.

   b. Training is required when regulatory changes impact current procedures and every 2 years.

   c. General awareness training is required for everyone who is involved in HazMat shipping. This training includes:

      1. Recognizing hazardous materials

      2. Penalties for not complying

3. Basic regulatory requirements

d. Function specific training is required to ensure employees can perform the specific HazMat jobs safely and in compliance with applicable regulations.

e. Driver's may be exempt from function specific training if the DOT's Materials of Trade (MOT) exception applies to the shipment. (See Attachment 48-1 for information on this exception).

E. Special Requirements

1. Some countries and transporters have more stringent requirements than DOT or IATA. For example, the United Parcel Service (UPS) publishes its own Guide for Shipping Ground and Air Hazardous Materials. URS shipping training and this program may not meet these additional requirements.

2. Contact the applicable shipping company or a URS Health and Safety Program Representative if you are unsure or suspect there may be additional, special requirements on a shipment.

3. For international shipments an expediter may be required to ensure needed materials are not held in customs. It may be advisable to purchase hazardous materials once you arrive in your destination country.

5. Documentation

All files must be kept in a central location.

A. Training records

1. Sign-up sheet with list of employee names, date, management certification.

2. Successfully completed tests.

3. Outline of course materials.

6. Resources

A. 49 Code of Federal Regulations, Parts 171-180, Subchapter C--Hazardous Materials Regulations.

B. Dangerous Goods Regulations. International Air Transport Association. 40th Edition. Effective January 1, 1999.

C. International Maritime Dangerous Goods Code. International Maritime Organization, Amendment 29-98.

D. DOT Office of Hazardous Materials Safety

E. URS HazMat Shipping Support Helpline 800.381.0664

F. Attachment 48-1 - Materials of Trade Summary

G. DOT Hazmat Certificate of Registration

URS SAFETY MANAGEMENT STANDARD

Injury / Illness / Incident Reporting

1. Applicability

This procedure applies to URS Corporation offices and field operations.

2. Purpose and Scope

The purpose of this procedure is to provide guidance for the timely reporting of work related injuries, illness, and incidents.

3. Implementation

Office Locations -	Implementation of this program is the responsibility of the employee's Supervisor.
Field Activities -	Implementation of this program is the responsibility of the Project Manager.

4. Requirements

A. Reporting: All employees shall immediately notify their appropriate level of management (line, project, and/or office) of a reportable incident. A reportable incident includes the following:

1. An injury to any URS employee, subcontractor, client representative, or private citizen, even if the injury does not require medical attention;
2. An injury to a member of the public occurring on a URS work site or possibly resulting from a URS or subcontractor activity or involving URS or subcontractor property, equipment, or resource;
3. Illness resulting from suspected chemical exposure;
4. Chronic or re-occurring conditions such as back pain or cumulative trauma disorders (example: carpal tunnel syndrome);
5. Fire, explosion, or flash;
6. Any vehicle accidents occurring on site, while traveling to or from client locations, or with any company-owned or leased vehicle;
7. Property damage resulting from any URS or subcontractor activity;
8. Structural collapse or potential structural hazards;

9. Unexpected release or imminent release of a hazardous material;

10. Unexpected chemical exposures to workers or the public;

11. A safety related complaint from the public regarding URS activities.

12. Any other significant occurrence that could impact safety.

B. Actions: The following actions will be taken following a reportable incident:

1. Employees:

   a. If necessary, suspend operations and secure and/or evacuate the area;

   b. Immediately notify your supervisor and/or project manager

   c. Record information pertaining to the incident (e.g., time, date, location, name and company of person(s) involved, description of event, and actions taken);

   d. Assist with incident investigation as directed by management;

   e. Implement corrective actions as directed by management;

   f. *Do not* discuss the incident with members of the news media or legal representatives (except URS legal counsel or your personal legal advisor) unless directed to do so by URS management;

   g. *Do not* make statements pertaining to guilt, fault, or liability.

2. Line/Project Management:

   a. Review circumstances of the incident with applicable employee(s);

   b. Notify local Health and Safety representative. If incident involves and an injury/illness of a URS employee, also notify the local Human Resources Representative;

   c. Complete and distribute injury/incident report within 24 hours. (Note: If the employee is unable to complete the report, another company employee, line manager, project manager, or local health and safety representative may complete the report.);

d. Review and verify that necessary corrective actions are identified and implemented;

e. Discuss with department or project staff the circumstances surrounding the incident and corrective actions taken.

3. Local Health And Safety Representative

   a. Assist with incident evaluation;

   b. With management, identify cause(s) of incident and identify corrective actions needed to avoid recurrence;

   c. Review injury/incident report for completeness and accuracy;

4. Local Human Resources Representative

   a. Report work-related injuries and illness to worker compensation carrier

      AIG Claim Services @ 1-877-366-8423

5. Corporate Health and Safety Management

   The Occupational Health Specialist (OHS), Corporate Health and Safety Director, and Construction Services Division Safety and Health Director will review all reported incidents (U.S.-based employees only) to determine OSHA reporting and recording requirements. All decisions will be based strictly on current Federal OSHA guidelines.

   a. Official records (including required reports, logs, for all reported incidents will be maintained at one central location by the OHS.

   b. The OHS will send each establishment any required government report for their establishment following receipt of an incident report.

c. Each January the OHS will prepare and distribute, to each URS establishment, the appropriate government injury/illness reports. These reports will summarize all required government information for incidents that occurred during the preceding calendar year. Each establishment will post these reports in a prominent location for the time specified by current regulations.

5. Documentation Summary

A. File these records in the Office Safety File:

1. Attachment 49-1 - Incident Report Form
2. Maintain OSHA 200 Log.

B. File these records in the Project Health and Safety File

1. Attachment 49-1 - Incident Report Form
2. Maintain OSHA 200 Log if applicable for Project.

6. Resources

A. U. S. OSHA

http://www.osha.gov/

URS SAFETY MANAGEMENT STANDARD

Marine Safety and Boat Operations

1. Applicability

This program establishes guidelines for the safe conduct of personnel working in the marine environment and personnel operating watercraft during URS field activities such as biological sampling, sediment sampling, and bathymetry.

2. Purpose and Scope

Maritime work has the same risks associated with land-side activities with the additional risks of drowning, hypothermia, and the energy of wave action. It is an inherently dangerous environment that must be treated with respect. This SMS delineates personal protective equipment requirements to address these hazards. In addition, this specifies watercraft-operating restrictions for URS activities.

The operation of watercraft by company employees will be an infrequent event, but may be a necessary part of a project due to the remote location of the job site. Where possible, subcontractors who specialize in the operation if watercraft will be contracted to provide work platforms. In most countries, a contractor hired to carry passengers aboard a small craft is required to be licensed by the national maritime authority or coast guard. Similarly, any vessel carrying more than 12 passengers (6 passengers in the US) must carry a certificate certifying safe carriage of passengers.

When it is not possible to hire an appropriate contractor to provide a safe work platform or vessel, then URS personnel may operate work boats in accordance with the guidance of this standard.

3. Implementation

Field Locations - Implementation of this program is the responsibility of the employee and the Project Manager.

4. Definitions

There are five types of Personal Flotation Device (PFD):

A. Type I is an offshore lifejacket

- Type I PFD will right an unconscious wearer and will usually keep the wearer's face out of the water.
- Type I PFD's are bulky and uncomfortable to wear for long periods of time.

B. Type II is a near shore buoyancy vest

- Type II PFD will right an unconscious wearer and will usually keep the wearer's face out of the water.

- Type II PFD's are bulky and uncomfortable to wear for long periods of time.

C. Type III is a floatation aid

- Generally the most comfortable PFD is the Type III which has at least 15.5 pounds of buoyancy in the adult size.

- The Type III PFD provides adequate buoyancy, but will not turn the wearer face-up in the water.

- The Type III device is more comfortable to wear, and is designed to be worn as work attire.

- Common Type III devices are work vests and harnesses with built in pneumatic floatation.

D. Type IV is a throwable device

- Type IV PFDs include the horseshoe collar, ring buoy, and seat cushion.

- They have at least 16.5 pounds of buoyancy and must offer immediate access.

E. Type V is a hybrid inflatable or special use device

- A Type V PFD is special purpose floatation.

- The full body insulating floatation suits that are suitable for work in cold weather are Type V devices.

- PFDs designed to survive high-speed impacts (like water skiing vests and jet-ski vests) are Type V devices.

- Some Type V PFDs are CO_2 activated, and are very low profile until inflated.

5. General Marine Safety

In general, the two additional hazards that maritime work involves are drowning and hypothermia. All other hazards are generally similar to our landside activities, and the personal protective equipment requirements are identical (hardhat, safety glasses, hearing protection, steel-toe shoes, etc).

Wearing a personal floatation device mitigates the risk of drowning. Company employees are required to wear a type III PFD anytime they are aboard a small craft and are outside of an enclosed cabin. The PFD must be readily accessible for each person inside a cabin. If employees are working aboard a larger vessel (>26 feet in length), a PFD must be readily accessible, but need not be worn unless engaged in activities on an open deck or at the rail.

The risk of hypothermia is mitigated by wearing appropriate insulated floating outerwear when cold weather or cold water is a threat. A Type V PFD, usually referred to as a "mustang suit', is a full body PFD that has excellent insulation qualities and will extend the wearer's survivability in the event of immersion or dowsing with spray when in cold weather. The wearing of these PFDs is required when the air temperature and the water temperature combined are less than 100 degrees F (38 degrees C), and when the small craft is less than 26 feet in length. When the working platform is larger than 26 feet, the wearing of a mustang suit is at the discretion of the boat Captain, the site supervisor, or the URS employee.

6. Operation Of Boats

A. Limitations

1. URS personnel may perform work from a small boat under following conditions:

    a. The boat used for the work must be appropriate to the type of work and suitable for safe carriage of the workers necessary for the task.

    b. The work site must be located in a protected area like a bay, sound, lake, or body of water that is protected from open-sea weather conditions.

    c. The work site must be within sight of land, and in no case more than 5-miles from shore.

    d. All operations will be completed in daylight hours under reasonable weather conditions with good visibility.

   e. The operator of the boat must have sufficient experience and knowledge to be competent in the operation of the boat at the work site location.

   f. There must be at least two people in the boat anytime the boat is underway.

   g. The boat and personnel must be properly equipped as specified below.

   h. The boat operator must be intimately familiar with all aspects of the boat, its intended use, the local area, and expected weather conditions.

   i. The boat must be monitored from the shore, either directly with a supervisor, or by filing a "float plan" with the project manager or other responsible person before getting underway.

2. Prior to departing the dock, the boat should be checked for:

   a. Watertight integrity

   b. Operation of machinery (ahead and astern, throttle, ignition cut-off)

   c. Appropriate safety gear (see section 6.B below)

   d. Proper loading of the boat (personnel and equipment) such that vessel stability is not jeopardized.

   e. Sufficient fuel for the duration of the trip and site work.

   f. All electrical and electronic equipment in good working order (lights, radios, horns, etc)

3. While operating, the boat operator shall:

   a. Maintain a communication schedule with shore support as specified in the float plan.

   b. Periodically monitor the weather on the VHF radio.

4. When moored, the boat operator shall close-out the float plan (if one

was required).

B. Boat Safety Equipment (for URS Operated Small Boats)

1. All persons on the boat will wear an U. S. Coast Guard approved Type III PFD device.

2. In addition, at least one throwable Type IV devices will be readily available for use.

3. At least one B-II U. S. Coast Guard approved hand-held portable fire extinguisher will be on the boat, readily available for use.

4. Visual Distress Signal Flares (check expiration date) and a battery operated light will be in good working order and readily available on the boat.

5. A sound-producing distress signal, either bell, whistle, or horn, will be in good working order and readily available on the boat.

6. A first aid kit will be available on the boat.

7. All boat fuel (gasoline or diesel) will be contained in fuel tanks or approved containers that supply fuel to the engine via approved fuel lines. No fuel transfers between containers are to be conducted aboard the boat.

8. A secondary means of propulsion will be available on the boat (multiple engines, oars or paddles for smaller vessels).

9. A boat hook, anchors, and proper mooring lines will be available on the boat.

10. A VHF radio is required for any boat working more than one mile offshore, or at any site where there is no shore-side support for the boat crew. (The radio may have to be licensed by the FCC depending upon transmission strength and installation.) When operating less than one mile from shore, a citizens band radio, cellular telephone, or a UHF radio may be used to provide positive communication with shoreside support.

C. Safe Boating Operations

1. All boats will be properly registered for use in waterways of local,

state, and federal jurisdictions.

2. All boat trailers and towing vehicles will be properly licensed and in good working order.

3. The boat must be operated by experienced personnel. The U. S. Coast Guard Auxiliary and other volunteer organizations regularly sponsor boating safety courses. In addition to basic boating safety, the courses cover navigation regulations and emergency procedures. The training is recommended, even for experienced boat operators.

4. The boat will be operated in a safe manner and all waterway regulations will be obeyed.

5. No alcoholic beverages, firearms, or illegal drugs are permitted on the boat.

6. No recreational equipment for fishing, hunting, water skiing, or SCUBA diving will be allowed on the boat unless specifically authorized as part of the work-related equipment.

D. Boating Accidents

Coast Guard and State regulations require accident reports if significant injuries or property damage occurs. The definition of a reportable accident varies between State and National authorities. The boat operator must be familiar with accident reporting requirements, usually available through the State's Department of Motor Vehicles. Any incident or accident should also be reported in accordance with SMS 49.

E. Float Plan

A float plan is required to be completed anytime the watercraft will be operating beyond the confines of a shore supported work site. The float plan (Attachment 53-1) should be completed and given to a shore supervisor who will know what actions to take in the event the boat is overdue.

7. Off-Shore Platforms

A. URS personnel may be required to visit offshore platforms. The client safety procedures will be the requirements in force.

B. Staff required to visit of-shore platforms will be trained/oriented regarding emergency procedures (evacuations, fire, first aid, assembly point), safe work practices, transfer from helicopter/boat to the platform and propre PPE (head protection, eye protection, floatation devices, foot protection, work clothes).

C. Training records shall be maintained by the Office Health and Safety Representative.

D. Transportation to platforms typically involves helicopter transfer. The helicopter pilot is in complete command and will make all decisions regarding weather, leading, seating, luggage/equipment allowed aboard, any transport of hazardous materials (e.g., sample coolers) and in-flight communications. Staff will receive a briefing regarding emergency procedures, safe helicopter entry, and rules of conduct.

E. Work platforms combine a work area with worker accommodation/food service facilities. Alcoholic beverages, illegal drugs, and firearms are prohibited at all times on the platforms, including off-duty periods.

URS SAFETY MANAGEMENT STANDARD
Office Ergonomics

1. Applicability

This program applies to job activities performed at computer workstations and covers factors designed to maximize compatibility between employees and office work.

2. Purpose and Scope

The primary goal of this program is to eliminate or reduce work-related cumulative trauma disorders, CTDs (also called musculo-skeletal disorders, repetitive strain injuries, repetitive motion injuries and occupational overuse syndrome). CTDs are not caused by a single event such as a slip, trip, or fall. CTDs are injuries to tendons, muscles, and nerves that occur as the result of repeated, prolonged, forceful or awkward body movements. CTDs can be prevented with proper interventions. Examples of CTDs are tendinitis, carpal tunnel syndrome, rotator cuff syndrome, epicondylitis, and De Quervain's disease.

Essential elements of this program include: management support, prompt employee reporting, workstation ergonomic analysis and control, employee training, health care management, and program evaluation.

3. Implementation

The Office Manager, with support from the URS H&S Divisional Managers and Occupational Health Specialist (OHS), will be responsible for implementation of this program.

4. Requirements

A. Management Leadership

URS management supports this program by encouraging employees to report signs and symptoms of CTDs whenever they occur and by authorizing the necessary resources to conduct training and ergonomic control measures at no cost to the employee.

B. Reporting Problems

Early recognition and reporting of signs and symptoms of CTDs are essential in preventing impairment and disability. Employees should notify their supervisor and submit a completed URS Incident Report (SMS 49-1) when experiencing the following warning signs: neck, upper back, shoulder, elbow, forearm, wrist, hand, thumb or fingers: intermittent and migratory pain, fatigue or weakness, tingling or burning, numbness, and lack of coordination or stiffness and cramping.

C. Workstation Ergonomic Analysis

The Regional H&S Manager or Local Health and Safety Representative will perform an ergonomic assessment (Attachment 54-1) in the following circumstances:

- An employee reports signs and symptoms of a possible CTD or an employee's doctor requests an ergonomic evaluation for the employee (complete as soon as possible, at least within 1 week of reporting).
- An employee requests an evaluation as a pro-active measure.
- As part of a general office audit when other employee's have reported CTDs or as part of an office move.

D. Control Measures

Ergonomics includes a three-tier hierarchy of controls which can be used to help prevent and manage CTDs.

1. Engineering Controls are the preferred method to prevent and control CTDs. (proper workstation layout, selection and use of ergonomic equipment - see Attachment 54-2.)
2. Administrative Controls are management approved practices designed to reduce or prevent exposure to ergonomic risk factors. (job rotation, alternating tasks, ergonomic training)
3. Work Practice Controls are the employee's responsibility in working safely at the keyboard. (taking authorized mini-breaks, using proper work postures, pacing) - see Attachment 54-3.

E. Training

Ergonomic training is needed for employees assigned to jobs that require four or more hours per day of working at the keyboard. The training course content will include the following:

1. The signs, symptoms, and consequences of CTDs.

2. The importance of early reporting of CTD symptoms.

3. Site specific exposures associated with CTDs.(i.e., word processing, data entry, 10-key calculators, CAD designers)

4. Methods used to minimize CTDs.

F. Health Care Management

Effective case management for CTDs is an essential element of a successful ergonomics program. If CTDs are recognized and treated appropriately early in their development, more serious conditions can be prevented.

Based on the severity of symptoms reported by an employee, a decision will be made by the OHS or H&S Representative and employee whether conservative treatment can be initiated, or prompt referral to a physician is indicated.

If the symptoms are mild and intermittent, applying cold or warm compresses for 15 minutes 2-3 times per day, taking over-the-counter anti-inflammatory medication with food, and modifying the workstation and work practices may relieve the symptoms.

If the symptoms are moderate to severe and persistent (have been occurring eight consecutive days or longer), the employee should be referred to a knowledgeable occupational physician. The physician will be informed by the company of the job tasks performed by the employee. The physician selected should be trained in prevention, early recognition, evaluation, treatment, and rehabilitation of CTDs, and in the principles of ergonomics and OSHA recordkeeping requirements.

Whenever possible, the company will accommodate physician ordered work restrictions by providing modified job assignments during rehabilitation of the CTD.

G. Program Evaluation

A follow-up evaluation must be conducted within 1-2 weeks following a workstation analysis in order to ensure that control measures were effective in reducing or eliminating the ergonomic risk factors and to assess if the implemented solutions reduced symptoms.

In addition, long term indicators for the effectiveness of this ergonomic program will include annual review by Corporate Health and Safety Director, comparing the CTD incident rate and severity rate to previous years' rates.

5. Documentation Summary

Completed Incident Report forms and Workstation Ergonomic Checklists will be forwarded to the OHS and Division H&S Manager and will be maintained for a minimum of five years.

6. Resources

A. Workstation Ergonomic Checklist – Attachment 54-1

B. Ergonomic Posture – Attachment 54-2

C. Stretching Exercises – Attachment 54-3

D. Back Injury Prevention - SMS 045

E. Office furniture – Contact URS Purchasing Department (425-385-2016) for assistance with company-authorized desks and chairs.

F. NIOSH Elements of Ergonomics Programs
http://www.cdc.gov/niosh/ephome2.html

G. U.S. OSHA: Ergonomics, Frequently Asked Questions
http://www.osha-slc.gov/ergonomics-standard/faq-overview.html

H. WorkSafe Australia: Guidance Note for the Prevention of Occupational Overuse Syndrome in Keyboard Employment [NOHSC:3005 (1996)]
http://www.worksafe.gov.au/publications/fulltext/toc/00997_01.htm

I. California Title 8 General Industry Safety Orders Section 5110, Ergonomics
http://www.ergoweb.com/Pub/Info/Std/calstd.html

J. Canadian Centre for Occupational Health and Safety
http://www.ccohs.ca/oshanswers/ergonomics/office/office.htm

URS SAFETY MANAGEMENT STANDARD

Health and Safety Training

1. Applicability

This SMS applies to all URS personnel. These are the minimum Environmental, Health and Safety (EHS) compliance training requirements and tracking procedures. Specific geographic entities, business units, and projects may require additional training. These requirements may be dictated by federal/national, state/provincial or local agencies or by the activities of a specific work group or project team. Each location or project manager is responsible for ensuring documentation and informing employees of these additional requirements.

2. Purpose and Scope

This SMS was developed to assist employees and managers in the identification of training requirements and to define the URS procedures for tracking/documenting this training. It covers environmental, hazardous materials, and health and safety training only. The goals of this program are to ensure regulatory compliance and to provide employees with the information/training they need to accomplish their work assignments safely, prevent injuries to themselves, coworkers, surrounding communities and clients, and to protect company property and the environment.

3. Implementation

Location — Location Manager is responsible for ensuring compliance with this program and any additional requirements necessary because of the physical location of the facility, and/or the business units in operation at that facility (e.g., laboratories).

Projects — Project Manager is responsible for ensuring project-related compliance (e.g., compliance of project staff members) with this program and any additional training necessary because of specific project activities.

Corporate HS Training Coordinator (CTC) — The CTC is responsible for maintaining the corporate training calendar, filing original records/tests, issuing certificates, maintaining and issuing corporate training materials, helping to develop materials that meet requirements, adding approved courses and course information to the corporate training database, updating the intranet site with course information.

4. Requirements

Employee training requirements are dictated by the work each employee performs (or are expected to perform) and the geographic area(s) where they perform these activities. In most cases there is a regulatory driver for specific training. Attachment 55-1 shows a decision tree designed to help employees and managers determine training requirements.

A. Health & Safety Orientation: All URS employees must be informed as to existence of and basic content of the URS Health and Safety Program. Locations will have the option of selecting the appropriate method of delivery but the content of this orientation must include at a minimum:

1. Review of the URS EHS policy statement
2. The Management System
3. The URS H&S Organization
4. Overview of the Safety Management Standards and Hazard Assessment Process
5. Incident Reporting (SMS 049)

Based on job assignment, additional training covered during this orientation:

6. Office Ergonomics (SMS 054)
7. Hazard Communication (US) or WHMIS (Canada)
8. Emergency Procedures (emergency action plans, evacuation plans, fire alarms, gathering points, emergency communications)

B. Table 1 contains a list of the most common courses that may be required, their frequency, and expected participants. This table will be updated as regulatory and company requirements change.

TABLE 1

Course Title	Regulatory Requirement	Frequency	Audience	Comments
Hazardous Waste Operations (40-Hrs - U.S.) (24-Hrs- non U.S.)	Y	Once	Anyone performing work or expected to perform at hazardous waste sites or treatment, storage, and disposal facilities	
Hazardous Waste Operations – Refresher (8 Hrs - U.S.) (4 Hrs - non-U.S.))	Y	Annually	(See above)	
Hazardous Waste Operations – Supervisor (8 Hrs)	Y	Once	Required for anyone serving as the site supervisor at a hazardous waste site.	
Field Safety (4 Hrs)	N	Biennially	Required for all URS non-craft employees performing field work that are not in hazardous waste training program.	Specific content will depend on the office and the employees' expected work.
Health & Safety Orientation	Y	Once	Required for all URS employees.	Specific content will depend on the office and the employees' expected work.
Respiratory Protection[1]	Y	Annually	Required for any employee who may be required to wear a respirator.	Initial training is approximately 1 hr. Annually refresher training and fit testing is approximately .5 hrs.

Course Title	Regulatory Requirement	Frequency	Audience	Comments
Hazardous Materials Shipping[1]	Y	Biennially	Required for anyone who packages, labels, transports, completes paperwork for, or offers for shipment, hazardous materials/dangerous goods	
Bloodborne Pathogens[1]	Y	Annually	Required for anyone designated as a first aid responder or others who have a potential bloodborne pathogen exposure.	
First Aid	N	Biennially	Required for Hazardous Waste Site Safety Officers and personnel at remote sites (e.g., no local emergency medical response).	
Hazard Communication[1]	Y	Initially and if hazards change	Required for anyone who is potentially exposed to/works with hazardous chemicals	Training must occur before any work with hazardous chemicals. Included (as needed) in H&S Orientation. After the initial training, required updates will typically be handled as part of project specific H&S training.

[1]This material is covered in the Hazardous Waste Operations initial and annually refresher courses, however individuals who are not Hazardous Waste Operations staff may be required to take one or more of these courses based on their work activities and as required by federal regulations.

C. Attachment 55-1 is a tool used to identify *additional* training requirements. These requirements may be necessary due to the individual's project or office activities, or the location of the facility. The responses to this simple questionnaire dictate what training an individual needs above and beyond the basic URS courses. Each employee, once these requirements have been identified, is expected to complete the required training as soon as possible and to track his/her progress.

D. Training requirements should be re-evaluated at least annually and more frequently if an employee's assigned duties change significantly.

E. To ensure consistency in content and duration and in meeting regulatory and company requirements, corporate training materials should be used as the base materials whenever they are available. Trainers may always elect to supplement the base corporate training materials for these courses with project/office/geographic unit specifics.

F. For training requiring certifications (regulatory or corporate) trainers must be regional or divisional H&S Managers or be approved by the Corporate Health and Safety Director. This training includes but is not limited to, Hazardous Waste Health and Safety courses and Field Safety Training.

G. Training is offered in a variety of formats including classroom instruction, computer-based training (CBT), and on-the-job (OTJ) training. To ensure consistency and that all requirements are being met, external courses (e.g., 40 Hour HAZOPWER) including classroom instruction and CBT should be evaluated and approved by the Corporate Health and Safety Director or a designee (e.g., Divisional or Regional H&S

Manager). Local, regional or divisional H&S staff will be able to assist in identifying qualified external vendors when the need arises.

H. Internal training course schedules will be posted on the Health and Safety intranet site at **http://healthandsafety.com/** .

I. URS staff is expected to be familiar with applicable training requirements. In addition to the corporate training tracking. Staff members are expected to track their own progress toward meeting those requirements.

5. Documentation Summary

A. Those courses shown in Table 1 will be tracked in a corporate training database. These courses were selected for a variety of reasons including:

1. Audits/compliance checking
2. Written certification requirements
3. Easy access to qualified individuals for project/office staffing purposes

B. All training must be documented using Training Attendance form (Attachment 55-2) and Course Agenda. Minimum course agenda requirements include:

- Type of course
- Course date
- Course location
- Topics covered
- Length of time covered for each topic
- Course duration (start / end times)
- Instructor(s) name

C. For client/vendor provided training, training documentation must include:

- Copy of the attendee's course certificate
- Course agenda

D. Divisional H&S Managers will ensure the course agenda meet regulatory/company requirements. The Corporate H&S Training Coordinator will then enter attendance records in the corporate training database.

E. Original attendance sheets, agendas, and any completed tests will be sent to the Corporate H&S Training Coordinator. These should be filed by course then by date for easy access/auditing.

F. Locations/projects will maintain records on any project or location specific training requirements such as fire extinguisher training, project H&S plan training, and chemical hygiene program (laboratory safety) training. They may optionally elect to maintain copies of attendance records for courses also being tracked corporately.

G. For courses requiring certification, certificates will be issued by the Corporate Health and Safety Director, unless the certificate is issued by a vendor or client. Under those conditions a copy of the certificate must be provided to the Corporate H&S Training Coordinator (along with course content information and sign in sheets).

H. Managers (local, regional, project) can access the information for staffing and compliance purposes through the Divisional H&S Managers or Corporate H&S Training Coordinator. Divisional H&S Managers will have "read only" access to the corporate training database.

6. References

The following are sites that provide additional information to assist you in identifying training requirements.

A. OSHA website training section (U.S. Regulatory Requirements)
http://www.osha-slc.gov/Training/

B. National Occupational Health and Safety Commission (Australia)
http://www.nohsc.gov.au/work/education/index.htm

C. European Agency for Safety and Health at Work
http://europe.osha.eu.int/training/

D. Additional Training Requirements Evaluation - Attachment 55-1

E. Training Attendance Form - Attachment 55-2

URS	Health and Safety Program ADDITIONAL H&S TRAINING EVALUATION	Attachment 55-1

Name ____________________ Location ____________________ Date ______________

Course Title	Regulatory	Frequency	Should You Attend?	Check if Required ✓	Comments
Asbestos Inspector	Y	Annual	You perform asbestos sampling tasks.		Not offered in-house
Asbestos Planner	Y	Annual	You serve as the project asbestos planner.		Not offered in-house
Confined Space Entry	Y	Once	You perform confined space entry/authorizer/attendant duties (including anyone performing non-entry rescue activities).		Tracked in corporate database.
Confined Space Refresher	N	As needed	Recommended if you perform entry activities.		
Confined Space Rescuer	Y	Once	You may have to enter a confined space to perform a rescue		Not offered in-house. Tracked in corporate database.
Construction Safety OSHA 500		Once	Recommended if you are a Supervisor and/or Safety Officers at Construction Sites		Tracked in corporate database.
Emergency Action Plan	Y	Once	You are assigned to and at least occasionally work at a fixed facility in the US. This should be covered in EHS Orientation.		For field/site personnel this will be covered in project/site safety training.
Excavations/Trenching Awareness	Y	Once	You work at sites where excavation/trenching tasks are performed.		Covered in HAZWOPER and Field Safety
Excavations/Trenching Competent Person	Y	Once	You are or may be designated as a competent person (educational background and experience may allow for grand-fathering)		Tracked in corporate database.
Fall Prevention/Protection	Y	Once	You supervise tasks or perform tasks at heights (on roofs, scaffolding, ladders, unfinished flooring).		Tracked in corporate database.
Fire Extinguisher	Y	Annual	You may be expected to use fire extinguishers (fixed facilities and project sites)		
Powered Industrial Trucks (Forklifts)	Y	Once	Your job assignments includes operating a powered industrial truck (forklift)		Required more frequently if required assessments indicate the need.
General Industry Safety	N	Once			See Field Safety

ADDITIONAL H&S TRAINING EVALUATION

Course Title	Regulatory	Frequency	Should You Attend?	Check if Required	Comments
H&S Issue for Project Managers	N	Once	Required if you manage projects with field work.		Will be offered as part of PM Training
Hazard Communication	Y	Once	You work with or around hazardous materials in a US facility (includes URS facilities and client facilities)		Tracked in corporate database. Typically included in H&S Orientation.
HAZWOPER HazMat Team	Y	Once	Emergency Response Team Members (First Responders Operations Level, HazMat Technicians and Incident Commanders)		Tracked in the corporate training database.
Hearing Conservation	Y	Annual	Employees exposed to noise at or above 85 decibels averaged over an 8 hour day.		Covered in HAZWOPER Refresher and Field Safety
Injury/Illness Prevention	Y	Once	You are assigned to CA offices		Covered in CA office H&S Orientation.
Laboratory Safety	Y	Once	You work in a fixed or mobile wet chemistry lab.		
Lead Inspector	Y		You are a project lead inspector.		Not offered in house.
Lead Planner	Y		You are a project lead planner.		Not offered in house.
Lockout/Tagout	Y	Once	You work with and around equipment that may need to be locked out/tagged out. (You are not responsible for applying tags/locks)		General awareness covered in HAZWOPER and Field Safety
Nuclear Density Gauge Operator	Y	Once	You operate nuclear density gauges		
Radiation Safety Officer	Y	Once	You are designated as a Radiation Safety Officer		
SCBA/Cascade Systems	Y	Once	Required for any employee required to wear SCBAs or to operate a supplied air system.		Part of Project H&S training as needed.
Shipping Specialist	Y	Once	You are designated as a Shipping Specialist and/or are a Regional H&S Manager.		Updates are required as regulations change. Tracked in the corporate training database.
Substance Specific	Y	Once	Any employee potentially exposed to a substance covered by the 29 CFR substance specific regulations. SMS 050.		Includes lead, asbestos, benzene, etc.
Waste Awareness	Y	Annual	You generate, handle or manage hazardous waste at a fixed facility or		Updates/refreshers can be part of Project H&S

Course Title	Regulatory	Frequency	Should You Attend?	Check if Required	Comments
			field project.		training.
Waste Specialist	Y	Once with Annual Refresher	You are responsible for waste management at a small or large quantity generator facility.		
Welding/Brazing/ Cutting	Y		You job duties include these activities		
WHMIS	Y		You are assigned to a Canadian facility and work with or around hazardous materials.		Canadian "HazCom"

OCCUPATIONAL SAFETY AND HEALTH TRAINING

ATTENDANCE RECORD

DATE: ______________________ **PAGE**_____**OF**_____

LOCATION: ______________________

TYPE OF COURSE: ______________________

INSTRUCTOR SIGNATURE: ______________________

Name (print legibly)	Signature	Company/Location	Social Security Number
Sophia Miller	*Sophia Miller*	URS - Pittsburgh	999-02-4581

(SSN - Social Security Number requested for training database use <u>only</u>. Information will be kept confidential.)

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URS SAFETY MANAGEMENT STANDARD
Drilling Safety Guidelines

1. Applicability

This program applies to URS projects in which truck-mounted, or other engine powered, drill rigs are used. It is applicable to URS employees and URS owned rigs. For drill rigs operated by contractors, the primary responsibility for drilling safety is with the drilling contractor.

2. Purpose and Scope

The purpose of these guidelines is to provide an overview for working safely around drilling operations with truck-mounted and other engine-powered drill rigs. The procedure addresses off-road movement of drill rigs, overhead and buried utilities, use of augers, rotary and core drilling, and other drilling operations and activities.

3. Implementation

Field Activities — Drill rig safety and maintenance is the responsibility of the drill rig operator. URS employees are responsible for their own safety including recognizing and avoiding drill rig hazards. URS employees that observe a drill rig condition believed to be unsafe shall advise the drill rig operator of the unsafe condition.

4. Safety Guidelines

A. General Guidelines

URS technicians, geologists, engineers, or other field staff assigned to observe drilling operations or collect soil samples should observe the following guidelines:

- Require a meeting at project start-up regarding the drill rig operator responsibility for rig safety and any site and equipment specific safety requirements
- Set up any sample tables and general work areas for the URS field staff to the side of the drill rig (preferably 10 meters away) and not directly behind the rig.
- URS engineers, technician, and geologists shall not assist the drillers with the drilling equipment or supplies and shall not at any time operate the drill rig controls.

B. Movement of Drill Rigs

Before moving a rig, the operator must do the following:

- To the extent practical, walk the planned route of travel and inspect it for depressions, gullies, ruts, and other obstacles.
- Check the brakes of the truck/carrier, especially if the terrain along the route of travel is rough or sloped.
- Discharge all passengers before moving on rough or steep terrain.
- Engage the front axle (on 4x4, 6x6, etc. vehicles) before traversing rough or steep terrain.

Driving drill rigs along the sides of hills or embankments should be avoided; however, if side-hill travel becomes necessary, the operator must conservatively evaluate the ability of the rig to remain upright while on the hill or embankment. The possibility must be considered that the presence of drilling tools on the rig may reduce the ability of the rig to remain upright (raises the center of mass of the rig).

Logs, ditches, road curbs, and other long and horizontal obstacles should be normally approached and driven over squarely, not at an angle.

When close lateral or overhead clearance is encountered, the driver of the rig should be guided by another person on the ground.

Loads on the drill rig and truck must be properly stored while the truck is moving, and the mast must be in the fully lowered position.

After the rig has been positioned to begin drilling, all brakes and/or locks must be set before drilling begins. If the rig is positioned on a steep grade and leveling of the ground is impossible or impractical, the wheel of the transport vehicle should be blocked and other means of preventing the rig from moving or topping over employed.

C. Buried and Overhead Utilities

The location of overhead and buried utility lines must be determined before drilling begins, and the locations should be noted on boring plans and/or assignment sheets.

When overhead power lines are close by, the drill rig mast should not be raised unless the distance between the rig and the nearest power line is at least 20 feet (7 meters) or other distance as required by local ordinances, whichever is greater. The drill rig operator or assistant should walk completely around the rig to make sure that proper distance exists.

When the drill rig is positioned near an overhead line, the rig operator should be aware that hoist lines and power lines can be moved towards each other by wind. When necessary and approved by the Project

Manager (PM), the utility and/or power lines may be shielded, shut down, or moved by the appropriate personnel.

For additional information, please refer to SMS #34 "Utility Clearances and Isolation".

D. Clearing the Work Area

Before a drill rig is positioned to drill, the area on which the rig is to be positioned should be cleared of removable obstacles and the rig should be leveled if sloped. The cleared/leveled area should be large enough to accommodate the rig and supplies.

E. Safe Use of Augers

Never place hands or fingers under the bottom of an auger flight or drill rods when hoisting the augers or rods over the top of another auger or rod in the ground or other hard surfaces, such as the drill rig platform.

Never allow feet to get under the auger or drill rod while they are being hoisted.

When the drill is rotating, stay clear of the drill string and other rotating components of the drill rig. Never reach behind or around a rotating auger for any reason.

Move auger cuttings away from the auger with a long-handled shovel or spade; never use hands or feet.

Never clean an auger attached to the drill rig unless the transmission is in neutral or the engine is off, and the auger has stopped rotating.

Do not wear loose clothing or jewelry while working near the drill rig. Long hair must be pulled back to avoid entanglement with moving parts.

Hearing protection is required when working near an operating drill rig.

F. Safe Use of Hand Tools

Regulations regarding hand tools should be observed in addition to the guidelines provided below:

- Each tool should be used only to perform tasks for which it was originally designed.
- Damaged tools should be repaired before use or discarded.
- Safety goggles or glasses should be worn when using a hammer or chisel. Nearby co-workers and by-standers should be required to wear safety goggles or glasses also, or move away.

- Tools should be kept cleaned and stored in an orderly manner when not in use.

G. Safe use of Wire Line Hoists, Wire Rope, and Hoisting Hardware

Safety rules described in Title 29 Code of Federal Regulations (CFR) 1926.552 and guidelines contained in the Wire Rope User's Manual published by the American Iron and Steel Institute shall be used whenever wire line hoists, wire rope, or hoisting hardware are used. The driller should provide written reports (upon request) documenting inspections of equipment.

H. Traffic Safety

Drilling in streets, parking lots or other areas of vehicular traffic requires definition of the work zones with cones, warning tape, etc. and compliance with local police requirements.

I. Fire Safety

- Fire extinguishers (type ABC) shall be kept on or near drill rigs for fighting small fires.
- If methane or other flammable gases or vapors are suspected in the area, a combustible gas indicator (CGI) shall be used to monitor the air near the borehole with all work to stop at 20 percent of the Lower Explosive Limit (LEL).
- Work shall stop during lightning storms.

J. Protective Gear

1. Minimum Protective Gear

Items listed below should be worn by all staff working within 30 feet (10 meters) of drilling activities.

- Hearing Protection;
- Hard Hat;
- Eye Protection (safety glasses, goggles, or face-shield)
- Safety Shoes (shoes or boots with steel toes)

2. **Other Gear**

Items listed below should be worn when conditions warrant their use. Some of the conditions are listed after each item.

- **Safety Harnesses and Lifelines:** Safety harnesses and lifelines shall be worn by all persons working on top of an elevated derrick beam or mast. The lifeline should be secured at a position that will allow a person to fall no more than six feet (2 meters). OSHA Fall Protection (1926 Subpart M) requirements apply.
- **Life Vests:** Use for work over water.

5. Resources

A. International Association of Drilling Contractors Safety Alerts http://iadc.org/alerts.htm

B. Fall Protection - SMS 040

C. Hearing Conservation - SMS 026

D. Subcontractor Health and Safety Requirements - SMS - 046

E. Utility Clearances and Isolation - SMS 034

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URS SAFETY MANAGEMENT STANDARD

Vehicle Safety Program

1. Applicability

This procedure applies to URS Corporation's U.S. operations. A violation of this policy is subject to disciplinary action up to and including termination.

2. Purpose and Scope

The purpose of this procedure is to help insure that people driving for the URS Corporation do so in a safe manner.

This Safety Management Standard (SMS) applies to employees operating motor vehicles that are owned, rented or leased by the Company, and the use of personal vehicles while on Company business.

This SMS does not apply to heavy equipment operations (see SMS 019).

3. Implementation

The overall responsibility for program implementation is with the URS Health and Safety Director. Other responsibilities include:

Administration - Fleet management, Vehicle Safety Program, vehicle acquisition, insurance claims reporting, controlling access to vehicles, maintenance of vehicles, participating on accident review.

Human Resources - Documentation of driver's license, discipline.

Health and Safety - Employee safety training, maintenance of the vehicle safety program, participation on the accident review committee.

Employee - Familiarization with URS Vehicle Safety Program, compliance with its requirements.

4. Requirements

A. Authorized Drivers

1. Authorized Drivers are those individuals permitted to drive URS owned, leased, or rented vehicles. Employees that only operate rental cars obtained on a daily basis through URS National Service Agreements are not required to be designated as Authorized Drivers.

2. Must be at least 18 (non-commercial license) or 21 (commercial license) years of age and have a current driver's license for the appropriate class of vehicle (unless more stringent requirements are established by the leasing/renting agency).

3. Human Resources and Office Administrators requires new employees and current employees (on an annual basis), designated as Authorized Drivers, to provide a copy of their driver's license. Authorized drivers who

lose their license through legal action must notify their Human Resources Representative immediately. The Human Resources Representative will notify the Fleet Manager.

4. The Company may suspend the privilege to operate vehicles on Company business due to non-compliance with the URS Vehicle Safety Program, involvement in a motor vehicle accident, or motor vehicle violations.

5. Authorized drivers must review the Vehicle Safety Program (SMS 057) and sign the Drivers Information form (Attachment 57-2).

6. Non-URS employees (e.g., subcontractors, alliance partners) may operate URS vehicles only when this activity is specifically agreed to in the applicable contract.

B. Training

1. Authorized Drivers shall be provided basic driver safety training, including a review of the URS Vehicle Safety Program (SMS 057) and video or on-line training, within 6 months of the effective date of this SMS or within 3 months of their hire date.
2. Additional training may be required for select employees based on accident involvement.

C. General Operating Policy and Procedure (Applies to Authorized and Non-Authorized Drivers Operating Motor Vehicles on Official Company Business)

1. Company owned/rented/leased motor vehicles may be operated only by properly licensed employees who are specifically authorized to drive Company vehicles.
2. Authorized drivers required to operate vehicles with special hazards (i.e. trucks carrying fuel cells, vehicles used to tow trailers, vehicles with limited visibility, etc.) shall be thoroughly briefed on the hazards and control measures necessary for safe operation of the vehicle. The local office shall maintain documentation of the briefing.
3. Drivers/operators shall know and obey all federal, state and local motor vehicle laws applicable to the operation of their vehicle.
4. A driver shall not permit unauthorized persons to operate a Company-owned/rented/leased vehicle.
5. URS policy regarding reimbursement and insurance coverage requirements for use of personal automobiles may be found in the Policy and Procedures Manual (Section 074.020).
6. All cargo extending 4 feet or more beyond the end of a truck, trailer or similar vehicle shall be clearly marked with a red warning flag or cloth measuring no less than 16 inches square. Red lights must be used at night.

7. Company owned/rented/leased vehicles are for official business use only and are not to be used for personal activities without the specific approval of a Division Manager, Senior Vice President, or above.
8. Seat belts and shoulder harnesses (occupant restraint systems) shall be worn or used whenever the vehicle is in operation. The vehicle may not move until all passengers have fastened their restraints.
9. When parking or leaving a vehicle, the following procedures must be followed: Shut off the engine, engage the transmission in park (automatic transmission) or first gear (standard transmission), set the parking brake, remove the ignition keys, and lock the vehicle.
10. The vehicle's engine is to be turned off during refueling. Smoking or cell phone use is not allowed while refueling.
11. Drivers/operators will not drive or operate vehicles while under the influence of alcohol or illegal drugs. Further details on the URS Substance Abuse Policy may be found in the Policy and Procedure Manual (section 034.030).
12. Drivers/operators will not drive or operate vehicles while under the influence of medications when told by a physician, another healthcare provider, or the manufacturer (i.e. instructions on the label) that the activity is unsafe.
13. Vehicle operators are responsible for any fines levied by law enforcement agencies for the operation of their vehicles.
14. Articles, tools, equipment, etc. placed in vehicles shall be stored as not to interfere with vision or the proper operation of the vehicle in any way. This also includes preventing items from flying about or out of the vehicle during sudden stops, turning, etc.
15. Trucks or vehicles with obstructed rear-view mirrors must observe the following procedures when backing up: Position an employee to act as a spotter at the rear of the vehicles, in the driver's line of sight, to ensure that the are behind the truck is clear. If no other employee is present, then the driver must step out of the vehicle and check the area behind the vehicle before backing up. As an added precaution, avoid backing up whenever possible.
16. Driver/operators may not deactivate or muffle any backup warning device.

D. Field Site Vehicle Safety

1. Define specific vehicle travel routes and parking areas at field sites. Use fencing, cones or other markings to define roads and parking.
2. If parking on the shoulder of an active road, park as far off the road as possible.
3. If work is required alongside an active road (e.g., surveying) park the vehicle behind the area of work to provide a barrier against out-of-control vehicles.

4. URS will not transport DOT-placard quantities of hazardous materials. However, small quantities of hazardous materials (e.g., sample coolers) may be transported if properly packaged. Be careful to prevent chemical contamination of the vehicle. Further details on DOT shipping may be found in the DOT Shipping SMS 048.
5. Nuclear density meters (e.g.,Troxler units) may be transported only by employees who have been trained in the use of nuclear density meters (see SMS 044). Nuclear density meters must be secured from movement and locked during transport. NRC and state-specific regulations regarding transport documentation also apply.
6. When performing fieldwork requiring the blocking of traffic lanes (e.g., bridge inspection), follow URS SMS 032, the Manual on Uniform Traffic Control Devices for Streets and Highways (ANSI D6.1) and local police requirements for barriers, cones, and flaggers.
7. No employee may ride in the bed of a pickup truck unless seating and restraints are provided for this specific use.

E. Accident Response and Reporting

1. In case of injury, call or have someone else call, 911 immediately for emergency assistance. If you are involved in an accident and are not injured, do the following:
    a. Protect the accident scene.
    b. Do not admit liability or place any blame for the accident.
    c. Provide only your name, address, driver's license number, and vehicle insurance information.
    d. Obtain the following:
        i. name(s), addresses, and telephone number(s) of the owner
        ii. driver and occupants of other vehicle(s)
        iii. the owner's insurance company
        iv. driver's license number
        v. year, make, model and license number of the vehicle(s)
        vi. name(s) and addresses of any witnesses
    e. **DO NOT:**
        - Call the insurance company; the Fleet Manager's office will do this (unless the incident involves your personal vehicle).
        - Give a statement to the press.
        - Give a signed statement to the claims adjuster representing the other driver's insurance company.

NOTE: The Auto Claim Report (Attachment 57-1) for Company-leased or owned vehicles is located in the vehicle glove compartment. The driver must complete this form at the scene of the accident and submit it to management.

2. Notification

All accidents with a Company-leased, rented, or owned vehicle must be reported to your Office/Branch Manager/Supervisor and Fleet Manager within 24-hours of the time it occurs. Use the Auto Claim Report (Attachment 57-1) for this purpose. The Fleet Administrator will report the accident to the insurance carrier (leased and owned vehicles only) promptly .

F. Accident Review

1. The Fleet Manager will review all accidents involving URS-owned, rented or leased vehicles. Accidents involving any of the following will result in immediate disciplinary action in coordination with Human Resources:
   a. Driving under the influence of alcohol or illegal drugs
   b. Reckless driving
   c. Driving without a license
   d. Hit-and-run driving
   e. Repeat accidents involving the same employee,
   f. Unauthorized use of Company vehicles.
2. Disciplinary action includes possible:
   a. Loss of URS driving privileges
   b. Additional driver safety training
   c. Suspension without pay
   d. Termination

G. Inspection

1. The driver is responsible for inspecting the vehicle prior to use and not driving a vehicle with obvious safety defects.
2. Basic safety checks must include:
   a. Tire condition/pressure
   b. Lights/turn signals
   c. A clean windshield and adequate window washer fluid
   d. Gauges/warning lights indicating a normal condition
   e. Mirrors properly adjusted
   f. Brakes with adequate pedal pressure for proper braking

3. Any defects must be reported to the local office Fleet Representative/Office Administrator.

H. Vehicle Maintenance

1. The Office Administrator (or designee) is to ensure that all URS-leased/owned vehicles are properly maintained.
2. Routine maintenance must be performed in accordance the schedule provided in the owner's manual stored in the vehicle.
3. Reported defects/problems with vehicles must be repaired promptly.

5. Documentation Summary

A. Auto Claim Report - (Attachment SMS 57-1)

B. Driver's Information - (Attachment SMS-57-2)

6. References

The following sites provide additional information to assist you:

A. National Safety Council; Information on Defensive Driving Courses
http://www.nsc.org/psg/ddc.htm

B. AAA Foundation for Traffic Safety
http://www.aaafts.org/

URS SAFETY MANAGEMENT STANDARD

Cold Stress

1. Applicability

This procedure applies to URS projects where field crews are working outdoors in damp and cool (below 50° F or 10°C) conditions or anytime temperatures are below 32°F or 0°C.

2. Purpose and Scope

The purpose of this procedure is to protect project personnel from the following conditions:

Hypothermia: Hypothermia results when the body loses heat faster than it can be produced. When this situation first occurs, blood vessels in the skin constrict in an attempt to conserve vital internal heat. Hands and feet are first affected. If the body continues to lose heat, involuntary shivers begin. This is the body's way of attempting to produce more heat, and it is usually the first real warning sign of hypothermia. Further heat loss produces speech difficulty, confusion, loss of manual dexterity, collapse, and finally death. Wet clothes or immersion in cold water greatly increases the hypothermia risk. The progressive clinical presentation of hypothermia may be seen in Attachment 59-1.

Frostbite: Local injury resulting from cold is included in the generic term frostbite. There are several degrees of damage. Frostbite can be categorized into:

- **Frost Nip or Initial Frostbite:** (1st degree frostbite) Characterized by blanching or whitening of skin.
- **Superficial Frostbite:** (2nd degree frostbite) Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient. Blistering and peeling of the frozen skin will follow exposure.
- **Deep Frostbite:** (3rd degree frostbite) Tissues are cold, pale, and solid; extremely serious injury with possible amputation of affected area.

Frostbite can occur without hypothermia when the extremities do not receive sufficient heat. The toes, fingers, cheeks, and ears are the most commonly affected. Frostbite occurs when there is freezing of the fluids around the cells of the affected tissues. The first symptom of frostbite is an uncomfortable sensation of coldness, followed by numbness. There may be tingling, stinging, or cramping. Contact by the skin with tools or other metal objects below 20°F (-7°C) may result in contact frostbite.

3. Implementation

Field Activities - Implementation of this procedure is the responsibility of the Project Manager and the field supervisor.

4. Requirements

A. Carefully plan work anticipated to be performed in cool or cold conditions. Include costs in project budgets for specialized equipment and supplies needed to complete the field activities.

B. Monitor weather forecasts immediately prior to entering the field.

C. Observe and monitor weather conditions such as ambient temperature, wind speed, and precipitation while in the field. Use Attachment 59-2 to determine wind chill.

D. Wear at least 3 layers of clothing.

- An outer layer to break the wind and allow some ventilation (e.g., Gortex® or nylon)
- A middle layer of down, wool, or similar materials to provide insulation
- An inner layer of cotton or synthetic weave to allow ventilation

In addition:

- Wear a hat. Up to 40% of body heat can be lost when the head is left exposed.
- Wear insulated boots or other insulated footwear.
- Keep a change of dry clothing available in case work clothes become wet.
- Do not wear tight clothing. Loose clothing allows better ventilation.

E. Use the following work practices:

- Use Attachment 59-3 to establish work/rest cycles in cold weather.
- Drink plenty of warm liquids. It is easy to become dehydrated in cold

weather.

- Avoiding caffeine and alcohol. Alcohol will accelerate loss of body heat.
- Eat high calorie snacks to help maintain body metabolism.
- If possible, heavy work should be scheduled during the warmer parts of the day. Take breaks out of the cold.
- Work in pairs to keep an eye on each other and watch for signs of cold stress.
- NEVER IGNORE SHIVERING. Persistent or violent shivering is a clear warning that you are on the verge of hypothermia.
- Avoid exhaustion.

F. When possible, use the following engineering controls:

- Provide shelter to escape cold, wind and precipitation
- Provide a source of heat (such as warm packs or portable heaters)
- Use insulating materials on equipment handles when temperatures drop below 30°F or -1°C.

G. Watch for symptoms and signs of hypothermia (see Attachment 59-1).

H. Treat cold stress illness as follows:

- Hypothermia: Prompt treatment of hypothermia is essential. Once the body temperature drops below 95°F or 35°C, the loss of temperature control occurs, and the body can no longer rewarm itself. Initial treatment includes reducing heat loss by moving the individual out of the wind and cold, removal of wet clothing, applying external heat (such as a pre-warmed sleeping bag, electric blanket, or body-heat from other workers) and follow-up medical attention.
- Frost Bite: The initial treatment for frostbite includes bringing the individual to a warm location, removal of clothing in the affected area, and, **if help is delayed**, placing the affected parts in warm (100° to104° F or 38° to 40°C) water. Do not massage or rub the frostbite area. After

the initial treatment, wrap the affected area loosely in sterile gauze and seek medical attention.

For further discussion on Cold Stress treatment, please refer to Attachment 59-1

I. Hypothermia in Water:

Loss of body heat to the water is a major cause of deaths in boating accidents. Often the cause of death is listed as drowning; however the primary cause is often hypothermia. It should also be noted that alcohol lowers the body temperature around two to three degrees by dilating the blood vessels. Do not drink alcohol around cold water. The following table shows the effects of hypothermia in water:

WATER TEMPERATURE	EXHAUSTION	SURVIVAL TIME
32.5° F (0°C)	Under 15 min.	Under 15 to 45 min.
32.5 to 40°F (0 – 4°C)	15 to 30 min.	30 to 90 min.
40 to 50°F (4 – 10°C)	30 to 60 min.	1 to 3 hrs.
50 to 60°F (10 – 16°C)	1 to 2 hrs.	1 to 6 hrs.
60 to 70°F (16 – 21°C)	2 to 7 hrs.	2 to 40 hrs.
60 to 70°F (16 – 21°C)	3 to 12 hrs.	3 hrs. to indefinite
Over 80°F (27°C)	Indefinite	Indefinite

SOME POINTS TO REMEMBER:

- Wear your PFD. Review SMS 053 - Marine Safety and Boat Operations.
- If water is less than 50°F (10°C), wear a wet suit or dry suit for work in water (e.g., wading) or if significant potential to fall in water.
- While in the water, do not attempt to swim unless to reach nearby safety. Unnecessary swimming increases the rate of body heat loss. Keep your head out of the water. This will increase your survival time.

- Keep a positive attitude about your rescue. This will increase your chances of survival.
- If there is more than one person in the water, huddling is recommended.

J. Training

Workers at risk of developing hypothermia or cold-related injury will be trained in:

- recognition of the signs and symptoms of cold injury or impending hypothermia,
- proper re-warming procedures and appropriate first aid treatment,
- proper use of clothing,
- proper eating and drinking practices
- safe work practices appropriate to the work that is to be performed.

5. Documentation Summary

File these records in the Project Safety File.

A. Completed Project Hazard Analysis form (see Health and Safety Website – “Hazard Analysis")

B. Cold stress training records

6. Resources

A. OSHA Fact Sheets – “Protecting Workers in Cold Environments” http://www.osha-slc.gov/OshDoc/Fact_data/FSNO98-55.html

B. Attachment 59-1 “Signs of, and Treatment for, Cold Stress related Illnesses”

C. Attachment 59-2(a) “Wind Chill Index” (units in °F and miles/hour)

D. Attachment 59-2(b) “Wind Chill Index” (units in °C and Kilometers/hour)

E. Attachment 59-3 "TLVs Work/Warm-up Schedule for Outside Workers based on a Four-hour Shift"

Attachment 59-1
Signs of and Treatment for Cold Stress Related Illnesses

Condition	Signs/Symptoms	Treatment
Hypothermia **Mild** (98° - 90° F) (36° - 32°C)	• shivering • lack of coordination • stumbling, fumbling hands • slurred speech • memory loss • pale, cold skin	• move to warm area • stay active • remove wet clothes and replace with dry clothes or blankets • cover the head • drink warm (not hot) sugary drink
Hypothermia **Moderate** (90° - 86° F) (32° - 30°C)	• shivering stops • unable to walk or stand • confused and irrational	• All of the above, plus • Call for an ambulance • Cover all extremities completely • Place very warm objects, such as hot packs or water bottles on the victim's head, neck, chest and groin
Hypothermia **Severe** (86° - 78° F) (30° - 26°C)	• severe muscle stiffness • very sleepy or unconscious • ice cold skin • death	• Call for an ambulance • Treat the victim very gently • Do not attempt to re-warm -- the victim should receive treatment in a hospital
Frostbite	• Cold, tingling, stinging or aching feeling in frostbitten area; numbness • Skin color turns red, then purple, then white or very pale skin, cold to the touch • Blisters in severe cases	• Seek medical attention • Do not rub the area • Wrap in soft cloth • If help is delayed, immerse in warm, not hot, water
Trench Foot	• Tingling, itching or burning sensation • Blisters	• Soak feet in warm water, then wrap with dry cloth bandages • Drink a warm, sugary drink

Source: Princeton University, Department of Environmental Health and Safety, posted 2/2/99.

Attachment 59-2(a)
Wind-Chill Index[1]
(miles per hour and °F.)

	ACTUAL THERMOMETER READING (°F)									
	50	40	30	20	10	0	-10	-20	-30	-40
Wind speed in mph	EQUIVALENT TEMPERATURE (°F)									
calm	50	40	30	20	10	0	-10	-20	-30	-40
5	48	37	27	16	6	-5	-15	-26	-36	-47
10	40	28	16	4	-9	-21	-33	-46	-58	-70
15	36	22	9	-5	-18	-36	-45	-58	-72	-85
20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
Over 40 mph (little added effect)	Little Danger (for properly clothed person)				Increasing Danger			Great Danger		
					(Danger from freezing of exposed flesh)					

[1] Source: Fundamentals of Industrial Hygiene, Third Edition. Plog, B.A., Benjamin, G.S., Kerwin, M.A., National Safety Council, 1988

Attachment 59-2(b)
Wind-chill Index[1]
(Kilometers per hour and °C.)

Estimated wind speed	Actual temperature reading (°C)												
	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
(in km/h)	Equivalent chill temperature (°C)												
0 (Calm)	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
8	9	3	-2	-7	-12	-18	-23	-28	-33	-38	-44	-49	-54
16	4	-2	-7	-14	-20	-27	-33	-38	-45	-50	-57	-63	-69
24	2	-5	-11	-18	-25	-32	-38	-45	-52	-58	-65	-72	-78
32	0	-7	-14	-21	-28	-35	-42	-50	-56	-64	-71	-78	-84
40	-1	-8	-16	-24	-31	-38	-46	-53	-60	-67	-76	-82	-90
48	-2	-10	-17	-25	-33	-40	-48	-55	-63	-70	-78	-86	-94
56	-3	-11	-18	-26	-34	-42	-50	-58	-65	-73	-81	-89	-96
64	-3	-11	-19	-27	-35	-43	-51	-59	-66	-74	-82	-90	-98
(Wind speeds greater than 64 km/h have little additional effect.)	LOW HAZARD Risk of exposed dry skin being affected in less than one hour. Awareness of hazard low.				INCREASING HAZARD Danger from freezing of exposed flesh within one minute.			HIGH HAZARD Flesh may freeze within 30 seconds.					

The table was originally developed by the U.S. Army Research Institute of Environmental Medicine, Natick, MA, and is adapted from the 1995-1996 *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices,* published by the ACGIH. The ACGIH publication provides the equivalent table with temperature in degrees Fahrenheit and wind speed in mph.

Equivalent chill temperature requiring dry clothing to maintain core body temperature above 36°C (96.8°F).

Attachment-59-3

TLVs Work/Warm-up Schedule for Outside Workers based on a Four-hour Shift*

The ACGIH has adopted the guidelines developed by the Saskatchewan Labour for working outdoors in cold weather conditions. These guidelines recommend protective clothing and limits on exposure time. The recommended exposure times are based on the wind chill factor, a scale based on air temperature and wind speed. The work-break schedule applies to any four-hour period with moderate or heavy activity. The warm-up break periods are of 10-minute duration in a warm location. The schedule assumes that "normal breaks" are taken once every two hours. At the end of a 4-hour period, an extended break (e.g. lunch break) in a warm location is recommended. More information is available in the ACGIH publications "2000 TLVs and BEIs" and "Documentation of TLVs and BEIs" and on the Saskatchewan Labour web page "Cold Conditions Guidelines for Outside Workers".

Air Temperature - Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		15 mph Wind		20 mph Wind	
°C (approx.)	°F (approx.)	Max. work Period	No. of Breaks**	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks
-26° to -28°	-15° to -19°	(Norm breaks) 1		(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4
-29°to -31°	-20°to -24°	(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-32° to -34°	-25°to -29°	75 min.	2	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease	
-35° to -37°	-30° to -34°	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease			
-38° to -39°	-35° to -39°	40 min.	4	30 min.	5	Non-emergency work should cease					
-40° to -42°	-40°to -44°	30 min.	5	Non-emergency work should cease							
-43° & below	-45° & below	Non-emergency work should cease									

*2000 TLVs and BEIs - Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati : American Conference of Governmental Industrial Hygienists (ACGIH), 2000 - page 176. Adopted from Saskatchewan Labour "Cold Conditions Guidelines for Outside Workers"

ATTACHMENT 2

CONTACT LIST

BADAMI

CONTACT LIST

Medical Services	Onsite	Badami	Notes
Medical services	Onsite emergency care limited to first aid.	Badami Medical Clinic 659-1327	Clinic located in Main Camp Emergency numbers are: · Badami Emergency 659-1200
Environmental Services	**Onsite**	**Badami**	**Notes**
Routine environmental services including waste management advice, manifesting, fluid transfers, minor spill management.		Technical help available through Badami environmental contact Del Sandvik or Alex Reyes at 659-1243	Contractor expected to provide cleanup of minor spills. Environmental contact will provide guidance on disposal of spill cleanup waste and field spill information to ACS/SRT Techs and to Environmental Advisor for agency reporting.
Emergency environmental services including large controlled or uncontrolled spills.		Badami emergency number 659-1200.	
Emergency Response Team Services	**Onsite**	**Badami**	**Notes**
Fire/exposure protection	Incipient response	Badami IMT activated with BPXA resources deployed as needed	Emergency number is · Badami Emergency 659-1200 · Badami Control Room 659-1300
Rescue/extraction	Initial response as possible	Additional support as needed	Emergency number is · Badami Emergency 659-1200 · Badami Control Room 659-1300
HazMat response team	Initial response as possible	Additional support as needed	Emergency numbers are · Badami Control Room 659-1200

Appendix C

DAILY PROGRESS REPORT

SITE NAME
Deadhorse

DATE
July 31, 2002

PERSONNEL
Rob Ellefson
Bill Craig

ACTIVITIES CONDUCTED
Bill Craig and Rob Ellefson mobilized to Deadhorse from Anchorage. Conducted inventory of Exxon-Mobil, Point Thomson Channel Excavation supplies/material. Contacted Cape Smyth Air, Badami Facility and ACS to confirm field logistics.

SIGNIFICANT FINDINGS
NA

ACTIVITIES REMAINING
Mobilize to Badami

TOMORROW'S PLANNED ACTIVITIES
Load ACS boat with field gear and finalize field preparations.

DAILY PROGRESS REPORT

SITE NAME
Deadhorse

DATE
August 1, 2002

PERSONNEL
Rob Ellefson
Bill Craig
Kim Nielsen

ACTIVITIES CONDUCTED
In the morning, Kim Nielsen traveled from Anchorage to Deadhorse, and Bill Craig and Rob Ellefson met with ACS managers and personnel to discuss field logistics. In the after noon, all URS personel loaded Badami-bound supplies and material on 42-foot ACS vessel, Gwydyr Bay. Contacted Cape Smyth Air, Badami Facility and ACS to confirm field logistics.

SIGNIFICANT FINDINGS
NA

ACTIVITIES REMAINING
Mobilize to Badami.

TOMORROW'S PLANNED ACTIVITIES
Mobilize field personnel to Badami and begin field work.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 2, 2002

URS PERSONNEL	ACS Personnel
Rob Ellefson	Chuck Crabaugh
Bill Craig	Tad Smith
Kim Nielsen	

ACTIVITIES CONDUCTED
URS personnel traveled to Endicott where they met the ACS crew on the boat Gwydyr Bay. A safety meeting was held onboard. We then traveled to Badami and attended an ATP meeting. Unloaded extra supplies from boat and traveled to the project area. Located sample location PTLA-SG04 and anchored. Collected three samples for the full EPA suite, two archive samples, a rinsate blank and a field blank. Returned to Badami.

SIGNIFICANT FINDINGS
NA

ACTIVITIES REMAINING
Continue sampling locations inside the barrier islands and watch for the ice to move out enough to access sample locations in the proposed summer dumping zone.

TOMORROW'S PLANNED ACTIVITIES
Attend Badami safety meeting in the morning before continuing sampling.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 3, 2002

URS PERSONNEL
Rob Ellefson
Bill Craig
Kim Nielsen

ACS Personnel
Chuck Crabaugh
Tad Smith

ACTIVITIES CONDUCTED
Traveled to the project area and collected sediment samples from locations PTLA-SG12, PTFI-SG04, PTFI-SG03, PTCE-SB02, and PTCE-SG01. Also collected a rinsate blank and a field blank. Returned to Badami.

SIGNIFICANT FINDINGS
Sample locations PTME-SG01 through PTME-SG05 were not accessible due to heavy ice. The boat is equipped to push small barges but was only able to push the ice enough to get within approximately ½ mile of the locations. The ice also prevented access from the west to location PTFI-SG02 (north of Flaxman Island), and the water was to shallow for the ACS boat to go around the east end of Flaxman. We will watch for a chance to access these locations, should the ice move out.

ACTIVITIES REMAINING
Continue sampling locations inside the barrier islands and watch for the ice to move out enough to access sample locations in the proposed summer dumping zone and outside Flaxman Island.

TOMORROW'S PLANNED ACTIVITIES
Package samples for shipment to the lab and continue sampling.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 4, 2002

URS PERSONNEL	ACS Personnel
Rob Ellefson	Chuck Crabaugh
Bill Craig	Tad Smith
Kim Nielsen	

ACTIVITIES CONDUCTED
Traveled to the project area and collected sediment samples from locations PTCE-SG02, PTFI-SG01, PTME-SG05, PTME-SG04, and PTLA-SG13. Also collected a rinsate blank and a field blank. Returned to Badami.

SIGNIFICANT FINDINGS
Southwest wind in the morning pushed the ice out enough to access locations PTFI-SG01, PTME-SG05, and PTME-SG04 in Mary Sachs Entrance. However, in the afternoon, the wind shifted around to the northwest and ice prevented further sampling in this area. Travel from the last location sampled in this area (PTME-SG04) was difficult and time-consuming due to the increased ice and floes had to be pushed aside by the boat to travel. We will watch for a chance to access the remaining locations in Mary Sachs Entrance.

ACTIVITIES REMAINING
Continue sampling locations inside the barrier islands and watch for the ice to move out enough to access remaining sample locations in the proposed summer dumping zone and outside Flaxman Island.

TOMORROW'S PLANNED ACTIVITIES
Package samples for shipment to the lab and continue sampling.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 5, 2002

URS PERSONNEL	ACS Personnel
Rob Ellefson	Chuck Crabaugh
Bill Craig	Tad Smith
Kim Nielsen	

ACTIVITIES CONDUCTED
Traveled to the project area and collected sediment samples from locations PTLA-SG10, PTLA-SG09, PTLA-SG08, PTLA-SG15, PTLA-SG07, and PTLA-SG14. Also collected a rinsate blank and a field blank. Returned to Badami.

SIGNIFICANT FINDINGS
Winds were northwest all day and ice prevented further sampling outside the barrier islands. We will watch for a chance to access the remaining locations in Mary Sachs Entrance and outside Flaxman Island.

ACTIVITIES REMAINING
Continue sampling locations inside the barrier islands and watch for the ice to move out enough to access remaining sample locations in the proposed summer dumping zone and outside Flaxman Island.

TOMORROW'S PLANNED ACTIVITIES
Package samples for shipment to the lab and continue sampling.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 6, 2002

URS PERSONNEL	ACS Personnel
Rob Ellefson	Chuck Crabaugh
Bill Craig	Tad Smith
Kim Nielsen	

ACTIVITIES CONDUCTED
Traveled to the project area and collected sediment samples from locations PTME-SG01, PTME-SG02, PTME-SG03, PTFI-SG02, PTLA-SG11, and PTLA-SG05. Also collected a rinsate blank and a field blank. Returned to Badami.

SIGNIFICANT FINDINGS
Winds were southwest to west all day and moved the ice north. We were able to access the remaining locations in Mary Sachs Entrance and outside Flaxman Island.

ACTIVITIES REMAINING
Continue sampling locations inside the barrier islands.

TOMORROW'S PLANNED ACTIVITIES
Package samples for shipment to the lab and continue sampling.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 7, 2002

URS PERSONNEL	ACS Personnel
Rob Ellefson	Chuck Crabaugh
Bill Craig	Tad Smith
Kim Nielsen	

ACTIVITIES CONDUCTED
Traveled to the project area and collected sediment samples from locations PTFI-SG05, PTFI-SG06, PTLA-SG01, PTLA-SG02, PTLA-SG03, and PTLA-SG06, PTLA-SG16, and PTLA-SG17. Also collected a rinsate blank and a field blank. Returned to Badami.

SIGNIFICANT FINDINGS
None.

ACTIVITIES REMAINING
Demobilize from Badami; sampling activities are complete.

TOMORROW'S PLANNED ACTIVITIES
Demobilize from Badami to West Dock via ACS boat, ship sampling equipment and excess supplies (primarily extra sample containers and coolers) to URS Anchorage office, and travel from the slope via evening commercial flight.

DAILY PROGRESS REPORT

PROJECT NAME
Point Thomson Ocean Dumping Evaluation

DATE
August 8, 2002

URS PERSONNEL
Rob Ellefson
Bill Craig
Kim Nielsen

ACS Personnel
Chuck Crabaugh
Tad Smith

ACTIVITIES CONDUCTED
Demobilized from Badami to West Dock via ACS boat, shipped sampling equipment and excess supplies (primarily extra sample containers and coolers) to URS Anchorage office, and traveled from the slope via evening commercial flight.

SIGNIFICANT FINDINGS
None.

ACTIVITIES REMAINING
None.

TOMORROW'S PLANNED ACTIVITIES
None – project is complete.

Appendix D

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Gravel, Medium	4.75 mm	4	47.1
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Gravel, Fine	2.00 mm	10	5.02
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Sand, Very Coarse	0.850 mm	20	1.97
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Sand, Coarse	0.425 mm	40	3.52
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Sand, Medium	0.250 mm	60	7.17
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Sand, Fine	0.106 mm	140	7.99
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Sand, Very Fine	0.075 mm	200	2.18
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Silt	0.0039 - 0.0625 mm	NA	20.9
PTCE-SB02	PTCE-SB02-A1	0.0' - 0.5'	70.17717	146.25117	Clay	<0.0039mm	NA	6.58
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Gravel, Medium	4.75 mm	4	56.2
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Gravel, Fine	2.00 mm	10	6.26
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Sand, Very Coarse	0.850 mm	20	1.39
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Sand, Coarse	0.425 mm	40	2.14
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Sand, Medium	0.250 mm	60	4.51
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Sand, Fine	0.106 mm	140	6.52
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Sand, Very Fine	0.075 mm	200	1.92
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Silt	0.0039 - 0.0625 mm	NA	18.5
PTCE-SB02	PTCE-SB02-A2	0.0' - 0.5'	70.17717	146.25117	Clay	<0.0039mm	NA	5.7
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Gravel, Medium	4.75 mm	4	41.7
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Gravel, Fine	2.00 mm	10	7.31
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Sand, Very Coarse	0.850 mm	20	1.46
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Sand, Coarse	0.425 mm	40	2.35
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Sand, Medium	0.250 mm	60	6.25
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Sand, Fine	0.106 mm	140	7.35
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Sand, Very Fine	0.075 mm	200	2.14
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Silt	0.0039 - 0.0625 mm	NA	20.5
PTCE-SB02	PTCE-SB02-A3	0.0' - 0.5'	70.17717	146.25117	Clay	<0.0039mm	NA	6.74
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Gravel, Medium	4.75 mm	4	21.6
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Gravel, Fine	2.00 mm	10	8.55
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Sand, Very Coarse	0.850 mm	20	2.78
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Sand, Coarse	0.425 mm	40	5.05
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Sand, Medium	0.250 mm	60	11.9
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Sand, Fine	0.106 mm	140	15.1
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Sand, Very Fine	0.075 mm	200	3.21
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Silt	0.0039 - 0.0625 mm	NA	24.7
PTCE-SG01	PTCE-SG01-A1	0.0' - 0.5'	70.17683	146.24833	Clay	<0.0039mm	NA	8.28

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Gravel, Medium	4.75 mm	4	30.1
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Gravel, Fine	2.00 mm	10	9.16
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Sand, Very Coarse	0.850 mm	20	2.75
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Sand, Coarse	0.425 mm	40	4.45
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Sand, Medium	0.250 mm	60	9.03
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Sand, Fine	0.106 mm	140	10.8
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Sand, Very Fine	0.075 mm	200	1.99
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Silt	0.0039 - 0.0625 mm	NA	20.4
PTCE-SG01	PTCE-SG01-A2	0.0' - 0.5'	70.17683	146.24833	Clay	<0.0039mm	NA	6.1
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Gravel, Medium	4.75 mm	4	39.4
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Gravel, Fine	2.00 mm	10	8.44
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Sand, Very Coarse	0.850 mm	20	2.65
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Sand, Coarse	0.425 mm	40	3.99
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Sand, Medium	0.250 mm	60	8.1
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Sand, Fine	0.106 mm	140	9.98
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Sand, Very Fine	0.075 mm	200	2.15
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Silt	0.0039 - 0.0625 mm	NA	20
PTCE-SG01	PTCE-SG01-A3	0.0' - 0.5'	70.17683	146.24833	Clay	<0.0039mm	NA	6.69
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Gravel, Medium	4.75 mm	4	43.4
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Gravel, Fine	2.00 mm	10	6.92
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Sand, Very Coarse	0.850 mm	20	1.25
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Sand, Coarse	0.425 mm	40	2.40
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Sand, Medium	0.250 mm	60	9.88
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Sand, Fine	0.106 mm	140	12.7
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Sand, Very Fine	0.075 mm	200	1.12
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Silt	0.0039 - 0.0625 mm	NA	14.1
PTCE-SG02	PTCE-SG02-A1	0.0' - 0.5'	70.17800	146.25517	Clay	<0.0039mm	NA	3.97
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Gravel, Medium	4.75 mm	4	52.2
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Gravel, Fine	2.00 mm	10	4.71
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Sand, Very Coarse	0.850 mm	20	0.99
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Sand, Coarse	0.425 mm	40	2.70
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Sand, Medium	0.250 mm	60	9.22
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Sand, Fine	0.106 mm	140	10.4
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Sand, Very Fine	0.075 mm	200	0.91
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Silt	0.0039 - 0.0625 mm	NA	12.2
PTCE-SG02	PTCE-SG02-A2	0.0' - 0.5'	70.17800	146.25517	Clay	<0.0039mm	NA	3.73

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Gravel, Medium	4.75 mm	4	46.1
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Gravel, Fine	2.00 mm	10	6.60
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Sand, Very Coarse	0.850 mm	20	1.59
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Sand, Coarse	0.425 mm	40	3.75
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Sand, Medium	0.250 mm	60	10.3
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Sand, Fine	0.106 mm	140	11.2
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Sand, Very Fine	0.075 mm	200	1.10
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Silt	0.0039 - 0.0625 mm	NA	14.3
PTCE-SG02	PTCE-SG02-A3	0.0' - 0.5'	70.17800	146.25517	Clay	<0.0039mm	NA	4.23
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Gravel, Fine	2.00 mm	10	0.25
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Sand, Very Coarse	0.850 mm	20	0.19
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Sand, Coarse	0.425 mm	40	2.23
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Sand, Medium	0.250 mm	60	56.9
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Sand, Fine	0.106 mm	140	34.9
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Sand, Very Fine	0.075 mm	200	0.76
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Silt	0.0039 - 0.0625 mm	NA	2.64
PTFI-SG01	PTFI-SG01-A1	0.0' - 0.5'	70.20150	146.22333	Clay	<0.0039mm	NA	1.05
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Gravel, Fine	2.00 mm	10	0.05
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Sand, Very Coarse	0.850 mm	20	0.13
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Sand, Coarse	0.425 mm	40	1.23
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Sand, Medium	0.250 mm	60	54.2
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Sand, Fine	0.106 mm	140	43.1
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Sand, Very Fine	0.075 mm	200	0.30
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Silt	0.0039 - 0.0625 mm	NA	1.26
PTFI-SG01	PTFI-SG01-A2	0.0' - 0.5'	70.20150	146.22333	Clay	<0.0039mm	NA	0.87
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Gravel, Fine	2.00 mm	10	0.00
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Sand, Very Coarse	0.850 mm	20	0.07
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Sand, Coarse	0.425 mm	40	1.33
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Sand, Medium	0.250 mm	60	52.9
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Sand, Fine	0.106 mm	140	43.1
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Sand, Very Fine	0.075 mm	200	0.28
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Silt	0.0039 - 0.0625 mm	NA	1.28
PTFI-SG01	PTFI-SG01-A3	0.0' - 0.5'	70.20150	146.22333	Clay	<0.0039mm	NA	0.95

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Gravel, Medium	4.75 mm	4	46
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Gravel, Fine	2.00 mm	10	17
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Sand, Very Coarse	0.850 mm	20	12.8
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Sand, Coarse	0.425 mm	40	13.3
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Sand, Medium	0.250 mm	60	8.52
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Sand, Fine	0.106 mm	140	1.54
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Sand, Very Fine	0.075 mm	200	0.04
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Silt	0.0039 - 0.0625 mm	NA	0.16
PTFI-SG02	PTFI-SG02-A1	0.0' - 0.5'	70.19067	146.01850	Clay	<0.0039mm	NA	0.29
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Gravel, Medium	4.75 mm	4	58.8
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Gravel, Fine	2.00 mm	10	16.6
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Sand, Very Coarse	0.850 mm	20	9.22
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Sand, Coarse	0.425 mm	40	9.03
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Sand, Medium	0.250 mm	60	5.72
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Sand, Fine	0.106 mm	140	0.94
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Sand, Very Fine	0.075 mm	200	0.04
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Silt	0.0039 - 0.0625 mm	NA	0.03
PTFI-SG02	PTFI-SG02-A2	0.0' - 0.5'	70.19067	146.01850	Clay	<0.0039mm	NA	0.16
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Gravel, Medium	4.75 mm	4	63.7
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Gravel, Fine	2.00 mm	10	12.3
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Sand, Very Coarse	0.850 mm	20	8.66
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Sand, Coarse	0.425 mm	40	9.27
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Sand, Medium	0.250 mm	60	5.64
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Sand, Fine	0.106 mm	140	1.07
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Sand, Very Fine	0.075 mm	200	0.03
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Silt	0.0039 - 0.0625 mm	NA	0.05
PTFI-SG02	PTFI-SG02-A3	0.0' - 0.5'	70.19067	146.01850	Clay	<0.0039mm	NA	0.19
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Gravel, Fine	2.00 mm	10	0.41
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Sand, Very Coarse	0.850 mm	20	0.64
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Sand, Coarse	0.425 mm	40	0.63
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Sand, Medium	0.250 mm	60	0.91
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Sand, Fine	0.106 mm	140	13.9
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Sand, Very Fine	0.075 mm	200	26.9
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Silt	0.0039 - 0.0625 mm	NA	47.9
PTFI-SG03	PTFI-SG03-A1	0.0' - 0.5'	70.18667	146.01900	Clay	<0.0039mm	NA	11.3

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Gravel, Fine	2.00 mm	10	1.29
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Sand, Very Coarse	0.850 mm	20	1.52
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Sand, Coarse	0.425 mm	40	1.12
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Sand, Medium	0.250 mm	60	1.44
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Sand, Fine	0.106 mm	140	8.37
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Sand, Very Fine	0.075 mm	200	15.4
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Silt	0.0039 - 0.0625 mm	NA	53.5
PTFI-SG03	PTFI-SG03-A2	0.0' - 0.5'	70.18667	146.01900	Clay	<0.0039mm	NA	17.3
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Gravel, Fine	2.00 mm	10	1.33
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Sand, Very Coarse	0.850 mm	20	1.24
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Sand, Coarse	0.425 mm	40	1
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Sand, Medium	0.250 mm	60	1.46
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Sand, Fine	0.106 mm	140	13
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Sand, Very Fine	0.075 mm	200	22
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Silt	0.0039 - 0.0625 mm	NA	48.2
PTFI-SG03	PTFI-SG03-A3	0.0' - 0.5'	70.18667	146.01900	Clay	<0.0039mm	NA	12.7
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Gravel, Fine	2.00 mm	10	0.17
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Sand, Very Coarse	0.850 mm	20	0.46
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Sand, Coarse	0.425 mm	40	0.52
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Sand, Medium	0.250 mm	60	0.82
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Sand, Fine	0.106 mm	140	12.5
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Sand, Very Fine	0.075 mm	200	22.8
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Silt	0.0039 - 0.0625 mm	NA	50
PTFI-SG03	PTFI-SG03-S1	0.0' - 0.5'	70.18667	146.01900	Clay	<0.0039mm	NA	13.4
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Gravel, Fine	2.00 mm	10	0.12
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Sand, Very Coarse	0.850 mm	20	0.36
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Sand, Coarse	0.425 mm	40	0.4
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Sand, Medium	0.250 mm	60	0.49
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Sand, Fine	0.106 mm	140	1.72
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Sand, Very Fine	0.075 mm	200	9.47
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Silt	0.0039 - 0.0625 mm	NA	71.9
PTFI-SG04	PTFI-SG04-A1	0.0' - 0.5'	70.17333	146.13667	Clay	<0.0039mm	NA	12.7

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Gravel, Fine	2.00 mm	10	0.46
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Sand, Very Coarse	0.850 mm	20	0.59
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Sand, Coarse	0.425 mm	40	0.63
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Sand, Medium	0.250 mm	60	0.66
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Sand, Fine	0.106 mm	140	2.21
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Sand, Very Fine	0.075 mm	200	7.9
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Silt	0.0039 - 0.0625 mm	NA	72.8
PTFI-SG04	PTFI-SG04-A2	0.0' - 0.5'	70.17333	146.13667	Clay	<0.0039mm	NA	15.1
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Gravel, Fine	2.00 mm	10	0.37
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Sand, Very Coarse	0.850 mm	20	0.61
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Sand, Coarse	0.425 mm	40	0.45
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Sand, Medium	0.250 mm	60	0.47
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Sand, Fine	0.106 mm	140	1.7
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Sand, Very Fine	0.075 mm	200	7.54
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Silt	0.0039 - 0.0625 mm	NA	71.8
PTFI-SG04	PTFI-SG04-A3	0.0' - 0.5'	70.17333	146.13667	Clay	<0.0039mm	NA	17
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Gravel, Medium	4.75 mm	4	0.32
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Gravel, Fine	2.00 mm	10	0.19
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Sand, Very Coarse	0.850 mm	20	0.23
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Sand, Coarse	0.425 mm	40	0.37
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Sand, Medium	0.250 mm	60	0.48
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Sand, Fine	0.106 mm	140	1.54
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Sand, Very Fine	0.075 mm	200	5.93
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Silt	0.0039 - 0.0625 mm	NA	71.2
PTFI-SG05	PTFI-SG05-A1	0.0' - 0.5'	70.17783	146.13783	Clay	<0.0039mm	NA	16.7
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Gravel, Fine	2.00 mm	10	0.10
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Sand, Very Coarse	0.850 mm	20	0.21
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Sand, Coarse	0.425 mm	40	0.31
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Sand, Medium	0.250 mm	60	0.45
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Sand, Fine	0.106 mm	140	1.70
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Sand, Very Fine	0.075 mm	200	6.51
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Silt	0.0039 - 0.0625 mm	NA	75.4
PTFI-SG05	PTFI-SG05-A2	0.0' - 0.5'	70.17783	146.13783	Clay	<0.0039mm	NA	13.5

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Gravel, Fine	2.00 mm	10	0.35
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Sand, Very Coarse	0.850 mm	20	0.45
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Sand, Coarse	0.425 mm	40	0.49
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Sand, Medium	0.250 mm	60	0.61
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Sand, Fine	0.106 mm	140	2.28
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Sand, Very Fine	0.075 mm	200	6.48
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Silt	0.0039 - 0.0625 mm	NA	76.8
PTFI-SG05	PTFI-SG05-A3	0.0' - 0.5'	70.17783	146.13783	Clay	<0.0039mm	NA	11.3
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Gravel, Medium	4.75 mm	4	0.00
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Gravel, Fine	2.00 mm	10	0.15
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Sand, Very Coarse	0.850 mm	20	0.37
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Sand, Coarse	0.425 mm	40	0.39
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Sand, Medium	0.250 mm	60	0.47
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Sand, Fine	0.106 mm	140	2.60
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Sand, Very Fine	0.075 mm	200	6.15
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Silt	0.0039 - 0.0625 mm	NA	75.6
PTFI-SG05	PTFI-SG05-S1	0.0' - 0.5'	70.17783	146.13783	Clay	<0.0039mm	NA	13.1
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Gravel, Medium	4.75 mm	4	9.64
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Gravel, Fine	2.00 mm	10	2.51
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Sand, Very Coarse	0.850 mm	20	0.75
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Sand, Coarse	0.425 mm	40	3.20
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Sand, Medium	0.250 mm	60	14.2
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Sand, Fine	0.106 mm	140	20.6
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Sand, Very Fine	0.075 mm	200	1.71
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Silt	0.0039 - 0.0625 mm	NA	31.8
PTFI-SG06	PTFI-SG06-A1	0.0' - 0.5'	70.18883	146.02050	Clay	<0.0039mm	NA	18.2
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Gravel, Medium	4.75 mm	4	3.18
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Gravel, Fine	2.00 mm	10	1.41
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Sand, Very Coarse	0.850 mm	20	0.87
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Sand, Coarse	0.425 mm	40	1.97
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Sand, Medium	0.250 mm	60	6.76
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Sand, Fine	0.106 mm	140	10.9
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Sand, Very Fine	0.075 mm	200	1.89
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Silt	0.0039 - 0.0625 mm	NA	47.0
PTFI-SG06	PTFI-SG06-A2	0.0' - 0.5'	70.18883	146.02050	Clay	<0.0039mm	NA	27.1

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Gravel, Medium	4.75 mm	4	17.2
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Gravel, Fine	2.00 mm	10	1.97
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Sand, Very Coarse	0.850 mm	20	0.74
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Sand, Coarse	0.425 mm	40	2.70
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Sand, Medium	0.250 mm	60	8.75
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Sand, Fine	0.106 mm	140	14.4
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Sand, Very Fine	0.075 mm	200	2.24
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Silt	0.0039 - 0.0625 mm	NA	32.6
PTFI-SG06	PTFI-SG06-A3	0.0' - 0.5'	70.18883	146.02050	Clay	<0.0039mm	NA	21.4
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Gravel, Medium	4.75 mm	4	51.9
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Gravel, Fine	2.00 mm	10	21.8
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Sand, Very Coarse	0.850 mm	20	7.36
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Sand, Coarse	0.425 mm	40	11.0
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Sand, Medium	0.250 mm	60	7.29
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Sand, Fine	0.106 mm	140	0.71
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Sand, Very Fine	0.075 mm	200	0.10
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Silt	0.0039 - 0.0625 mm	NA	0.69
PTLA-SG01	PTLA-SG01-A1	0.0' - 0.5'	70.18617	146.61833	Clay	<0.0039mm	NA	0.57
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Gravel, Medium	4.75 mm	4	59.6
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Gravel, Fine	2.00 mm	10	18.5
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Sand, Very Coarse	0.850 mm	20	6.19
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Sand, Coarse	0.425 mm	40	8.51
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Sand, Medium	0.250 mm	60	5.02
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Sand, Fine	0.106 mm	140	0.45
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Sand, Very Fine	0.075 mm	200	0.06
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Silt	0.0039 - 0.0625 mm	NA	0.53
PTLA-SG01	PTLA-SG01-A2	0.0' - 0.5'	70.18617	146.61833	Clay	<0.0039mm	NA	0.23
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Gravel, Medium	4.75 mm	4	43.7
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Gravel, Fine	2.00 mm	10	26.6
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Sand, Very Coarse	0.850 mm	20	8.82
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Sand, Coarse	0.425 mm	40	10.8
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Sand, Medium	0.250 mm	60	7.04
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Sand, Fine	0.106 mm	140	0.79
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Sand, Very Fine	0.075 mm	200	0.17
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Silt	0.0039 - 0.0625 mm	NA	1.66
PTLA-SG01	PTLA-SG01-A3	0.0' - 0.5'	70.18617	146.61833	Clay	<0.0039mm	NA	0.37

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Gravel, Fine	2.00 mm	10	0.00
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Sand, Very Coarse	0.850 mm	20	0.17
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Sand, Coarse	0.425 mm	40	0.18
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Sand, Medium	0.250 mm	60	0.31
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Sand, Fine	0.106 mm	140	2.39
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Sand, Very Fine	0.075 mm	200	9.05
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Silt	0.0039 - 0.0625 mm	NA	67.2
PTLA-SG02	PTLA-SG02-A1	0.0' - 0.5'	70.20433	146.62800	Clay	<0.0039mm	NA	17.3
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Gravel, Fine	2.00 mm	10	0.00
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Sand, Very Coarse	0.850 mm	20	0.13
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Sand, Coarse	0.425 mm	40	0.23
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Sand, Medium	0.250 mm	60	0.30
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Sand, Fine	0.106 mm	140	5.93
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Sand, Very Fine	0.075 mm	200	12.4
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Silt	0.0039 - 0.0625 mm	NA	65.0
PTLA-SG02	PTLA-SG02-A2	0.0' - 0.5'	70.20433	146.62800	Clay	<0.0039mm	NA	16.5
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Gravel, Fine	2.00 mm	10	0.05
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Sand, Very Coarse	0.850 mm	20	0.20
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Sand, Coarse	0.425 mm	40	0.29
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Sand, Medium	0.250 mm	60	0.33
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Sand, Fine	0.106 mm	140	4.16
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Sand, Very Fine	0.075 mm	200	20.8
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Silt	0.0039 - 0.0625 mm	NA	58.2
PTLA-SG02	PTLA-SG02-A3	0.0' - 0.5'	70.20433	146.62800	Clay	<0.0039mm	NA	13.1
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Gravel, Fine	2.00 mm	10	0.04
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Sand, Very Coarse	0.850 mm	20	0.62
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Sand, Coarse	0.425 mm	40	0.46
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Sand, Medium	0.250 mm	60	0.43
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Sand, Fine	0.106 mm	140	4.97
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Sand, Very Fine	0.075 mm	200	9.09
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Silt	0.0039 - 0.0625 mm	NA	62.9
PTLA-SG03	PTLA-SG03-A1	0.0' - 0.5'	70.21867	146.57950	Clay	<0.0039mm	NA	18.8

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Gravel, Fine	2.00 mm	10	0.11
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Sand, Very Coarse	0.850 mm	20	0.47
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Sand, Coarse	0.425 mm	40	0.46
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Sand, Medium	0.250 mm	60	0.43
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Sand, Fine	0.106 mm	140	5.41
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Sand, Very Fine	0.075 mm	200	11.5
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Silt	0.0039 - 0.0625 mm	NA	68.6
PTLA-SG03	PTLA-SG03-A2	0.0' - 0.5'	70.21867	146.57950	Clay	<0.0039mm	NA	19.6
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Gravel, Medium	4.75 mm	4	0.70
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Gravel, Fine	2.00 mm	10	0.07
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Sand, Very Coarse	0.850 mm	20	0.16
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Sand, Coarse	0.425 mm	40	0.29
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Sand, Medium	0.250 mm	60	0.54
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Sand, Fine	0.106 mm	140	6.03
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Sand, Very Fine	0.075 mm	200	9.59
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Silt	0.0039 - 0.0625 mm	NA	63.8
PTLA-SG03	PTLA-SG03-A3	0.0' - 0.5'	70.21867	146.57950	Clay	<0.0039mm	NA	18.3
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Gravel, Fine	2.00 mm	10	0.2
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Sand, Very Coarse	0.850 mm	20	0.58
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Sand, Coarse	0.425 mm	40	2.46
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Sand, Medium	0.250 mm	60	36.8
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Sand, Fine	0.106 mm	140	46.7
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Sand, Very Fine	0.075 mm	200	3.52
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Silt	0.0039 - 0.0625 mm	NA	7.23
PTLA-SG04	PTLA-SG04-A1	0.0' - 0.5'	70.22367	146.55483	Clay	<0.0039mm	NA	2.15
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Gravel, Fine	2.00 mm	10	0.54
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Sand, Very Coarse	0.850 mm	20	0.52
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Sand, Coarse	0.425 mm	40	3.44
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Sand, Medium	0.250 mm	60	41.2
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Sand, Fine	0.106 mm	140	48.4
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Sand, Very Fine	0.075 mm	200	1.86
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Silt	0.0039 - 0.0625 mm	NA	2.4
PTLA-SG04	PTLA-SG04-A2	0.0' - 0.5'	70.22367	146.55483	Clay	<0.0039mm	NA	1.13

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Gravel, Fine	2.00 mm	10	0.34
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Sand, Very Coarse	0.850 mm	20	0.83
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Sand, Coarse	0.425 mm	40	2.36
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Sand, Medium	0.250 mm	60	26.7
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Sand, Fine	0.106 mm	140	59.3
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Sand, Very Fine	0.075 mm	200	2.61
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Silt	0.0039 - 0.0625 mm	NA	5.58
PTLA-SG04	PTLA-SG04-A3	0.0' - 0.5'	70.22367	146.55483	Clay	<0.0039mm	NA	1.63
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Gravel, Fine	2.00 mm	10	0.03
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Sand, Very Coarse	0.850 mm	20	0.08
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Sand, Coarse	0.425 mm	40	0.41
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Sand, Medium	0.250 mm	60	3.3
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Sand, Fine	0.106 mm	140	84.1
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Sand, Very Fine	0.075 mm	200	6.63
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Silt	0.0039 - 0.0625 mm	NA	3.16
PTLA-SG05	PTLA-SG05-A1	0.0' - 0.5'	70.22633	146.47617	Clay	<0.0039mm	NA	1.26
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Gravel, Fine	2.00 mm	10	0.00
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Sand, Very Coarse	0.850 mm	20	0.07
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Sand, Coarse	0.425 mm	40	0.21
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Sand, Medium	0.250 mm	60	1.06
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Sand, Fine	0.106 mm	140	79.5
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Sand, Very Fine	0.075 mm	200	11.7
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Silt	0.0039 - 0.0625 mm	NA	5.67
PTLA-SG05	PTLA-SG05-A2	0.0' - 0.5'	70.22633	146.47617	Clay	<0.0039mm	NA	1.38
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Gravel, Fine	2.00 mm	10	0.04
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Sand, Very Coarse	0.850 mm	20	0.09
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Sand, Coarse	0.425 mm	40	0.16
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Sand, Medium	0.250 mm	60	1.12
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Sand, Fine	0.106 mm	140	75.8
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Sand, Very Fine	0.075 mm	200	12.9
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Silt	0.0039 - 0.0625 mm	NA	6.82
PTLA-SG05	PTLA-SG05-A3	0.0' - 0.5'	70.22633	146.47617	Clay	<0.0039mm	NA	1.6

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Gravel, Fine	2.00 mm	10	0.18
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Sand, Very Coarse	0.850 mm	20	0.42
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Sand, Coarse	0.425 mm	40	0.51
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Sand, Medium	0.250 mm	60	2.19
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Sand, Fine	0.106 mm	140	35.8
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Sand, Very Fine	0.075 mm	200	11.8
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Silt	0.0039 - 0.0625 mm	NA	38.6
PTLA-SG06	PTLA-SG06-A1	0.0' - 0.5'	70.20483	146.46033	Clay	<0.0039mm	NA	10.7
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Gravel, Fine	2.00 mm	10	0.05
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Sand, Very Coarse	0.850 mm	20	0.23
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Sand, Coarse	0.425 mm	40	0.31
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Sand, Medium	0.250 mm	60	5.75
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Sand, Fine	0.106 mm	140	42.4
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Sand, Very Fine	0.075 mm	200	8.51
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Silt	0.0039 - 0.0625 mm	NA	35.1
PTLA-SG06	PTLA-SG06-A2	0.0' - 0.5'	70.20483	146.46033	Clay	<0.0039mm	NA	10.1
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Gravel, Fine	2.00 mm	10	0.07
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Sand, Very Coarse	0.850 mm	20	0.31
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Sand, Coarse	0.425 mm	40	0.34
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Sand, Medium	0.250 mm	60	2.85
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Sand, Fine	0.106 mm	140	38.3
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Sand, Very Fine	0.075 mm	200	10.1
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Silt	0.0039 - 0.0625 mm	NA	37.8
PTLA-SG06	PTLA-SG06-A3	0.0' - 0.5'	70.20483	146.46033	Clay	<0.0039mm	NA	11.5
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Gravel, Fine	2.00 mm	10	0.25
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Sand, Very Coarse	0.850 mm	20	0.96
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Sand, Coarse	0.425 mm	40	0.67
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Sand, Medium	0.250 mm	60	1.93
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Sand, Fine	0.106 mm	140	33.0
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Sand, Very Fine	0.075 mm	200	11.5
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Silt	0.0039 - 0.0625 mm	NA	38.2
PTLA-SG06	PTLA-SG06-S1	0.0' - 0.5'	70.20483	146.46033	Clay	<0.0039mm	NA	11.1

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Gravel, Medium	4.75 mm	4	14.8
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Gravel, Fine	2.00 mm	10	5.41
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Sand, Very Coarse	0.850 mm	20	4.96
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Sand, Coarse	0.425 mm	40	17.1
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Sand, Medium	0.250 mm	60	22.2
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Sand, Fine	0.106 mm	140	12.2
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Sand, Very Fine	0.075 mm	200	1.48
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Silt	0.0039 - 0.0625 mm	NA	14.6
PTLA-SG07	PTLA-SG07-A1	0.0' - 0.5'	70.19017	146.44200	Clay	<0.0039mm	NA	6.34
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Gravel, Medium	4.75 mm	4	39.4
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Gravel, Fine	2.00 mm	10	13.3
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Sand, Very Coarse	0.850 mm	20	2.93
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Sand, Coarse	0.425 mm	40	8.56
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Sand, Medium	0.250 mm	60	11.3
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Sand, Fine	0.106 mm	140	7.58
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Sand, Very Fine	0.075 mm	200	0.96
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Silt	0.0039 - 0.0625 mm	NA	9.99
PTLA-SG07	PTLA-SG07-A2	0.0' - 0.5'	70.19017	146.44200	Clay	<0.0039mm	NA	4.41
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Gravel, Medium	4.75 mm	4	47.4
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Gravel, Fine	2.00 mm	10	14.2
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Sand, Very Coarse	0.850 mm	20	2.11
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Sand, Coarse	0.425 mm	40	4.84
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Sand, Medium	0.250 mm	60	7.49
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Sand, Fine	0.106 mm	140	6.45
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Sand, Very Fine	0.075 mm	200	0.82
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Silt	0.0039 - 0.0625 mm	NA	8.34
PTLA-SG07	PTLA-SG07-A3	0.0' - 0.5'	70.19017	146.44200	Clay	<0.0039mm	NA	3.35
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Gravel, Medium	4.75 mm	4	0.67
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Gravel, Fine	2.00 mm	10	0.99
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Sand, Very Coarse	0.850 mm	20	0.93
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Sand, Coarse	0.425 mm	40	5.31
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Sand, Medium	0.250 mm	60	38.5
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Sand, Fine	0.106 mm	140	25.7
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Sand, Very Fine	0.075 mm	200	5.85
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Silt	0.0039 - 0.0625 mm	NA	17.3
PTLA-SG08	PTLA-SG08-A1	0.0' - 0.5'	70.19683	146.38167	Clay	<0.0039mm	NA	3.27

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Gravel, Medium	4.75 mm	4	1.29
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Gravel, Fine	2.00 mm	10	0.86
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Sand, Very Coarse	0.850 mm	20	0.58
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Sand, Coarse	0.425 mm	40	2.33
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Sand, Medium	0.250 mm	60	25.4
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Sand, Fine	0.106 mm	140	30.4
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Sand, Very Fine	0.075 mm	200	7.78
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Silt	0.0039 - 0.0625 mm	NA	26.8
PTLA-SG08	PTLA-SG08-A2	0.0' - 0.5'	70.19683	146.38167	Clay	<0.0039mm	NA	4.95
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Gravel, Medium	4.75 mm	4	1.55
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Gravel, Fine	2.00 mm	10	1.20
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Sand, Very Coarse	0.850 mm	20	1.08
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Sand, Coarse	0.425 mm	40	5.85
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Sand, Medium	0.250 mm	60	35.1
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Sand, Fine	0.106 mm	140	23.7
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Sand, Very Fine	0.075 mm	200	5.82
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Silt	0.0039 - 0.0625 mm	NA	18.7
PTLA-SG08	PTLA-SG08-A3	0.0' - 0.5'	70.19683	146.38167	Clay	<0.0039mm	NA	3.68
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Gravel, Medium	4.75 mm	4	0.47
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Gravel, Fine	2.00 mm	10	0.30
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Sand, Very Coarse	0.850 mm	20	0.62
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Sand, Coarse	0.425 mm	40	0.42
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Sand, Medium	0.250 mm	60	0.60
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Sand, Fine	0.106 mm	140	22.9
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Sand, Very Fine	0.075 mm	200	14.3
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Silt	0.0039 - 0.0625 mm	NA	44.3
PTLA-SG09	PTLA-SG09-A1	0.0' - 0.5'	70.21183	146.40317	Clay	<0.0039mm	NA	10.5
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Gravel, Fine	2.00 mm	10	0.44
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Sand, Very Coarse	0.850 mm	20	1.13
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Sand, Coarse	0.425 mm	40	0.53
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Sand, Medium	0.250 mm	60	0.72
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Sand, Fine	0.106 mm	140	22.0
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Sand, Very Fine	0.075 mm	200	13.6
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Silt	0.0039 - 0.0625 mm	NA	44.1
PTLA-SG09	PTLA-SG09-A2	0.0' - 0.5'	70.21183	146.40317	Clay	<0.0039mm	NA	11.5

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Gravel, Fine	2.00 mm	10	0.32
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Sand, Very Coarse	0.850 mm	20	0.69
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Sand, Coarse	0.425 mm	40	0.59
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Sand, Medium	0.250 mm	60	0.77
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Sand, Fine	0.106 mm	140	19.9
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Sand, Very Fine	0.075 mm	200	13.6
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Silt	0.0039 - 0.0625 mm	NA	47.8
PTLA-SG09	PTLA-SG09-A3	0.0' - 0.5'	70.21183	146.40317	Clay	<0.0039mm	NA	12.0
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Gravel, Fine	2.00 mm	10	0.31
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Sand, Very Coarse	0.850 mm	20	1.42
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Sand, Coarse	0.425 mm	40	12.7
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Sand, Medium	0.250 mm	60	48.8
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Sand, Fine	0.106 mm	140	32.3
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Sand, Very Fine	0.075 mm	200	1.86
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Silt	0.0039 - 0.0625 mm	NA	1.26
PTLA-SG10	PTLA-SG10-A1	0.0' - 0.5'	70.22733	146.39317	Clay	<0.0039mm	NA	0.63
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Gravel, Fine	2.00 mm	10	0.23
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Sand, Very Coarse	0.850 mm	20	1.43
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Sand, Coarse	0.425 mm	40	6.56
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Sand, Medium	0.250 mm	60	37.9
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Sand, Fine	0.106 mm	140	45.0
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Sand, Very Fine	0.075 mm	200	5.23
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Silt	0.0039 - 0.0625 mm	NA	3.03
PTLA-SG10	PTLA-SG10-A2	0.0' - 0.5'	70.22733	146.39317	Clay	<0.0039mm	NA	0.80
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Gravel, Fine	2.00 mm	10	0.62
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Sand, Very Coarse	0.850 mm	20	1.74
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Sand, Coarse	0.425 mm	40	9.73
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Sand, Medium	0.250 mm	60	47.7
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Sand, Fine	0.106 mm	140	32.6
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Sand, Very Fine	0.075 mm	200	3.23
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Silt	0.0039 - 0.0625 mm	NA	1.97
PTLA-SG10	PTLA-SG10-A3	0.0' - 0.5'	70.22733	146.39317	Clay	<0.0039mm	NA	0.71

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Gravel, Medium	4.75 mm	4	53.6
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Gravel, Fine	2.00 mm	10	6.61
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Sand, Very Coarse	0.850 mm	20	3.36
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Sand, Coarse	0.425 mm	40	7.09
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Sand, Medium	0.250 mm	60	17.7
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Sand, Fine	0.106 mm	140	10.2
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Sand, Very Fine	0.075 mm	200	0.33
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Silt	0.0039 - 0.0625 mm	NA	0.16
PTLA-SG11	PTLA-SG11-A1	0.0' - 0.5'	70.22500	146.34750	Clay	<0.0039mm	NA	0.23
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Gravel, Medium	4.75 mm	4	45.7
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Gravel, Fine	2.00 mm	10	13.4
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Sand, Very Coarse	0.850 mm	20	6.86
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Sand, Coarse	0.425 mm	40	9.95
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Sand, Medium	0.250 mm	60	17.5
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Sand, Fine	0.106 mm	140	8.67
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Sand, Very Fine	0.075 mm	200	0.22
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Silt	0.0039 - 0.0625 mm	NA	0.06
PTLA-SG11	PTLA-SG11-A2	0.0' - 0.5'	70.22500	146.34750	Clay	<0.0039mm	NA	0.28
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Gravel, Medium	4.75 mm	4	52.5
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Gravel, Fine	2.00 mm	10	14.2
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Sand, Very Coarse	0.850 mm	20	5.71
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Sand, Coarse	0.425 mm	40	7.86
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Sand, Medium	0.250 mm	60	14.3
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Sand, Fine	0.106 mm	140	6.37
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Sand, Very Fine	0.075 mm	200	0.16
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Silt	0.0039 - 0.0625 mm	NA	0.07
PTLA-SG11	PTLA-SG11-A3	0.0' - 0.5'	70.22500	146.34750	Clay	<0.0039mm	NA	0.22
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Gravel, Fine	2.00 mm	10	0.01
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Sand, Very Coarse	0.850 mm	20	0.04
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Sand, Coarse	0.425 mm	40	0.87
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Sand, Medium	0.250 mm	60	52.7
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Sand, Fine	0.106 mm	140	42.6
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Sand, Very Fine	0.075 mm	200	1.58
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Silt	0.0039 - 0.0625 mm	NA	0.96
PTLA-SG12	PTLA-SG12-A1	0.0' - 0.5'	70.20317	146.31850	Clay	<0.0039mm	NA	0.99

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Gravel, Fine	2.00 mm	10	0.06
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Sand, Very Coarse	0.850 mm	20	0.02
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Sand, Coarse	0.425 mm	40	0.63
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Sand, Medium	0.250 mm	60	48.5
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Sand, Fine	0.106 mm	140	46.4
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Sand, Very Fine	0.075 mm	200	1.68
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Silt	0.0039 - 0.0625 mm	NA	0.99
PTLA-SG12	PTLA-SG12-A2	0.0' - 0.5'	70.20317	146.31850	Clay	<0.0039mm	NA	1.02
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Gravel, Fine	2.00 mm	10	0.00
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Sand, Very Coarse	0.850 mm	20	0.04
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Sand, Coarse	0.425 mm	40	0.82
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Sand, Medium	0.250 mm	60	48.6
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Sand, Fine	0.106 mm	140	47.6
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Sand, Very Fine	0.075 mm	200	1.5
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Silt	0.0039 - 0.0625 mm	NA	0.72
PTLA-SG12	PTLA-SG12-A3	0.0' - 0.5'	70.20317	146.31850	Clay	<0.0039mm	NA	0.93
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Gravel, Medium	4.75 mm	4	9. 39
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Gravel, Fine	2.00 mm	10	1.37
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Sand, Very Coarse	0.850 mm	20	1.06
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Sand, Coarse	0.425 mm	40	5.86
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Sand, Medium	0.250 mm	60	50.1
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Sand, Fine	0.106 mm	140	10.1
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Sand, Very Fine	0.075 mm	200	3.21
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Silt	0.0039 - 0.0625 mm	NA	16.3
PTLA-SG13	PTLA-SG13-A1	0.0' - 0.5'	70.19400	146.32933	Clay	<0.0039mm	NA	4.31
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Gravel, Medium	4.75 mm	4	10.7
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Gravel, Fine	2.00 mm	10	3.97
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Sand, Very Coarse	0.850 mm	20	1.34
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Sand, Coarse	0.425 mm	40	3.84
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Sand, Medium	0.250 mm	60	47.7
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Sand, Fine	0.106 mm	140	14.4
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Sand, Very Fine	0.075 mm	200	3.77
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Silt	0.0039 - 0.0625 mm	NA	15.1
PTLA-SG13	PTLA-SG13-A2	0.0' - 0.5'	70.19400	146.32933	Clay	<0.0039mm	NA	3.60

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Gravel, Medium	4.75 mm	4	55.9
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Gravel, Fine	2.00 mm	10	4.92
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Sand, Very Coarse	0.850 mm	20	0.98
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Sand, Coarse	0.425 mm	40	1.02
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Sand, Medium	0.250 mm	60	13.7
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Sand, Fine	0.106 mm	140	7.46
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Sand, Very Fine	0.075 mm	200	2.27
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Silt	0.0039 - 0.0625 mm	NA	7.44
PTLA-SG13	PTLA-SG13-A3	0.0' - 0.5'	70.19400	146.32933	Clay	<0.0039mm	NA	1.94
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Gravel, Medium	4.75 mm	4	37.8
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Gravel, Fine	2.00 mm	10	4.41
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Sand, Very Coarse	0.850 mm	20	1.12
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Sand, Coarse	0.425 mm	40	2.80
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Sand, Medium	0.250 mm	60	5.27
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Sand, Fine	0.106 mm	140	4.41
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Sand, Very Fine	0.075 mm	200	1.52
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Silt	0.0039 - 0.0625 mm	NA	35.3
PTLA-SG14	PTLA-SG14-A1	0.0' - 0.5'	70.18400	146.32200	Clay	<0.0039mm	NA	5.81
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Gravel, Medium	4.75 mm	4	6.77
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Gravel, Fine	2.00 mm	10	0.89
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Sand, Very Coarse	0.850 mm	20	0.61
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Sand, Coarse	0.425 mm	40	0.93
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Sand, Medium	0.250 mm	60	2.59
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Sand, Fine	0.106 mm	140	2.95
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Sand, Very Fine	0.075 mm	200	2.42
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Silt	0.0039 - 0.0625 mm	NA	65.3
PTLA-SG14	PTLA-SG14-A2	0.0' - 0.5'	70.18400	146.32200	Clay	<0.0039mm	NA	8.24
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Gravel, Medium	4.75 mm	4	1.20
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Gravel, Fine	2.00 mm	10	4.96
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Sand, Very Coarse	0.850 mm	20	2.37
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Sand, Coarse	0.425 mm	40	5.12
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Sand, Medium	0.250 mm	60	9.24
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Sand, Fine	0.106 mm	140	6.96
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Sand, Very Fine	0.075 mm	200	2.01
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Silt	0.0039 - 0.0625 mm	NA	47.4
PTLA-SG14	PTLA-SG14-A3	0.0' - 0.5'	70.18400	146.32200	Clay	<0.0039mm	NA	13.2

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Gravel, Fine	2.00 mm	10	0.37
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Sand, Very Coarse	0.850 mm	20	0.51
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Sand, Coarse	0.425 mm	40	1.25
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Sand, Medium	0.250 mm	60	9.19
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Sand, Fine	0.106 mm	140	37.8
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Sand, Very Fine	0.075 mm	200	3.05
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Silt	0.0039 - 0.0625 mm	NA	37.9
PTLA-SG15	PTLA-SG15-A1	0.0' - 0.5'	70.18333	146.35000	Clay	<0.0039mm	NA	9.29
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Gravel, Fine	2.00 mm	10	0.25
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Sand, Very Coarse	0.850 mm	20	0.31
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Sand, Coarse	0.425 mm	40	1.03
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Sand, Medium	0.250 mm	60	7.50
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Sand, Fine	0.106 mm	140	38.4
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Sand, Very Fine	0.075 mm	200	3.10
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Silt	0.0039 - 0.0625 mm	NA	40.5
PTLA-SG15	PTLA-SG15-A2	0.0' - 0.5'	70.18333	146.35000	Clay	<0.0039mm	NA	8.92
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Gravel, Fine	2.00 mm	10	0.26
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Sand, Very Coarse	0.850 mm	20	0.35
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Sand, Coarse	0.425 mm	40	0.58
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Sand, Medium	0.250 mm	60	5.09
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Sand, Fine	0.106 mm	140	33.6
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Sand, Very Fine	0.075 mm	200	3.91
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Silt	0.0039 - 0.0625 mm	NA	45.1
PTLA-SG15	PTLA-SG15-A3	0.0' - 0.5'	70.18333	146.35000	Clay	<0.0039mm	NA	10.9
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Gravel, Fine	2.00 mm	10	0.04
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Sand, Very Coarse	0.850 mm	20	0.11
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Sand, Coarse	0.425 mm	40	0.87
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Sand, Medium	0.250 mm	60	43.5
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Sand, Fine	0.106 mm	140	51.3
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Sand, Very Fine	0.075 mm	200	2.18
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Silt	0.0039 - 0.0625 mm	NA	1.05
PTLA-SG16	PTLA-SG16-A1	0.0' - 0.5'	70.20500	146.31900	Clay	<0.0039mm	NA	0.70

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Gravel, Medium	4.75 mm	4	0.29
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Gravel, Fine	2.00 mm	10	0.48
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Sand, Very Coarse	0.850 mm	20	0.46
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Sand, Coarse	0.425 mm	40	2.06
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Sand, Medium	0.250 mm	60	52.4
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Sand, Fine	0.106 mm	140	40.6
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Sand, Very Fine	0.075 mm	200	1.76
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Silt	0.0039 - 0.0625 mm	NA	0.79
PTLA-SG16	PTLA-SG16-A2	0.0' - 0.5'	70.20500	146.31900	Clay	<0.0039mm	NA	0.64
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Gravel, Medium	4.75 mm	4	0.26
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Gravel, Fine	2.00 mm	10	0.63
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Sand, Very Coarse	0.850 mm	20	0.65
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Sand, Coarse	0.425 mm	40	2.23
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Sand, Medium	0.250 mm	60	51.4
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Sand, Fine	0.106 mm	140	40.2
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Sand, Very Fine	0.075 mm	200	1.81
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Silt	0.0039 - 0.0625 mm	NA	0.95
PTLA-SG16	PTLA-SG16-A3	0.0' - 0.5'	70.20500	146.31900	Clay	<0.0039mm	NA	0.63
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Gravel, Fine	2.00 mm	10	0.10
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Sand, Very Coarse	0.850 mm	20	0.28
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Sand, Coarse	0.425 mm	40	2.26
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Sand, Medium	0.250 mm	60	68.4
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Sand, Fine	0.106 mm	140	27.7
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Sand, Very Fine	0.075 mm	200	0.18
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Silt	0.0039 - 0.0625 mm	NA	0.36
PTLA-SG17	PTLA-SG17-A1	0.0' - 0.5'	70.23133	146.55467	Clay	<0.0039mm	NA	0.58
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Gravel, Fine	2.00 mm	10	0.50
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Sand, Very Coarse	0.850 mm	20	0.87
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Sand, Coarse	0.425 mm	40	2.09
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Sand, Medium	0.250 mm	60	63.7
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Sand, Fine	0.106 mm	140	31.8
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Sand, Very Fine	0.075 mm	200	0.36
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Silt	0.0039 - 0.0625 mm	NA	0.57
PTLA-SG17	PTLA-SG17-A2	0.0' - 0.5'	70.23133	146.55467	Clay	<0.0039mm	NA	0.50

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Gravel, Medium	4.75 mm	4	0.00
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Gravel, Fine	2.00 mm	10	0.68
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Sand, Very Coarse	0.850 mm	20	1.15
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Sand, Coarse	0.425 mm	40	2.45
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Sand, Medium	0.250 mm	60	60.7
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Sand, Fine	0.106 mm	140	33.1
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Sand, Very Fine	0.075 mm	200	0.36
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Silt	0.0039 - 0.0625 mm	NA	0.53
PTLA-SG17	PTLA-SG17-A3	0.0' - 0.5'	70.23133	146.55467	Clay	<0.0039mm	NA	0.56
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Gravel, Medium	4.75 mm	4	0.00
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Gravel, Fine	2.00 mm	10	0.21
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Sand, Very Coarse	0.850 mm	20	0.42
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Sand, Coarse	0.425 mm	40	1.03
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Sand, Medium	0.250 mm	60	8.27
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Sand, Fine	0.106 mm	140	71.9
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Sand, Very Fine	0.075 mm	200	8.3
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Silt	0.0039 - 0.0625 mm	NA	8.29
PTME-SG01	PTME-SG01-A1	0.0' - 0.5'	70.22467	146.26500	Clay	<0.0039mm	NA	1.97
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Gravel, Medium	4.75 mm	4	0.00
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Gravel, Fine	2.00 mm	10	0.73
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Sand, Very Coarse	0.850 mm	20	1.03
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Sand, Coarse	0.425 mm	40	3.25
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Sand, Medium	0.250 mm	60	14.6
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Sand, Fine	0.106 mm	140	70.3
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Sand, Very Fine	0.075 mm	200	5.03
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Silt	0.0039 - 0.0625 mm	NA	2.66
PTME-SG01	PTME-SG01-A2	0.0' - 0.5'	70.22467	146.26500	Clay	<0.0039mm	NA	1.46
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Gravel, Medium	4.75 mm	4	0.00
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Gravel, Fine	2.00 mm	10	0.26
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Sand, Very Coarse	0.850 mm	20	0.79
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Sand, Coarse	0.425 mm	40	3.82
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Sand, Medium	0.250 mm	60	15.4
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Sand, Fine	0.106 mm	140	70.7
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Sand, Very Fine	0.075 mm	200	5.54
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Silt	0.0039 - 0.0625 mm	NA	2.77
PTME-SG01	PTME-SG01-A3	0.0' - 0.5'	70.22467	146.26500	Clay	<0.0039mm	NA	1.37

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Gravel, Medium	4.75 mm	4	0.00
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Gravel, Fine	2.00 mm	10	0.52
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Sand, Very Coarse	0.850 mm	20	2.3
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Sand, Coarse	0.425 mm	40	3.74
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Sand, Medium	0.250 mm	60	10.8
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Sand, Fine	0.106 mm	140	36.5
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Sand, Very Fine	0.075 mm	200	4.23
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Silt	0.0039 - 0.0625 mm	NA	34.6
PTME-SG02	PTME-SG02-A1	0.0' - 0.5'	70.22367	146.24417	Clay	<0.0039mm	NA	6.37
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Gravel, Medium	4.75 mm	4	4.5
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Gravel, Fine	2.00 mm	10	2.02
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Sand, Very Coarse	0.850 mm	20	2.01
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Sand, Coarse	0.425 mm	40	7.49
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Sand, Medium	0.250 mm	60	38.2
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Sand, Fine	0.106 mm	140	41.2
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Sand, Very Fine	0.075 mm	200	0.92
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Silt	0.0039 - 0.0625 mm	NA	3.09
PTME-SG02	PTME-SG02-A2	0.0' - 0.5'	70.22367	146.24417	Clay	<0.0039mm	NA	1.3
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Gravel, Medium	4.75 mm	4	4.92
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Gravel, Fine	2.00 mm	10	11.9
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Sand, Very Coarse	0.850 mm	20	10.8
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Sand, Coarse	0.425 mm	40	10
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Sand, Medium	0.250 mm	60	19.3
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Sand, Fine	0.106 mm	140	32.8
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Sand, Very Fine	0.075 mm	200	2.11
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Silt	0.0039 - 0.0625 mm	NA	4.89
PTME-SG02	PTME-SG02-A3	0.0' - 0.5'	70.22367	146.24417	Clay	<0.0039mm	NA	1.54
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Gravel, Medium	4.75 mm	4	0.00
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Gravel, Fine	2.00 mm	10	0.12
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Sand, Very Coarse	0.850 mm	20	0.36
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Sand, Coarse	0.425 mm	40	2.69
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Sand, Medium	0.250 mm	60	23.3
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Sand, Fine	0.106 mm	140	58.8
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Sand, Very Fine	0.075 mm	200	8.07
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Silt	0.0039 - 0.0625 mm	NA	3.78
PTME-SG03	PTME-SG03-A1	0.0' - 0.5'	70.21900	146.23517	Clay	<0.0039mm	NA	1.52

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Gravel, Medium	4.75 mm	4	0.00
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Gravel, Fine	2.00 mm	10	0.08
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Sand, Very Coarse	0.850 mm	20	0.44
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Sand, Coarse	0.425 mm	40	2.72
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Sand, Medium	0.250 mm	60	23.2
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Sand, Fine	0.106 mm	140	60.1
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Sand, Very Fine	0.075 mm	200	9.2
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Silt	0.0039 - 0.0625 mm	NA	3.84
PTME-SG03	PTME-SG03-A2	0.0' - 0.5'	70.21900	146.23517	Clay	<0.0039mm	NA	1.31
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Gravel, Medium	4.75 mm	4	0.00
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Gravel, Fine	2.00 mm	10	0.08
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Sand, Very Coarse	0.850 mm	20	0.26
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Sand, Coarse	0.425 mm	40	2
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Sand, Medium	0.250 mm	60	21.7
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Sand, Fine	0.106 mm	140	62.5
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Sand, Very Fine	0.075 mm	200	8.84
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Silt	0.0039 - 0.0625 mm	NA	3.77
PTME-SG03	PTME-SG03-A3	0.0' - 0.5'	70.21900	146.23517	Clay	<0.0039mm	NA	1.36
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Gravel, Medium	4.75 mm	4	0.00
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Gravel, Fine	2.00 mm	10	0.00
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Sand, Very Coarse	0.850 mm	20	0.14
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Sand, Coarse	0.425 mm	40	1.47
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Sand, Medium	0.250 mm	60	20.1
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Sand, Fine	0.106 mm	140	62.7
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Sand, Very Fine	0.075 mm	200	10.4
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Silt	0.0039 - 0.0625 mm	NA	3.92
PTME-SG03	PTME-SG03-S1	0.0' - 0.5'	70.21900	146.23517	Clay	<0.0039mm	NA	1.28
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Gravel, Medium	4.75 mm	4	0.00
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Gravel, Fine	2.00 mm	10	0.03
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Sand, Very Coarse	0.850 mm	20	0.18
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Sand, Coarse	0.425 mm	40	0.77
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Sand, Medium	0.250 mm	60	6.19
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Sand, Fine	0.106 mm	140	31.8
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Sand, Very Fine	0.075 mm	200	7.97
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Silt	0.0039 - 0.0625 mm	NA	37.2
PTME-SG04	PTME-SG04-A1	0.0' - 0.5'	70.21667	146.22100	Clay	<0.0039mm	NA	11.8

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Gravel, Medium	4.75 mm	4	0.00
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Gravel, Fine	2.00 mm	10	0.02
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Sand, Very Coarse	0.850 mm	20	0.13
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Sand, Coarse	0.425 mm	40	0.82
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Sand, Medium	0.250 mm	60	5.65
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Sand, Fine	0.106 mm	140	63.8
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Sand, Very Fine	0.075 mm	200	14.2
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Silt	0.0039 - 0.0625 mm	NA	13.3
PTME-SG04	PTME-SG04-A2	0.0' - 0.5'	70.21667	146.22100	Clay	<0.0039mm	NA	2.81
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Gravel, Medium	4.75 mm	4	0.00
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Gravel, Fine	2.00 mm	10	0.00
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Sand, Very Coarse	0.850 mm	20	0.15
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Sand, Coarse	0.425 mm	40	1.62
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Sand, Medium	0.250 mm	60	12.0
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Sand, Fine	0.106 mm	140	63.0
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Sand, Very Fine	0.075 mm	200	12.6
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Silt	0.0039 - 0.0625 mm	NA	8.87
PTME-SG04	PTME-SG04-A3	0.0' - 0.5'	70.21667	146.22100	Clay	<0.0039mm	NA	2.17
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Gravel, Medium	4.75 mm	4	0.00
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Gravel, Fine	2.00 mm	10	0.14
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Sand, Very Coarse	0.850 mm	20	0.31
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Sand, Coarse	0.425 mm	40	2.08
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Sand, Medium	0.250 mm	60	15.6
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Sand, Fine	0.106 mm	140	72.8
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Sand, Very Fine	0.075 mm	200	5.57
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Silt	0.0039 - 0.0625 mm	NA	2.29
PTME-SG05	PTME-SG05-A1	0.0' - 0.5'	70.21050	146.20833	Clay	<0.0039mm	NA	1.15
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Gravel, Medium	4.75 mm	4	0.00
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Gravel, Fine	2.00 mm	10	0.08
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Sand, Very Coarse	0.850 mm	20	0.50
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Sand, Coarse	0.425 mm	40	3.47
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Sand, Medium	0.250 mm	60	18.0
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Sand, Fine	0.106 mm	140	66.6
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Sand, Very Fine	0.075 mm	200	5.30
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Silt	0.0039 - 0.0625 mm	NA	3.71
PTME-SG05	PTME-SG05-A2	0.0' - 0.5'	70.21050	146.20833	Clay	<0.0039mm	NA	1.48

Grain Size Result Summary

Station ID	Sample ID	Depth	Latitude	Longitude	Grain Size	Sieve/Particle Size	Sieve Number	Percent Retained
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Gravel, Medium	4.75 mm	4	0.00
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Gravel, Fine	2.00 mm	10	0.05
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Sand, Very Coarse	0.850 mm	20	0.28
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Sand, Coarse	0.425 mm	40	2.31
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Sand, Medium	0.250 mm	60	17.6
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Sand, Fine	0.106 mm	140	68.8
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Sand, Very Fine	0.075 mm	200	5.06
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Silt	0.0039 - 0.0625 mm	NA	3.93
PTME-SG05	PTME-SG05-A3	0.0' - 0.5'	70.21050	146.20833	Clay	<0.0039mm	NA	1.46

Surface Sediment Analysis **Station ID: PTCE-SB02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.8	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.89	NA				
Carbon, Total Organic (TOC)	PSEP	1.47	PERCENT	0.03	0.05		
Solids, Total	E160.3M	76.3	PERCENT				
Solids, Total Volatile	E160.4M	1.8	mg/Kg		0.1		
Sulfide	PSEP	1.1	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.07	mg/Kg	0.02	0.02	N	
Arsenic, Total	SW6020	6.56	mg/Kg	0.04	0.22		
Barium, Total	SW6010B	38.6	mg/Kg	0.1	0.4		
Cadmium, Total	SW6020	0.26	mg/Kg	0.01	0.02		
Chromium, Total	SW6010B	11	mg/Kg	0.1	0.9		
Copper, Total	SW6020	12.8	mg/Kg	0.02	0.04		
Iron, Total	SW6010B	13200	mg/Kg	0.2	1.8		
Lead, Total	SW6020	7.59	mg/Kg	0.01	0.02		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	17	mg/Kg	0.01	0.09		
Silver, Total	SW6020	0.083	mg/Kg	0.004	0.009		
Zinc, Total	SW6010B	49.7	mg/Kg	0.1	0.9		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.33	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.31	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.41	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.32	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	27		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	6.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	6.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.5		
1,2,4-Trichlorobenzene	SW8270C	10	ug/Kg	3.5	14	J	
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	66		VLL
2-Methylnaphthalene	SW8270C SIM	7.3	ug/Kg	0.55	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.2	14		
4-Methylphenol	SW8270C	11	ug/Kg	3.1	14	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.55	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.42	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Benz(a)anthracene	SW8270C SIM	0.79	ug/Kg	0.35	14	J	
Benzo(a)pyrene	SW8270C SIM	0.83	ug/Kg	0.37	14	J	
Benzo(b)fluoranthene	SW8270C SIM	1.6	ug/Kg	0.37	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	2	ug/Kg	0.27	14	J	
Benzo(k)fluoranthene	SW8270C SIM	0.66	ug/Kg	0.4	14	J	

Surface Sediment Analyses [illegible] **Station ID : PTCE-SB02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	230	ug/Kg	22	270	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.7	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	15	ug/Kg	2.3	270	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	14		
Chrysene	SW8270C SIM	4.4	ug/Kg	0.4	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.48	14		
Dibenzofuran	SW8270C	ND	ug/Kg	3.8	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.4	14		
Di-n-butyl Phthalate	SW8270C	4.9	ug/Kg	3.4	14	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	27		
Fluoranthene	SW8270C SIM	2.3	ug/Kg	0.45	14	J	
Fluorene	SW8270C SIM	1.7	ug/Kg	0.45	14	J	
Hexachlorobenzene	SW8270C	13	ug/Kg	4	14	J	VLL
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.7	14		
Hexachloroethane	SW8270C	9.8	ug/Kg	3.1	14	J	VLL
Indeno(1,2,3-cd)pyrene	SW8270C SIM	1	ug/Kg	0.4	14	J	
Naphthalene	SW8270C SIM	3.6	ug/Kg	0.55	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	14		
Pentachlorophenol (PCP)	SW8270C	15	ug/Kg	3	66	J	
Phenanthrene	SW8270C SIM	8.4	ug/Kg	0.4	14	J	
Phenol	SW8270C	46	ug/Kg	3.7	40		
Pyrene	SW8270C SIM	2.5	ug/Kg	0.29	14	J	

Surface Sediment Analyses — Station ID: PTCE-SB02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.8	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.71	NA				
Carbon, Total Organic (TOC)	PSEP	1.34	PERCENT	0.03	0.05		
Solids, Total	E160.3M	85.1	PERCENT				
Solids, Total Volatile	E160.4M	1.9	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.07	mg/Kg	0.02	0.02	N	
Arsenic, Total	SW6020	5.97	mg/Kg	0.04	0.19		
Barium, Total	SW6010B	32.8	mg/Kg	0.1	0.4		
Cadmium, Total	SW6020	0.19	mg/Kg	0.01	0.02		
Chromium, Total	SW6010B	9.7	mg/Kg	0.1	0.8		
Copper, Total	SW6020	7.72	mg/Kg	0.02	0.04		
Iron, Total	SW6010B	12300	mg/Kg	0.2	1.6		
Lead, Total	SW6020	4.04	mg/Kg	0.01	0.02		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	10.8	mg/Kg	0.01	0.08		
Silver, Total	SW6020	0.069	mg/Kg	0.004	0.008		
Zinc, Total	SW6010B	43.2	mg/Kg	0.1	0.8		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.97	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.97	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.77	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.97	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		VLL
2-Methylnaphthalene	SW8270C SIM	5.1	ug/Kg	0.5	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	8.6	ug/Kg	2.8	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	0.35	ug/Kg	0.31	12	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	1	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses Station ID: PTCE-SB02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	150	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.1	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	3.1	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	1.3	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	1.2	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		VLL
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		VLL
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	2.6	ug/Kg	0.5	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	5.8	ug/Kg	0.36	12	J	
Phenol	SW8270C	24	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	1.3	ug/Kg	0.26	12	J	

Surface Sediment Analyses [illegible] Station ID : PTCE-SB02-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.7	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.78	NA				
Carbon, Total Organic (TOC)	PSEP	1.05	PERCENT	0.03	0.05		
Solids, Total	E160.3M	82	PERCENT				
Solids, Total Volatile	E160.4M	2.2	mg/Kg		0.1		
Sulfide	PSEP	0.5	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.11	mg/Kg	0.02	0.02	N	
Arsenic, Total	SW6020	6.66	mg/Kg	0.04	0.2		
Barium, Total	SW6010B	36.4	mg/Kg	0.1	0.4		
Cadmium, Total	SW6020	0.22	mg/Kg	0.01	0.02		
Chromium, Total	SW6010B	10.7	mg/Kg	0.1	0.8		
Copper, Total	SW6020	13.1	mg/Kg	0.02	0.04		
Iron, Total	SW6010B	13100	mg/Kg	0.2	1.6		
Lead, Total	SW6020	7.2	mg/Kg	0.01	0.02		
Mercury, Total	SW7471A	0.05	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	16.8	mg/Kg	0.01	0.08		
Silver, Total	SW6020	0.084	mg/Kg	0.004	0.008		
Zinc, Total	SW6010B	47.8	mg/Kg	0.1	0.8		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.3	1.3	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	6.1		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.87	6.1		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	6.1		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	6.2	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	6.1	ug/Kg	2.9	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	0.99	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.92	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses — Station ID: PTCE-SB02-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	140	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	10	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	3.6	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	1.2	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	1.5	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		VLL
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		VLL
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	3.1	ug/Kg	0.52	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	4	ug/Kg	2.8	61	J	
Phenanthrene	SW8270C SIM	7	ug/Kg	0.37	13	J	
Phenol	SW8270C	16	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	1.2	ug/Kg	0.27	13	J	

Surface Sediment Analyses — **Station ID: PTCE-SG01-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.91	NA				
Carbon, Total Organic (TOC)	PSEP	1.18	PERCENT	0.03	0.05		
Solids, Total	E160.3M	78.3	PERCENT				
Solids, Total Volatile	E160.4M	1.9	mg/Kg		0.1		
Sulfide	PSEP	0.5	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.1	mg/Kg	0.02	0.02	N	
Arsenic, Total	SW6020	5.68	mg/Kg	0.04	0.21		
Barium, Total	SW6010B	30	mg/Kg	0.1	0.4		
Cadmium, Total	SW6020	0.22	mg/Kg	0.01	0.02		
Chromium, Total	SW6010B	9	mg/Kg	0.1	0.9		
Copper, Total	SW6020	12.2	mg/Kg	0.02	0.04		
Iron, Total	SW6010B	10400	mg/Kg	0.2	1.7		
Lead, Total	SW6020	6.58	mg/Kg	0.01	0.02		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	15.9	mg/Kg	0.01	0.09		
Silver, Total	SW6020	0.065	mg/Kg	0.004	0.009		
Zinc, Total	SW6010B	40.7	mg/Kg	0.1	0.9		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.4	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.32	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	26		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	6.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	6.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.4	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	64		VLL
2-Methylnaphthalene	SW8270C SIM	6.2	ug/Kg	0.54	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.1	13		
4-Methylphenol	SW8270C	8.3	ug/Kg	3	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.54	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.41	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.49	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.36	13		
Benzo(b)fluoranthene	SW8270C SIM	0.97	ug/Kg	0.36	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.1	ug/Kg	0.26	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	13		

Surface Sediment Analyses **Station ID: PTCE-SG01-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	140	ug/Kg	21	260	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	9.9	ug/Kg	2.2	260	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	3.6	ug/Kg	0.39	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.7	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.9	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	26		
Fluoranthene	SW8270C SIM	1.3	ug/Kg	0.44	13	J	
Fluorene	SW8270C SIM	1.4	ug/Kg	0.44	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.9	13		VLL
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	13		
Hexachloroethane	SW8270C	ND	ug/Kg	3	13		VLL
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.39	13		
Naphthalene	SW8270C SIM	3.1	ug/Kg	0.54	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	64		
Phenanthrene	SW8270C SIM	6.9	ug/Kg	0.39	13	J	
Phenol	SW8270C	26	ug/Kg	3.6	39	J	
Pyrene	SW8270C SIM	1.3	ug/Kg	0.29	13	J	

Surface Sediment Analyses [illegible] **Station ID: PTCE-SG01-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.93	NA				
Carbon, Total Organic (TOC)	PSEP	0.86	PERCENT	0.03	0.05		
Solids, Total	E160.3M	81.1	PERCENT				
Solids, Total Volatile	E160.4M	1.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.12	mg/Kg	0.02	0.02	N	
Arsenic, Total	SW6020	5.21	mg/Kg	0.04	0.21		
Barium, Total	SW6010B	32	mg/Kg	0.1	0.4		
Cadmium, Total	SW6020	0.19	mg/Kg	0.01	0.02		
Chromium, Total	SW6010B	9.8	mg/Kg	0.1	0.8		
Copper, Total	SW6020	11	mg/Kg	0.02	0.04		
Iron, Total	SW6010B	10600	mg/Kg	0.2	1.6		
Lead, Total	SW6020	6.66	mg/Kg	0.01	0.02		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	16.3	mg/Kg	0.01	0.08		
Silver, Total	SW6020	0.062	mg/Kg	0.004	0.008		
Zinc, Total	SW6010B	41.6	mg/Kg	0.1	0.8		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.31	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	6.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.88	6.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	62		VLL
2-Methylnaphthalene	SW8270C SIM	6.5	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	6.5	ug/Kg	2.9	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.33	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	1.3	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.69	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses Station ID: PTCE-SG01-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	130	ug/Kg	21	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.4	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	3.6	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.45	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.6	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	1.5	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.8	13		VLL
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		VLL
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	3.2	ug/Kg	0.52	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	11	ug/Kg	2.8	62	J	
Phenanthrene	SW8270C SIM	7.2	ug/Kg	0.37	13	J	
Phenol	SW8270C	24	ug/Kg	3.5	37	J	
Pyrene	SW8270C SIM	1.3	ug/Kg	0.28	13	J	

Surface Sediment Analyses — **Station ID: PTCE-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.74	NA				
Carbon, Total Organic (TOC)	PSEP	0.9	PERCENT	0.03	0.05		
Solids, Total	E160.3M	83.3	PERCENT				
Solids, Total Volatile	E160.4M	2.4	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.11	mg/Kg	0.02	0.02	N	
Arsenic, Total	SW6020	4.08	mg/Kg	0.04	0.2		
Barium, Total	SW6010B	25.1	mg/Kg	0.1	0.4		
Cadmium, Total	SW6020	0.19	mg/Kg	0.01	0.02		
Chromium, Total	SW6010B	8.4	mg/Kg	0.1	0.8		
Copper, Total	SW6020	9.74	mg/Kg	0.02	0.04		
Iron, Total	SW6010B	9870	mg/Kg	0.2	1.6		
Lead, Total	SW6020	5.64	mg/Kg	0.01	0.02		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	13.7	mg/Kg	0.01	0.08		
Silver, Total	SW6020	0.063	mg/Kg	0.004	0.008		
Zinc, Total	SW6010B	39.8	mg/Kg	0.1	0.8		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	0.99	13		
Aroclor 1221	SW8082	ND	ug/Kg	0.99	25		
Aroclor 1232	SW8082	ND	ug/Kg	0.99	13		
Aroclor 1242	SW8082	ND	ug/Kg	0.99	13		
Aroclor 1248	SW8082	ND	ug/Kg	0.99	13		
Aroclor 1254	SW8082	ND	ug/Kg	0.99	13		
Aroclor 1260	SW8082	ND	ug/Kg	0.99	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.99	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	60		VLL
2-Methylnaphthalene	SW8270C SIM	7.7	ug/Kg	0.51	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	5.6	ug/Kg	2.8	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	12		
Benz(a)anthracene	SW8270C SIM	0.37	ug/Kg	0.32	12	J	
Benzo(a)pyrene	SW8270C SIM	0.37	ug/Kg	0.34	12	J	
Benzo(b)fluoranthene	SW8270C SIM	1.7	ug/Kg	0.34	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTCE-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	120	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.1	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	3.4	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	12		
Diethyl Phthalate	SW8270C	4.2	ug/Kg	3.7	12	J	
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	0.99	ug/Kg	0.41	12	J	
Fluorene	SW8270C SIM	1.8	ug/Kg	0.41	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	12		VLL
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		VLL
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.43	ug/Kg	0.36	12	J	
Naphthalene	SW8270C SIM	3.4	ug/Kg	0.51	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	12		
Pentachlorophenol (PCP)	SW8270C	5.5	ug/Kg	2.8	60	J	
Phenanthrene	SW8270C SIM	7.3	ug/Kg	0.36	12	J	
Phenol	SW8270C	28	ug/Kg	3.4	36	J	
Pyrene	SW8270C SIM	1.4	ug/Kg	0.27	12	J	

Surface Sediment Analyses					Station ID: PTCE-SG02-A1		
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	2.9	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.65	g/L				
Carbon, Total Organic (TOC)	PSEP	0.61	PERCENT	0.03	0.05		
Solids, Total	E160.3M	72.5	PERCENT				
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.09	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	7.7	mg/Kg	0.1	0.6		
Barium, Total	SW6020	40.1	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.22	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	10.5	mg/Kg	0.03	0.23		
Copper, Total	SW6020	10.9	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	13900	mg/Kg	0.5	4.6		
Lead, Total	SW6020	6.9	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	17.1	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	47.5	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.21	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.34	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.43	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.34	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	28		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.9	6.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.98	6.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.7	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	21	69		VLL
2-Methylnaphthalene	SW8270C SIM	4.5	ug/Kg	0.58	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.3	14		
4-Methylphenol	SW8270C	8.6	ug/Kg	3.3	14	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.58	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.45	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.53	14		
Benz(a)anthracene	SW8270C SIM	0.99	ug/Kg	0.36	14	J	
Benzo(a)pyrene	SW8270C SIM	0.65	ug/Kg	0.39	14	J	
Benzo(b)fluoranthene	SW8270C SIM	1.4	ug/Kg	0.39	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.3	ug/Kg	0.28	14	J	
Benzo(k)fluoranthene	SW8270C SIM	0.58	ug/Kg	0.42	14	J	
Benzoic Acid	SW8270C	150	ug/Kg	23	280	J	

Surface Sediment Analyses [illegible] **Station ID: PTCE-SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.8	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	170	280		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.9	14		
Chrysene	SW8270C SIM	3.6	ug/Kg	0.42	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Dibenzofuran	SW8270C	ND	ug/Kg	4	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.2	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	28		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.47	14	J	
Fluorene	SW8270C SIM	1.1	ug/Kg	0.47	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.2	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.8	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.2	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.42	14		
Naphthalene	SW8270C SIM	2.2	ug/Kg	0.58	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.4	14		
Pentachlorophenol (PCP)	SW8270C	4.5	ug/Kg	3.2	69	J	
Phenanthrene	SW8270C SIM	6.5	ug/Kg	0.42	14	J	
Phenol	SW8270C	31	ug/Kg	3.9	42	J	
Pyrene	SW8270C SIM	2.2	ug/Kg	0.31	14	J	

Surface Sediment Analyses [illegible] Station ID: PTCE-SG02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	14.1	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.77	g/L				
Carbon, Total Organic (TOC)	PSEP	0.84	PERCENT	0.03	0.05		
Solids, Total	E160.3M	77.7	PERCENT				
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.08	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	7.3	mg/Kg	0.1	0.5		
Barium, Total	SW6020	39.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.22	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	11	mg/Kg	0.03	0.21		
Copper, Total	SW6020	11.6	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	12900	mg/Kg	0.4	4.3		
Lead, Total	SW6020	7.05	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	17.3	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	47.6	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.4	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.32	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	26		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	6.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	6.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.4	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	65		VLL
2-Methylnaphthalene	SW8270C SIM	4	ug/Kg	0.55	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.1	13		
4-Methylphenol	SW8270C	120	ug/Kg	3	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.55	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.42	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.49	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Benzo(b)fluoranthene	SW8270C SIM	1.4	ug/Kg	0.37	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.79	ug/Kg	0.26	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	13		
Benzoic Acid	SW8270C	170	ug/Kg	22	260	J	

Surface Sediment Analyses Station ID: PTCE-SG02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	160	260		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	3.3	ug/Kg	0.39	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.7	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.9	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.4	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.4	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	26		
Fluoranthene	SW8270C SIM	0.77	ug/Kg	0.44	13	J	
Fluorene	SW8270C SIM	0.91	ug/Kg	0.44	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.9	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	13		
Hexachloroethane	SW8270C	ND	ug/Kg	3	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.39	13		
Naphthalene	SW8270C SIM	2	ug/Kg	0.55	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	13		
Pentachlorophenol (PCP)	SW8270C	3.5	ug/Kg	3	65	J	
Phenanthrene	SW8270C SIM	4.8	ug/Kg	0.39	13	J	
Phenol	SW8270C	360	ug/Kg	3.6	39		
Pyrene	SW8270C SIM	1.2	ug/Kg	0.29	13	J	

Surface Sediment Analyses: [illegible] Station ID: PTCE-SG02-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	10.1	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.64	g/L				
Carbon, Total Organic (TOC)	PSEP	0.72	PERCENT	0.03	0.05		
Solids, Total	E160.3M	70.7	PERCENT				
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.11	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	6.5	mg/Kg	0.1	0.6		
Barium, Total	SW6020	36.9	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.17	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	9.71	mg/Kg	0.04	0.24		
Copper, Total	SW6020	10.3	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	13100	mg/Kg	0.5	4.7		
Lead, Total	SW6020	6.52	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	15.2	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.06	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	43.3	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.44	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.35	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	6.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.8	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	71		VLL
2-Methylnaphthalene	SW8270C SIM	5.9	ug/Kg	0.6	15	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
4-Methylphenol	SW8270C	140	ug/Kg	3.3	15		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.6	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.46	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.54	15		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.37	15		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(b)fluoranthene	SW8270C SIM	1.6	ug/Kg	0.4	15	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.85	ug/Kg	0.29	15	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	15		
Benzoic Acid	SW8270C	140	ug/Kg	24	290	J	

Surface Sediment Analyses						Station ID: PTCE-SG02-A3	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.9	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	290		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	4.3	ug/Kg	0.43	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.51	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.1	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.3	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	29		
Fluoranthene	SW8270C SIM	1.1	ug/Kg	0.49	15	J	
Fluorene	SW8270C SIM	1.3	ug/Kg	0.49	15	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.3	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.9	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Naphthalene	SW8270C SIM	2.8	ug/Kg	0.6	15	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.5	15		
Pentachlorophenol (PCP)	SW8270C	4	ug/Kg	3.3	71	J	
Phenanthrene	SW8270C SIM	7.3	ug/Kg	0.43	15	J	
Phenol	SW8270C	130	ug/Kg	4	43		
Pyrene	SW8270C SIM	1.6	ug/Kg	0.32	15	J	

Surface Sediment Analyses **Station ID: PTH-SG01-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.4	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.79	g/L				
Carbon, Total Organic (TOC)	PSEP	0.22	PERCENT	0.03	0.05		
Solids, Total	E160.3M	72	PERCENT				
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.07	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	4.2	mg/Kg	0.1	0.6		
Barium, Total	SW6020	18.9	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.12	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	5.43	mg/Kg	0.03	0.23		
Copper, Total	SW6020	3.7	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	8730	mg/Kg	0.5	4.6		
Lead, Total	SW6020	2.73	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	8.91	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	20.9	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.21	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.43	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.34	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	28		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	6.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.99	6.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.7	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	21	70		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.59	14		
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	14		
4-Methylphenol	SW8270C	ND	ug/Kg	3.3	14		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.59	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.45	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.53	14		
Benz(a)anthracene	SW8270C SIM	0.51	ug/Kg	0.37	14	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.39	14		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	14		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.28	14		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	14		
Benzoic Acid	SW8270C	100	ug/Kg	23	280	J	

Surface Sediment Analyses [illegible] **Station ID: PTEI-SG01-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.9	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	280		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	14		
Chrysene	SW8270C SIM	ND	ug/Kg	0.42	14		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Dibenzofuran	SW8270C	ND	ug/Kg	4	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.3	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	28		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.48	14		
Fluorene	SW8270C SIM	ND	ug/Kg	0.48	14		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.2	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.9	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.2	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.42	14		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.59	14		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.4	14		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.2	70		
Phenanthrene	SW8270C SIM	0.72	ug/Kg	0.42	14	J	
Phenol	SW8270C	8.1	ug/Kg	3.9	42	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.31	14		

Surface Sediment Analyses						Station ID: PTFI-SG01-A2	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	0.4	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.73	g/L				
Carbon, Total Organic (TOC)	PSEP	0.15	PERCENT	0.03	0.05		
Solids, Total	E160.3M	74.2	PERCENT				
Sulfide	PSEP	0.5	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.07	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4.3	mg/Kg	0.1	0.5		
Barium, Total	SW6020	17.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.11	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	5.66	mg/Kg	0.03	0.22		
Copper, Total	SW6020	3.38	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	8890	mg/Kg	0.4	4.5		
Lead, Total	SW6020	2.59	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.17	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	8.99	mg/Kg	0.02	0.22		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	21.4	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.21	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.34	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.32	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.42	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.33	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	27		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.88	6.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.96	6.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.6	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	21	68		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.57	14		
2-Methylphenol	SW8270C	ND	ug/Kg	3.3	14		
4-Methylphenol	SW8270C	ND	ug/Kg	3.2	14		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.57	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.44	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.52	14		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.36	14		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.38	14		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	14		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.27	14		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	14		
Benzoic Acid	SW8270C	93	ug/Kg	23	270	J	

Surface Sediment Analyses [illegible] **Station ID: PTFI-SG0[illegible]-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.8	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	170	270		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.9	14		
Chrysene	SW8270C SIM	ND	ug/Kg	0.41	14		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.49	14		
Dibenzofuran	SW8270C	ND	ug/Kg	3.9	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.1	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.5	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.5	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	27		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.46	14		
Fluorene	SW8270C SIM	ND	ug/Kg	0.46	14		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.1	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.8	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.1	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.41	14		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.57	14		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.3	14		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.1	68		
Phenanthrene	SW8270C SIM	0.48	ug/Kg	0.41	14	J	
Phenol	SW8270C	10	ug/Kg	3.8	41	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.3	14		

Surface Sediment Analyses [illegible] **Station ID: PTFI-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.2	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.93	g/L				
Carbon, Total Organic (TOC)	PSEP	0.16	PERCENT	0.03	0.05		
Solids, Total	E160.3M	70.2	PERCENT				
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.06	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	4.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	25	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.11	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	5.75	mg/Kg	0.04	0.23		
Copper, Total	SW6020	3.39	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	8980	mg/Kg	0.5	4.7		
Lead, Total	SW6020	2.51	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	9.02	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	22.4	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.25	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.34	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.44	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.35	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	7.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.8	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	72		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.6	15		
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
4-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.6	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.46	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.55	15		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.38	15		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.29	15		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	15		
Benzoic Acid	SW8270C	100	ug/Kg	24	290	J	

Surface Sediment Analyses **Station ID: PTF-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	4	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	290		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	ND	ug/Kg	0.43	15		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.52	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.1	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.4	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.4	29		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.49	15		
Fluorene	SW8270C SIM	ND	ug/Kg	0.49	15		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.3	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	4	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.6	15		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.5	15		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.3	72		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Phenol	SW8270C	12	ug/Kg	4	43	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.32	15		

Surface Sediment Analyses [illegible] **Station ID: PTFI-SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.94	g/L				
Carbon, Total Organic (TOC)	PSEP	0.67	PERCENT	0.02	0.05		
Solids, Total	E160.3M	91.9	PERCENT				
Solids, Total Volatile	E160.4M	7.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	2.4	mg/Kg	0.1	0.5		
Barium, Total	SW6020	64	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.05	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	4.56	mg/Kg	0.03	0.18		
Copper, Total	SW6020	6.46	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	5250	mg/Kg	0.9	3.6		
Lead, Total	SW6020	2.33	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	ND	mg/Kg	0.006	0.013		
Nickel, Total	SW6020	6.95	mg/Kg	0.02	0.18		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	10.5	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.27	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.34	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.30	1.1	i	
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.9	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.9	22		
Aroclor 1232	SW8082	ND	ug/Kg	0.9	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.9	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.9	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.9	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.9	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.71	5.4		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.4		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.9	5.4		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.9	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	55		VLL
2-Methylnaphthalene	SW8270C SIM	0.68	ug/Kg	0.46	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.46	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.35	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.42	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.29	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.31	11		
Benzo(b)fluoranthene	SW8270C SIM	0.59	ug/Kg	0.31	11	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.22	11		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.33	11		

Surface Sediment Analyses **Station ID: PTEI SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	75	ug/Kg	18	220	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	6	ug/Kg	1.9	220	J	
Butyl Benzyl Phthalate	SW8270C	7.2	ug/Kg	1.5	11	J	
Chrysene	SW8270C SIM	0.47	ug/Kg	0.33	11	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.4	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.3	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	22		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	11		
Fluorene	SW8270C SIM	ND	ug/Kg	0.37	11		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.3	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.33	11		
Naphthalene	SW8270C SIM	0.72	ug/Kg	0.46	11	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.5	55		
Phenanthrene	SW8270C SIM	0.59	ug/Kg	0.33	11	J	
Phenol	SW8270C	7.1	ug/Kg	3.1	33	J	
Pyrene	SW8270C SIM	0.25	ug/Kg	0.24	11	J	

Surface Sediment Analyses Station ID: PTFI-SG02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.73	g/L				
Carbon, Total Organic (TOC)	PSEP	0.35	PERCENT	0.02	0.05		
Solids, Total	E160.3M	94.5	PERCENT				
Solids, Total Volatile	E160.4M	5.4	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	3.1	mg/Kg	0.1	0.4		
Barium, Total	SW6020	58.6	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.09	mg/Kg	0.02	0.04		
Chromium, Total	SW6020	3.43	mg/Kg	0.03	0.18		
Copper, Total	SW6020	4.72	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	5040	mg/Kg	0.9	3.5		
Lead, Total	SW6020	2.86	mg/Kg	0.03	0.04		
Mercury, Total	SW7471A	ND	mg/Kg	0.005	0.01		
Nickel, Total	SW6020	8.63	mg/Kg	0.02	0.18		
Silver, Total	SW6020	0.01	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	10	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.16	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.26	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.18	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.25	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.33	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.26	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.87	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.87	22		
Aroclor 1232	SW8082	ND	ug/Kg	0.87	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.87	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.87	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.87	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.87	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.69	5.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.87	5.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.8	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	16	53		VLL
2-Methylnaphthalene	SW8270C SIM	0.76	ug/Kg	0.45	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
Acenaphthene	SW8270C SIM	0.47	ug/Kg	0.45	11	J	
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.34	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.41	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.28	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.3	11		
Benzo(b)fluoranthene	SW8270C SIM	0.37	ug/Kg	0.3	11	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.22	11		
Benzo(k)fluoranthene	SW8270C SIM	0.36	ug/Kg	0.32	11	J	

Surface Sediment Analyses [illegible] **Station ID : RTFLSG02-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	80	ug/Kg	18	220	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	6.7	ug/Kg	1.8	220	J	
Butyl Benzyl Phthalate	SW8270C	7.3	ug/Kg	1.5	11	J	
Chrysene	SW8270C SIM	0.53	ug/Kg	0.32	11	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.39	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3.1	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.3	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	22		
Fluoranthene	SW8270C SIM	0.4	ug/Kg	0.36	11	J	
Fluorene	SW8270C SIM	0.43	ug/Kg	0.36	11	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.2	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.5	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.32	11		
Naphthalene	SW8270C SIM	1.1	ug/Kg	0.45	11	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.6	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.5	53		
Phenanthrene	SW8270C SIM	1.1	ug/Kg	0.32	11	J	
Phenol	SW8270C	7.9	ug/Kg	3	32	J	
Pyrene	SW8270C SIM	0.31	ug/Kg	0.24	11	J	

Surface Sediment Analyses **Station ID: PTRI-SG02-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.8	g/L				
Carbon, Total Organic (TOC)	PSEP	0.22	PERCENT	0.02	0.05		
Solids, Total	E160.3M	94	PERCENT				
Solids, Total Volatile	E160.4M	8.5	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	1.9	mg/Kg	0.1	0.4		
Barium, Total	SW6020	17.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.03	mg/Kg	0.02	0.04	B	
Chromium, Total	SW6020	3.01	mg/Kg	0.03	0.18		
Copper, Total	SW6020	3.13	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	4910	mg/Kg	0.9	3.6		
Lead, Total	SW6020	1.98	mg/Kg	0.03	0.04		
Mercury, Total	SW7471A	0.008	mg/Kg	0.008	0.015	B	
Nickel, Total	SW6020	5.06	mg/Kg	0.02	0.18		
Silver, Total	SW6020	0.01	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	8.9	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.27	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.18	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.25	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.33	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.26	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.16	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.88	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.88	22		
Aroclor 1232	SW8082	ND	ug/Kg	0.88	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.88	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.88	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.88	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.88	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.7	5.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.88	5.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.8	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	54		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.45	11		
2-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.45	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.35	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.41	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.28	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.3	11		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.3	11		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.22	11		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	11		

Surface Sediment Analyses Station ID: TPLSG02-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	72	ug/Kg	18	220	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.2	ug/Kg	1.9	220	J	
Butyl Benzyl Phthalate	SW8270C	6.7	ug/Kg	1.5	11	J	
Chrysene	SW8270C SIM	ND	ug/Kg	0.32	11		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.39	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3.1	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.3	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	22		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	11		
Fluorene	SW8270C SIM	ND	ug/Kg	0.37	11		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.3	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.5	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.32	11		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.45	11		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.6	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.5	54		
Phenanthrene	SW8270C SIM	0.55	ug/Kg	0.32	11	J	
Phenol	SW8270C	7.3	ug/Kg	3	32	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.24	11		

Surface Sediment Analyses **Station ID : PTFL-SG05-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	8.6	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.64	g/L				
Carbon, Total Organic (TOC)	PSEP	1.67	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86.5	PERCENT				
Solids, Total Volatile	E160.4M	6.2	mg/Kg		0.1		
Sulfide	PSEP	1.4	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.1	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.3	mg/Kg	0.1	0.6		
Barium, Total	SW6020	62.9	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.34	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	15.3	mg/Kg	0.03	0.23		
Copper, Total	SW6020	14.9	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	16400	mg/Kg	0.5	4.6		
Lead, Total	SW6020	8.23	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	23.8	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.11	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	65.5	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.85	21		
Aroclor 1232	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.85	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.95	5.8		VML
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	58		VLL
2-Methylnaphthalene	SW8270C SIM	9.2	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	9.7	ug/Kg	2.7	12	J	
Acenaphthene	SW8270C SIM	0.52	ug/Kg	0.49	12	J	
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	0.8	ug/Kg	0.44	12	J	
Benz(a)anthracene	SW8270C SIM	0.87	ug/Kg	0.31	12	J	
Benzo(a)pyrene	SW8270C SIM	0.93	ug/Kg	0.33	12	J	
Benzo(b)fluoranthene	SW8270C SIM	2.7	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.9	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses **Station ID: PTPI-SC05-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	19	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.5	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	6.2	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	0.56	ug/Kg	0.42	12	J	
Dibenzofuran	SW8270C	3.4	ug/Kg	3.4	12	J	
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	3.8	ug/Kg	3	12	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	24		
Fluoranthene	SW8270C SIM	2	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	2.2	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.76	ug/Kg	0.35	12	J	
Naphthalene	SW8270C SIM	4.4	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	5.5	ug/Kg	2.7	58	J	
Phenanthrene	SW8270C SIM	11	ug/Kg	0.35	12	J	
Phenol	SW8270C	14	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	2.8	ug/Kg	0.26	12	J	

Surface Sediment Analyses **Station ID: PTFI-SG05-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.6	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.73	g/L				
Carbon, Total Organic (TOC)	PSEP	1.34	PERCENT	0.03	0.05		
Solids, Total	E160.3M	82.6	PERCENT				
Solids, Total Volatile	E160.4M	5.6	mg/Kg		0.1		
Sulfide	PSEP	0.5	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.11	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	50.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.34	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	13.2	mg/Kg	0.04	0.24		
Copper, Total	SW6020	13.9	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	15400	mg/Kg	0.5	4.8		
Lead, Total	SW6020	7.79	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	23.1	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	64.1	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	1.8	ug/Kg	0.3	1.3	P	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	9.2	ug/Kg	0.51	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	10	ug/Kg	2.9	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	0.49	ug/Kg	0.47	13	J	
Benz(a)anthracene	SW8270C SIM	0.58	ug/Kg	0.32	13	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	2.3	ug/Kg	0.34	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses [illegible] Station ID: PTI-SG05-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	12	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	5.6	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	1.2	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	2.1	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	4.3	ug/Kg	0.51	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	10	ug/Kg	0.37	13	J	
Phenol	SW8270C	26	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	2.1	ug/Kg	0.27	13	J	

Surface Sediment Analyses StationID: PTFI-SG05-A

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.1	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.72	g/L				
Carbon, Total Organic (TOC)	PSEP	1.32	PERCENT	0.03	0.05		
Solids, Total	E160.3M	82	PERCENT				
Solids, Total Volatile	E160.4M	5	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.11	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.6	mg/Kg	0.1	0.6		
Barium, Total	SW6020	59.6	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.33	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	14.3	mg/Kg	0.04	0.24		
Copper, Total	SW6020	13.7	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	16400	mg/Kg	0.5	4.9		
Lead, Total	SW6020	7.21	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	22.8	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.09	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	62.1	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	1.2	ug/Kg	0.3	1.3	J,P	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.87	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	9.4	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	5.2	ug/Kg	2.9	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	0.61	ug/Kg	0.32	13	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	2.3	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analytes **Station ID: PTFI-SG05-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	35	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	5.6	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	1.3	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	2	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	4.5	ug/Kg	0.52	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	11	ug/Kg	0.37	13	J	
Phenol	SW8270C	27	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	2.1	ug/Kg	0.27	13	J	

Surface Sediment Analyses					Station ID: PTI-SG05-S1		
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	2.1	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.72	g/L				
Carbon, Total Organic (TOC)	PSEP	1.29	PERCENT	0.03	0.05		
Solids, Total	E160.3M	82.5	PERCENT				
Solids, Total Volatile	E160.4M	5	mg/Kg		0.1		
Sulfide	PSEP	0.7	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.13	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.5	mg/Kg	0.1	0.6		
Barium, Total	SW6020	58.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.33	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	14.7	mg/Kg	0.04	0.24		
Copper, Total	SW6020	13.7	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	15600	mg/Kg	0.5	4.9		
Lead, Total	SW6020	7.21	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	23.2	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.09	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	63.9	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.3	1.3	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.87	6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	9.8	ug/Kg	0.51	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	12	ug/Kg	2.9	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	0.53	ug/Kg	0.47	13	J	
Benz(a)anthracene	SW8270C SIM	0.69	ug/Kg	0.32	13	J	
Benzo(a)pyrene	SW8270C SIM	0.7	ug/Kg	0.34	13	J	
Benzo(b)fluoranthene	SW8270C SIM	2.5	ug/Kg	0.34	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.1	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses [illegible] **Station ID: PTFLSG05-S1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	160	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	14	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	5.9	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	2	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	4.6	ug/Kg	0.51	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	17	ug/Kg	2.8	61	J	
Phenanthrene	SW8270C SIM	11	ug/Kg	0.37	13	J	
Phenol	SW8270C	14	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	2.3	ug/Kg	0.27	13	J	

Surface Sediment Analyses **Station ID: PTFI-SG06-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.2	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.94	g/L				
Carbon, Total Organic (TOC)	PSEP	0.57	PERCENT	0.03	0.05		
Solids, Total	E160.3M	90.6	PERCENT				
Solids, Total Volatile	E160.4M	5.7	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.06	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	82.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.17	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	14.9	mg/Kg	0.03	0.22		
Copper, Total	SW6020	14.4	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	16600	mg/Kg	0.4	4.4		
Lead, Total	SW6020	8.82	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	19.8	mg/Kg	0.02	0.22		
Silver, Total	SW6020	0.09	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	55.8	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.34	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.91	22		
Aroclor 1232	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.91	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.72	5.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	5.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.9	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	56		VLL
2-Methylnaphthalene	SW8270C SIM	2.3	ug/Kg	0.47	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.47	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.29	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(b)fluoranthene	SW8270C SIM	1	ug/Kg	0.31	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.59	ug/Kg	0.23	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses [illegible] Station ID: PTFI-SG06-A1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	120	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.4	ug/Kg	1.9	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	1.6	ug/Kg	0.34	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.4	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	23		
Fluoranthene	SW8270C SIM	0.64	ug/Kg	0.38	12	J	
Fluorene	SW8270C SIM	ND	ug/Kg	0.38	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	1.3	ug/Kg	0.47	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	12		
Pentachlorophenol (PCP)	SW8270C	43	ug/Kg	2.6	56	J	
Phenanthrene	SW8270C SIM	3.3	ug/Kg	0.34	12	J	
Phenol	SW8270C	15	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	0.79	ug/Kg	0.25	12	J	

Surface Sediment Analyses [illegible] **Station ID: PTFI-SG06-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	3.6	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.87	g/L				
Carbon, Total Organic (TOC)	PSEP	0.64	PERCENT	0.03	0.05		
Solids, Total	E160.3M	93	PERCENT				
Solids, Total Volatile	E160.4M	3.7	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.16	mg/Kg	0.05	0.05	N	
Arsenic, Total	SW6020	7.9	mg/Kg	0.1	0.5		
Barium, Total	SW6020	80.1	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.15	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	15.3	mg/Kg	0.03	0.22		
Copper, Total	SW6020	15.3	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	17200	mg/Kg	0.4	4.3		
Lead, Total	SW6020	10.5	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.02	mg/Kg	0.005	0.01		
Nickel, Total	SW6020	22.5	mg/Kg	0.02	0.22		
Silver, Total	SW6020	0.24	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	65.3	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.27	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.33	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.16	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.89	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.89	22		
Aroclor 1232	SW8082	ND	ug/Kg	0.89	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.89	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.89	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.89	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.89	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.7	5.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.77	5.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.89	5.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.9	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	54		VLL
2-Methylnaphthalene	SW8270C SIM	2.6	ug/Kg	0.46	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.46	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.35	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.41	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.28	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.31	11		
Benzo(b)fluoranthene	SW8270C SIM	0.96	ug/Kg	0.31	11	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.61	ug/Kg	0.22	11	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.33	11		

Surface Sediment Analyses [illegible] Station ID: PTF-SG06-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	100	ug/Kg	18	220	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	6.1	ug/Kg	1.9	220	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.5	11		
Chrysene	SW8270C SIM	2.5	ug/Kg	0.33	11	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.39	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3.1	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.3	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.8	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	22		
Fluoranthene	SW8270C SIM	0.6	ug/Kg	0.37	11	J	
Fluorene	SW8270C SIM	0.39	ug/Kg	0.37	11	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.3	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.5	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.33	11		
Naphthalene	SW8270C SIM	1.5	ug/Kg	0.46	11	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	11		
Pentachlorophenol (PCP)	SW8270C	8.5	ug/Kg	2.5	54	J	
Phenanthrene	SW8270C SIM	3.7	ug/Kg	0.33	11	J	
Phenol	SW8270C	16	ug/Kg	3	33	J	
Pyrene	SW8270C SIM	0.9	ug/Kg	0.24	11	J	

Surface Sediment Analyses **Station ID: PTRI-SG06-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.9	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.98	g/L				
Carbon, Total Organic (TOC)	PSEP	0.66	PERCENT	0.03	0.05		
Solids, Total	E160.3M	95.9	PERCENT				
Solids, Total Volatile	E160.4M	3	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.05	0.05	N	
Arsenic, Total	SW6020	7.7	mg/Kg	0.1	0.5		
Barium, Total	SW6020	76.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.15	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	14.4	mg/Kg	0.03	0.21		
Copper, Total	SW6020	14.1	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	17000	mg/Kg	0.4	4.2		
Lead, Total	SW6020	8.41	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	19.4	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.09	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	55.7	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.16	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.26	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.18	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.25	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.32	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.26	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.16	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.86	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.86	21		
Aroclor 1232	SW8082	ND	ug/Kg	0.86	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.86	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.86	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.86	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.86	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.68	5.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.75	5.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.8	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	16	53		VLL
2-Methylnaphthalene	SW8270C SIM	3	ug/Kg	0.44	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.44	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.34	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.4	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.28	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.3	11		
Benzo(b)fluoranthene	SW8270C SIM	1.1	ug/Kg	0.3	11	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.53	ug/Kg	0.21	11	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	11		

Surface Sediment Analyses: [illegible] Station ID: RTFL-SG06-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	86	ug/Kg	18	210	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	2.9	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.7	ug/Kg	1.8	210	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.5	11		
Chrysene	SW8270C SIM	2.8	ug/Kg	0.32	11	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.38	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.2	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.7	21		
Fluoranthene	SW8270C SIM	0.78	ug/Kg	0.36	11	J	
Fluorene	SW8270C SIM	0.5	ug/Kg	0.36	11	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.2	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	2.9	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.4	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.32	11		
Naphthalene	SW8270C SIM	1.8	ug/Kg	0.44	11	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.6	11		
Pentachlorophenol (PCP)	SW8270C	4.7	ug/Kg	2.4	53	J	
Phenanthrene	SW8270C SIM	4.5	ug/Kg	0.32	11	J	
Phenol	SW8270C	11	ug/Kg	2.9	32	J	
Pyrene	SW8270C SIM	1.1	ug/Kg	0.23	11	J	

Surface Sediment Analyses					Station ID: PTLA-SG01-A1		
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	0.5	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	2.18	g/L				
Carbon, Total Organic (TOC)	PSEP	0.26	PERCENT	0.03	0.05		
Solids, Total	E160.3M	97.2	PERCENT				
Solids, Total Volatile	E160.4M	0.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.07	mg/Kg	0.05	0.05	N	
Arsenic, Total	SW6020	2.9	mg/Kg	0.1	0.5		
Barium, Total	SW6020	13.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.03	mg/Kg	0.02	0.05	B	
Chromium, Total	SW6020	3.07	mg/Kg	0.03	0.21		
Copper, Total	SW6020	3.07	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	4490	mg/Kg	0.4	4.1		
Lead, Total	SW6020	2.02	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	5.02	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.16	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	15.8	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.16	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.26	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.18	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.24	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.32	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.25	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.16	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.14	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.85	21		
Aroclor 1232	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.85	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.67	5.1		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.74	5.1		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.85	5.1		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.7	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	16	52		VLL
2-Methylnaphthalene	SW8270C SIM	0.82	ug/Kg	0.44	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.4	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.44	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.33	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.39	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.27	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.29	11		
Benzo(b)fluoranthene	SW8270C SIM	0.37	ug/Kg	0.29	11	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.8	ug/Kg	0.21	11	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.31	11		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG01-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	33	ug/Kg	17	210	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	2.9	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.2	ug/Kg	1.8	210	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.5	11		
Chrysene	SW8270C SIM	0.47	ug/Kg	0.31	11	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.37	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.2	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.7	11		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	11		
Fluorene	SW8270C SIM	ND	ug/Kg	0.35	11		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.1	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	2.9	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.4	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.34	ug/Kg	0.31	11	J	
Naphthalene	SW8270C SIM	0.53	ug/Kg	0.44	11	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.5	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.4	52		
Phenanthrene	SW8270C SIM	0.93	ug/Kg	0.31	11	J	
Phenol	SW8270C	11	ug/Kg	2.9	31	J	
Pyrene	SW8270C SIM	0.37	ug/Kg	0.23	11	J	

Surface Sediment Analyses — **Station ID: FTLA-SG01-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	2.01	g/L				
Carbon, Total Organic (TOC)	PSEP	1.05	PERCENT	0.03	0.05		
Solids, Total	E160.3M	96.7	PERCENT				
Solids, Total Volatile	E160.4M	0.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05	N	
Arsenic, Total	SW6020	2.2	mg/Kg	0.1	0.5		
Barium, Total	SW6020	9.4	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.05	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	2.47	mg/Kg	0.03	0.21		
Copper, Total	SW6020	2.6	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	2980	mg/Kg	0.4	4.1		
Lead, Total	SW6020	1.64	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	4.17	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	9.9	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.16	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.26	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.18	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.25	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.32	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.26	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.16	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.14	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.85	21		
Aroclor 1232	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.85	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.68	5.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.74	5.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.85	5.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.8	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	16	52		VLL
2-Methylnaphthalene	SW8270C SIM	0.54	ug/Kg	0.44	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.44	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.34	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.4	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.27	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.29	11		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.29	11		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.21	11		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	11		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG01-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	24	ug/Kg	17	210	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	2.9	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.2	ug/Kg	1.8	210	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.5	11		
Chrysene	SW8270C SIM	ND	ug/Kg	0.32	11		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.38	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.2	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.7	11		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	11		
Fluorene	SW8270C SIM	ND	ug/Kg	0.36	11		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.2	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	2.9	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.4	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.32	11		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.44	11		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.6	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.4	52		
Phenanthrene	SW8270C SIM	0.58	ug/Kg	0.32	11	J	
Phenol	SW8270C	11	ug/Kg	2.9	32	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.23	11		

Surface Sediment Analyses **Station ID: PTLA-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	2.17	g/L				
Carbon, Total Organic (TOC)	PSEP	0.36	PERCENT	0.03	0.05		
Solids, Total	E160.3M	96.5	PERCENT				
Solids, Total Volatile	E160.4M	1.1	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05	N	
Arsenic, Total	SW6020	3.9	mg/Kg	0.1	0.5		
Barium, Total	SW6020	19	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.07	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	4.86	mg/Kg	0.03	0.21		
Copper, Total	SW6020	4.96	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	4410	mg/Kg	0.4	4.2		
Lead, Total	SW6020	3.29	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	7.72	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.05	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	20.3	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.16	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.26	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.18	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.25	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.32	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.26	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.16	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.14	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.85	21		
Aroclor 1232	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.85	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.85	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.68	5.1		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.74	5.1		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.85	5.1		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.8	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	16	52		VLL
2-Methylnaphthalene	SW8270C SIM	0.61	ug/Kg	0.44	11	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.5	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.44	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.34	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.4	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.27	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.3	11		
Benzo(b)fluoranthene	SW8270C SIM	0.51	ug/Kg	0.3	11	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.28	ug/Kg	0.21	11	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	11		

Surface Sediment Analyses — **Station ID: PTLA-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	25	ug/Kg	17	210	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	2.9	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.1	ug/Kg	1.8	210	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.5	11		
Chrysene	SW8270C SIM	0.41	ug/Kg	0.32	11	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.38	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.2	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.7	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.7	11		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	11		
Fluorene	SW8270C SIM	ND	ug/Kg	0.36	11		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.2	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	2.9	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.4	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.32	11		
Naphthalene	SW8270C SIM	0.48	ug/Kg	0.44	11	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.6	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.4	52		
Phenanthrene	SW8270C SIM	0.62	ug/Kg	0.32	11	J	
Phenol	SW8270C	12	ug/Kg	2.9	32	J	
Pyrene	SW8270C SIM	0.33	ug/Kg	0.23	11	J	

Surface Sediment Analyses **Station ID: PTLA-SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	5.5	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.59	g/L				
Carbon, Total Organic (TOC)	PSEP	2.7	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86	PERCENT				
Solids, Total Volatile	E160.4M	5.4	mg/Kg		0.1		
Sulfide	PSEP	88	mg/Kg	10	35		
Antimony, Total	SW6020	0.14	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	7.6	mg/Kg	0.1	0.6		
Barium, Total	SW6020	57.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.34	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	12.3	mg/Kg	0.03	0.23		
Copper, Total	SW6020	15.1	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	16100	mg/Kg	0.5	4.7		
Lead, Total	SW6020	8.41	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	20.8	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.1	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	60.1	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.96	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.96	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.96	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		VLL
2-Methylnaphthalene	SW8270C SIM	9.7	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	32	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	0.82	ug/Kg	0.31	12	J	
Benzo(a)pyrene	SW8270C SIM	0.62	ug/Kg	0.33	12	J	
Benzo(b)fluoranthene	SW8270C SIM	2.4	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.8	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	0.42	ug/Kg	0.35	12	J	

Surface Sediment Analyses **Station ID: PTLA-SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	49	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	6	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	5.9	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	0.43	ug/Kg	0.42	12	J	
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	12		
Fluoranthene	SW8270C SIM	1.5	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	2.3	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.64	ug/Kg	0.35	12	J	
Naphthalene	SW8270C SIM	4.1	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	10	ug/Kg	0.35	12	J	
Phenol	SW8270C	51	ug/Kg	3.3	35		
Pyrene	SW8270C SIM	2.4	ug/Kg	0.26	12	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG02-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	3.1	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.62	g/L				
Carbon, Total Organic (TOC)	PSEP	1.53	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86	PERCENT				
Solids, Total Volatile	E160.4M	5.2	mg/Kg		0.1		
Sulfide	PSEP	1.4	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.1	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8	mg/Kg	0.1	0.6		
Barium, Total	SW6020	56.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.33	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	12.3	mg/Kg	0.03	0.23		
Copper, Total	SW6020	14.8	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	16300	mg/Kg	0.5	4.7		
Lead, Total	SW6020	8.06	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	21.1	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.1	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	59.7	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.96	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.96	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.96	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		VLL
2-Methylnaphthalene	SW8270C SIM	9.5	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	8.9	ug/Kg	2.8	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	0.5	ug/Kg	0.31	12	J	
Benzo(a)pyrene	SW8270C SIM	0.49	ug/Kg	0.33	12	J	
Benzo(b)fluoranthene	SW8270C SIM	2.2	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.4	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses [illegible] Station ID - PTLA-SG02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	41	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	2	240		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	5.2	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	12		
Fluoranthene	SW8270C SIM	1.3	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	2	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.35	ug/Kg	0.35	12	J	
Naphthalene	SW8270C SIM	4.3	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	9.7	ug/Kg	0.35	12	J	
Phenol	SW8270C	22	ug/Kg	3.3	35	J	
Pyrene	SW8270C SIM	1.9	ug/Kg	0.26	12	J	

Surface Sediment Analyses — **Station ID: PTLA-SG02-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	5.5	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.82	g/L				
Carbon, Total Organic (TOC)	PSEP	1.77	PERCENT	0.03	0.05		
Solids, Total	E160.3M	87.5	PERCENT				
Solids, Total Volatile	E160.4M	4.7	mg/Kg		0.1		
Sulfide	PSEP	5.8	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	7.2	mg/Kg	0.1	0.6		
Barium, Total	SW6020	49.4	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.36	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	11.7	mg/Kg	0.03	0.23		
Copper, Total	SW6020	12.9	mg/Kg	0.05	0.11		
Iron, Total	SW6010B	15200	mg/Kg	0.5	4.6		
Lead, Total	SW6020	6.66	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	21.4	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	56.9	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.94	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.94	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.75	5.6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.82	5.6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	5.6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	58		VLL
2-Methylnaphthalene	SW8270C SIM	7.7	ug/Kg	0.48	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	13	ug/Kg	2.7	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.48	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	0.39	ug/Kg	0.3	12	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	2.1	ug/Kg	0.32	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.3	ug/Kg	0.23	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses **Station ID: PTLA-SG02-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	41	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.6	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	5	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	12		
Fluoranthene	SW8270C SIM	1.1	ug/Kg	0.39	12	J	
Fluorene	SW8270C SIM	1.8	ug/Kg	0.39	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	3.4	ug/Kg	0.48	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	58		
Phenanthrene	SW8270C SIM	8.3	ug/Kg	0.35	12	J	
Phenol	SW8270C	31	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	1.9	ug/Kg	0.26	12	J	

Surface Sediment Analyses **Station ID: PTLA-SC03-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.7	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.61	g/L				
Carbon, Total Organic (TOC)	PSEP	1.08	PERCENT	0.03	0.05		
Solids, Total	E160.3M	88.6	PERCENT				
Solids, Total Volatile	E160.4M	5	mg/Kg		0.1		
Sulfide	PSEP	2.8	mg/Kg	0.2	0.7		VML
Antimony, Total	SW6020	0.1	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	6.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	67	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.29	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	12.8	mg/Kg	0.03	0.23		
Copper, Total	SW6020	12.2	mg/Kg	0.05	0.11		
Iron, Total	SW6010B	15500	mg/Kg	0.5	4.5		
Lead, Total	SW6020	7.18	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	20.1	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.11	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	51.5	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.93	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.93	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.74	5.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	5.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	5.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	57		VLL
2-Methylnaphthalene	SW8270C SIM	7.3	ug/Kg	0.48	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	7.3	ug/Kg	2.7	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.48	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Benz(a)anthracene	SW8270C SIM	0.45	ug/Kg	0.3	12	J	
Benzo(a)pyrene	SW8270C SIM	0.43	ug/Kg	0.32	12	J	
Benzo(b)fluoranthene	SW8270C SIM	2.6	ug/Kg	0.32	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	2.1	ug/Kg	0.23	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses					Station ID - PTLA-SG03-A1		
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Benzoic Acid	SW8270C	60	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	3.4	ug/Kg	3.2	12	J	
Bis(2-ethylhexyl) Phthalate	SW8270C	6.1	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	5	ug/Kg	0.34	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	0.62	ug/Kg	0.41	12	J	
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	12		
Fluoranthene	SW8270C SIM	1.2	ug/Kg	0.39	12	J	
Fluorene	SW8270C SIM	1.8	ug/Kg	0.39	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.86	ug/Kg	0.34	12	J	
Naphthalene	SW8270C SIM	3	ug/Kg	0.48	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	57		
Phenanthrene	SW8270C SIM	8.5	ug/Kg	0.34	12	J	
Phenol	SW8270C	18	ug/Kg	3.2	34	J	
Pyrene	SW8270C SIM	2.1	ug/Kg	0.25	12	J	

Surface Sediment Analyses **Station ID: PTLA-SG03-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.8	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.71	g/L				
Carbon, Total Organic (TOC)	PSEP	1.27	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86.9	PERCENT				
Solids, Total Volatile	E160.4M	5.3	mg/Kg		0.1		
Sulfide	PSEP	1.5	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.08	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.2	mg/Kg	0.1	0.6		
Barium, Total	SW6020	70.1	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.29	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	14.1	mg/Kg	0.03	0.23		
Copper, Total	SW6020	13.4	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	15700	mg/Kg	0.5	4.6		
Lead, Total	SW6020	7.55	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	20.8	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	57	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.95	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.95	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.75	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.82	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.95	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	58		VLL
2-Methylnaphthalene	SW8270C SIM	5.2	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	7.7	ug/Kg	2.7	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	0.4	ug/Kg	0.33	12	J	
Benzo(b)fluoranthene	SW8270C SIM	2	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.23	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses **Station ID: PTLA-SG03-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	33	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.1	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	4.1	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	12		
Fluoranthene	SW8270C SIM	1	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	1.3	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	2.3	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	58		
Phenanthrene	SW8270C SIM	6.4	ug/Kg	0.35	12	J	
Phenol	SW8270C	18	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	1.7	ug/Kg	0.26	12	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG03-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.4	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.58	g/L				
Carbon, Total Organic (TOC)	PSEP	1.04	PERCENT	0.03	0.05		
Solids, Total	E160.3M	84.1	PERCENT				
Solids, Total Volatile	E160.4M	4.7	mg/Kg		0.1		
Sulfide	PSEP	1.4	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	7.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	71.3	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.3	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	14.7	mg/Kg	0.04	0.24		
Copper, Total	SW6020	14.1	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	16400	mg/Kg	0.5	4.8		
Lead, Total	SW6020	8.25	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	22.2	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	62.2	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.98	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.98	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.85	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.98	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	60		VLL
2-Methylnaphthalene	SW8270C SIM	5.5	ug/Kg	0.5	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	5.3	ug/Kg	2.8	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	1.9	ug/Kg	0.34	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG03-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	36	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	2.6	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	4	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	12		
Fluoranthene	SW8270C SIM	0.91	ug/Kg	0.41	12	J	
Fluorene	SW8270C SIM	1.4	ug/Kg	0.41	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	2.5	ug/Kg	0.5	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	60		
Phenanthrene	SW8270C SIM	6.1	ug/Kg	0.36	12	J	
Phenol	SW8270C	21	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	1.6	ug/Kg	0.27	12	J	

Surface Sediment Analyses **Station ID: PTLA-SG05-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.5	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.78	g/L				
Carbon, Total Organic (TOC)	PSEP	0.29	PERCENT	0.02	0.05		
Solids, Total	E160.3M	80.3	PERCENT				
Solids, Total Volatile	E160.4M	2.1	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.06	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4.3	mg/Kg	0.1	0.5		
Barium, Total	SW6020	26.4	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.17	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	8.27	mg/Kg	0.03	0.21		
Copper, Total	SW6020	4.2	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9780	mg/Kg	1	4.2		
Lead, Total	SW6020	2.47	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.014	mg/Kg	0.005	0.009		
Nickel, Total	SW6020	12.9	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	27.4	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.31	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.39	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.31	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	6.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.89	6.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	63		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.53	13		
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	3.5	ug/Kg	3	13	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.53	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.48	13		
Benz(a)anthracene	SW8270C SIM	0.4	ug/Kg	0.33	13	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	13		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG05-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	92	ug/Kg	21	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.5	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	5.5	ug/Kg	2.2	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	0.63	ug/Kg	0.38	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.45	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.6	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	13		
Fluorene	SW8270C SIM	ND	ug/Kg	0.43	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.8	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.5	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.38	13		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.53	13		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.1	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	63		
Phenanthrene	SW8270C SIM	0.87	ug/Kg	0.38	13	J	
Phenol	SW8270C	20	ug/Kg	3.5	38	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.28	13		

Surface Sediment Analyses — Station ID : PTLA-SG05-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.81	g/L				
Carbon, Total Organic (TOC)	PSEP	0.27	PERCENT	0.02	0.05		
Solids, Total	E160.3M	80.2	PERCENT				
Solids, Total Volatile	E160.4M	2.1	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.05	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4	mg/Kg	0.1	0.5		
Barium, Total	SW6020	33.6	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.2	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	9.04	mg/Kg	0.03	0.21		
Copper, Total	SW6020	4.62	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9680	mg/Kg	1	4.2		
Lead, Total	SW6020	2.59	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.016	mg/Kg	0.008	0.016	B	
Nickel, Total	SW6020	13.6	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	28.8	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.31	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.39	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.31	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.82	6.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.89	6.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	63		VLL
2-Methylnaphthalene	SW8270C SIM	0.73	ug/Kg	0.53	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	ND	ug/Kg	3	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.53	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.48	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.33	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	1.1	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	13		

Surface Sediment Analyses						Station ID: PTLA-SG05-A2	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Benzoic Acid	SW8270C	92	ug/Kg	21	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.5	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	64	ug/Kg	2.2	250	J	
Butyl Benzyl Phthalate	SW8270C	8.4	ug/Kg	1.8	13	J	
Chrysene	SW8270C SIM	1.1	ug/Kg	0.38	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.45	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.6	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	13		
Fluorene	SW8270C SIM	0.51	ug/Kg	0.43	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.8	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.5	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.38	13		
Naphthalene	SW8270C SIM	0.56	ug/Kg	0.53	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.1	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	63		
Phenanthrene	SW8270C SIM	1.1	ug/Kg	0.38	13	J	
Phenol	SW8270C	10	ug/Kg	3.5	38	J	
Pyrene	SW8270C SIM	0.54	ug/Kg	0.28	13	J	

Surface Sediment Analyses **Station ID: PTLA-SG05-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.79	g/L				
Carbon, Total Organic (TOC)	PSEP	0.38	PERCENT	0.02	0.05		
Solids, Total	E160.3M	80.7	PERCENT				
Solids, Total Volatile	E160.4M	2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4.2	mg/Kg	0.1	0.5		
Barium, Total	SW6020	32.6	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.2	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	8.94	mg/Kg	0.03	0.21		
Copper, Total	SW6020	4.8	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9550	mg/Kg	1	4.1		
Lead, Total	SW6020	2.75	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.016	mg/Kg	0.006	0.012		
Nickel, Total	SW6020	13.8	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	28.9	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.31	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.31	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	6.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.88	6.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	62		VLL
2-Methylnaphthalene	SW8270C SIM	0.73	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.33	13		VML
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	13		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG05-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	21	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.5	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	13	ug/Kg	2.2	250	J	
Butyl Benzyl Phthalate	SW8270C	8.7	ug/Kg	1.7	13	J	
Chrysene	SW8270C SIM	0.95	ug/Kg	0.38	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.45	13		VML
Dibenzofuran	SW8270C	ND	ug/Kg	3.6	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	5	ug/Kg	3.2	13	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	25		
Fluoranthene	SW8270C SIM	0.61	ug/Kg	0.43	13	J	
Fluorene	SW8270C SIM	ND	ug/Kg	0.43	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.8	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.5	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.38	13		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.52	13		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.1	13		
Pentachlorophenol (PCP)	SW8270C	3.3	ug/Kg	2.9	62	J	
Phenanthrene	SW8270C SIM	1.3	ug/Kg	0.38	13	J	
Phenol	SW8270C	13	ug/Kg	3.5	38	J	
Pyrene	SW8270C SIM	0.45	ug/Kg	0.28	13	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG06-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	3.4	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.81	g/L				
Carbon, Total Organic (TOC)	PSEP	1.72	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86.3	PERCENT				
Solids, Total Volatile	E160.4M	4.2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	7.5	mg/Kg	0.1	0.6		
Barium, Total	SW6020	45	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.28	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	11.2	mg/Kg	0.03	0.23		
Copper, Total	SW6020	11.1	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	14800	mg/Kg	0.5	4.6		
Lead, Total	SW6020	6.19	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	18.7	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	51	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.96	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.96	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.96	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	58		VLL
2-Methylnaphthalene	SW8270C SIM	5.3	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	6.1	ug/Kg	2.7	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	1.2	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.86	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG06-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	33	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	5.2	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	3.2	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	12		
Fluoranthene	SW8270C SIM	0.8	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	1.4	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	2.5	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	58		
Phenanthrene	SW8270C SIM	5.7	ug/Kg	0.35	12	J	
Phenol	SW8270C	21	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	1.3	ug/Kg	0.26	12	J	

Surface Sediment Analyses [illegible] **Station ID : PTLA-SG06-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.4	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.85	g/L				
Carbon, Total Organic (TOC)	PSEP	1.39	PERCENT	0.03	0.05		
Solids, Total	E160.3M	78.3	PERCENT				
Solids, Total Volatile	E160.4M	6	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.07	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	8.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	46.5	mg/Kg	0.01	0.03		
Cadmium, Total	SW6020	0.26	mg/Kg	0.03	0.06		
Chromium, Total	SW6020	11.8	mg/Kg	0.04	0.26		
Copper, Total	SW6020	11.2	mg/Kg	0.05	0.13		
Iron, Total	SW6010B	14800	mg/Kg	0.5	5.1		
Lead, Total	SW6020	6.58	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	20	mg/Kg	0.03	0.26		
Silver, Total	SW6020	0.06	mg/Kg	0.01	0.03		
Zinc, Total	SW6020	52	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.4	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.3	1.3	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	26		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	6.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	6.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.4	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	64		VLL
2-Methylnaphthalene	SW8270C SIM	5.2	ug/Kg	0.54	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.1	13		
4-Methylphenol	SW8270C	ND	ug/Kg	3	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.54	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.41	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.49	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.36	13		
Benzo(b)fluoranthene	SW8270C SIM	1.2	ug/Kg	0.36	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.76	ug/Kg	0.26	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	13		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG06-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	39	ug/Kg	21	260	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.3	ug/Kg	2.2	260	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	3	ug/Kg	0.39	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.7	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.9	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	13		
Fluoranthene	SW8270C SIM	0.8	ug/Kg	0.44	13	J	
Fluorene	SW8270C SIM	1.2	ug/Kg	0.44	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.9	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	13		
Hexachloroethane	SW8270C	ND	ug/Kg	3	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.39	13		
Naphthalene	SW8270C SIM	2.4	ug/Kg	0.54	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	64		
Phenanthrene	SW8270C SIM	5.3	ug/Kg	0.39	13	J	
Phenol	SW8270C	21	ug/Kg	3.6	39	J	
Pyrene	SW8270C SIM	1.4	ug/Kg	0.29	13	J	

Surface Sediment Analyses Station ID: PTLA-SG06-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	5.4	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.82	g/L				
Carbon, Total Organic (TOC)	PSEP	1.05	PERCENT	0.03	0.05		
Solids, Total	E160.3M	88.7	PERCENT				
Solids, Total Volatile	E160.4M	3.8	mg/Kg		0.1		
Sulfide	PSEP	0.7	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.08	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	7.6	mg/Kg	0.1	0.6		
Barium, Total	SW6020	48.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.29	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	11.7	mg/Kg	0.03	0.23		
Copper, Total	SW6020	11	mg/Kg	0.05	0.11		
Iron, Total	SW6010B	13800	mg/Kg	0.5	4.5		
Lead, Total	SW6020	6.48	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	19.2	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	50.8	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.93	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.93	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.74	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	57		VLL
2-Methylnaphthalene	SW8270C SIM	5.3	ug/Kg	0.48	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	10	ug/Kg	2.7	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.48	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Benz(a)anthracene	SW8270C SIM	0.38	ug/Kg	0.3	12	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	1.4	ug/Kg	0.32	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.96	ug/Kg	0.23	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses — **Station ID: PTLA-SG06-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	95	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	23	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	3.4	ug/Kg	0.34	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.41	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	0.85	ug/Kg	0.39	12	J	
Fluorene	SW8270C SIM	1.2	ug/Kg	0.39	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	2.5	ug/Kg	0.48	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	57		
Phenanthrene	SW8270C SIM	5.8	ug/Kg	0.34	12	J	
Phenol	SW8270C	100	ug/Kg	3.2	34		
Pyrene	SW8270C SIM	1.5	ug/Kg	0.25	12	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG06-S1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	4.8	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.82	g/L				
Carbon, Total Organic (TOC)	PSEP	1.03	PERCENT	0.03	0.05		
Solids, Total	E160.3M	85	PERCENT				
Solids, Total Volatile	E160.4M	4.2	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.09	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	7.9	mg/Kg	0.1	0.6		
Barium, Total	SW6020	51.1	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.27	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	12.2	mg/Kg	0.04	0.24		
Copper, Total	SW6020	11.5	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	14300	mg/Kg	0.5	4.7		
Lead, Total	SW6020	6.35	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	19.7	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	51.4	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.97	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.97	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.77	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.97	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		VLL
2-Methylnaphthalene	SW8270C SIM	6.2	ug/Kg	0.5	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	6.5	ug/Kg	2.8	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	1.8	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.88	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses — **Station ID: PTLA-SC[illegible]-S1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	97	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.2	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	3.7	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	0.86	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	1.3	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	2.8	ug/Kg	0.5	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	6.5	ug/Kg	0.36	12	J	
Phenol	SW8270C	23	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	1.4	ug/Kg	0.26	12	J	

Surface Sediment Analyses					Station ID: PTLA-SG07-A1		
Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.7	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.93	g/L				
Carbon, Total Organic (TOC)	PSEP	0.74	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86	PERCENT				
Solids, Total Volatile	E160.4M	2.9	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.05	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	4.9	mg/Kg	0.1	0.3		
Barium, Total	SW6020	31.3	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.11	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	8.02	mg/Kg	0.02	0.12		
Copper, Total	SW6020	6.81	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	9360	mg/Kg	0.6	2.3		
Lead, Total	SW6020	4.63	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	11	mg/Kg	0.01	0.12		
Silver, Total	SW6020	0.06	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	29.5	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.96	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.96	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.96	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.76	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.96	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		
2-Methylnaphthalene	SW8270C SIM	4.7	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	3.9	ug/Kg	2.8	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	1.4	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.68	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses **Station ID: PTLA-SG07-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	89	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.4	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	3.6	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	24		
Fluoranthene	SW8270C SIM	0.93	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	1.2	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	2.1	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	6.2	ug/Kg	0.35	12	J	
Phenol	SW8270C	6.2	ug/Kg	3.3	35	J	
Pyrene	SW8270C SIM	1.3	ug/Kg	0.26	12	J	

Surface Sediment Analyses						Station ID: PTLA-SG07-A2	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	2.1	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	2.01	g/L				
Carbon, Total Organic (TOC)	PSEP	0.76	PERCENT	0.03	0.05		
Solids, Total	E160.3M	90.2	PERCENT				
Solids, Total Volatile	E160.4M	1.5	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.05	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	5.1	mg/Kg	0.1	0.3		
Barium, Total	SW6020	30.5	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.1	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	6.56	mg/Kg	0.02	0.11		
Copper, Total	SW6020	5.89	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	9220	mg/Kg	0.6	2.2		
Lead, Total	SW6020	4.51	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	9.27	mg/Kg	0.01	0.11		
Silver, Total	SW6020	0.04	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	26	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.34	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.91	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.91	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.73	5.6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	5.6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	56		
2-Methylnaphthalene	SW8270C SIM	4.5	ug/Kg	0.47	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	5.9	ug/Kg	2.6	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.47	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.29	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	1.2	ug/Kg	0.32	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.56	ug/Kg	0.23	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG07-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	83	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	10	ug/Kg	1.9	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	3.2	ug/Kg	0.34	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.4	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	5	ug/Kg	2.9	12	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	23		
Fluoranthene	SW8270C SIM	0.78	ug/Kg	0.38	12	J	
Fluorene	SW8270C SIM	1	ug/Kg	0.38	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	2.2	ug/Kg	0.47	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	56		
Phenanthrene	SW8270C SIM	5.1	ug/Kg	0.34	12	J	
Phenol	SW8270C	7.1	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	1.1	ug/Kg	0.25	12	J	

Surface Sediment Analyses — Station ID : PTLA-SG07-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.3	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	2.06	g/L				
Carbon, Total Organic (TOC)	PSEP	0.53	PERCENT	0.03	0.05		
Solids, Total	E160.3M	86.7	PERCENT				
Solids, Total Volatile	E160.4M	2.2	mg/Kg		0.1		
Sulfide	PSEP	1.8	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.04	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	5.2	mg/Kg	0.1	0.3		
Barium, Total	SW6020	25.3	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.09	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	5.09	mg/Kg	0.02	0.12		
Copper, Total	SW6020	5.1	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	5290	mg/Kg	0.6	2.3		
Lead, Total	SW6020	3.72	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	8.5	mg/Kg	0.01	0.12		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	21.1	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.36	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.95	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.95	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.95	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.75	5.6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.82	5.6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.95	5.6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	58		
2-Methylnaphthalene	SW8270C SIM	3	ug/Kg	0.49	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	3	ug/Kg	2.7	12	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	0.73	ug/Kg	0.33	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.29	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG07-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Bis(2-ethylhexyl) Phthalate	SW8270C	8	ug/Kg	2	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	1.6	ug/Kg	0.35	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	4.2	ug/Kg	3	12	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	24		
Fluoranthene	SW8270C SIM	0.55	ug/Kg	0.4	12	J	
Fluorene	SW8270C SIM	0.77	ug/Kg	0.4	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	1.5	ug/Kg	0.49	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	3.9	ug/Kg	2.7	58	J	
Phenanthrene	SW8270C SIM	3.5	ug/Kg	0.35	12	J	
Phenol	SW8270C	11	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	0.73	ug/Kg	0.26	12	J	

Surface Sediment Analyses						Station ID: PTLA-SG08-A1	
Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.8	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.9	g/L				
Carbon, Total Organic (TOC)	PSEP	0.43	PERCENT	0.03	0.05		
Solids, Total	E160.3M	82.8	PERCENT				
Solids, Total Volatile	E160.4M	2.2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.07	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	6.8	mg/Kg	0.1	0.3		
Barium, Total	SW6020	28	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.1	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	7.19	mg/Kg	0.02	0.12		
Copper, Total	SW6020	5.62	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	11400	mg/Kg	0.6	2.4		
Lead, Total	SW6020	4.6	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	11.1	mg/Kg	0.01	0.12		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	30.1	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		
2-Methylnaphthalene	SW8270C SIM	2.7	ug/Kg	0.51	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Benz(a)anthracene	SW8270C SIM	0.62	ug/Kg	0.32	13	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	0.9	ug/Kg	0.34	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses **Station ID: P[illegible]LA-SG08-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Bis(2-ethylhexyl) Phthalate	SW8270C	7	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	1.8	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	0.58	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	0.67	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	1.4	ug/Kg	0.51	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	3.4	ug/Kg	0.37	13	J	
Phenol	SW8270C	5.5	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	0.82	ug/Kg	0.27	13	J	

Surface Sediment Analyses **Station ID : PTLA-SG08-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.9	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.78	g/L				
Carbon, Total Organic (TOC)	PSEP	0.47	PERCENT	0.03	0.05		
Solids, Total	E160.3M	80.4	PERCENT				
Solids, Total Volatile	E160.4M	3.2	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.09	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	7.7	mg/Kg	0.1	0.3		
Barium, Total	SW6020	39	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.16	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	9.43	mg/Kg	0.02	0.12		
Copper, Total	SW6020	8.32	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	13200	mg/Kg	0.6	2.5		
Lead, Total	SW6020	5.91	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	15.3	mg/Kg	0.01	0.12		
Silver, Total	SW6020	0.05	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	40.9	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.31	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.39	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.38	1.3	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	6.1		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.89	6.1		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.1		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	63		
2-Methylnaphthalene	SW8270C SIM	4.9	ug/Kg	0.53	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	25	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.53	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.48	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.33	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	1.4	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.59	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	13		

Surface Sediment Analyses **Station ID: PTLA-SG08-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Bis(2-ethylhexyl) Phthalate	SW8270C	6	ug/Kg	2.2	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	3.9	ug/Kg	0.38	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.45	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.6	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	25		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.43	13	J	
Fluorene	SW8270C SIM	1.3	ug/Kg	0.43	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.8	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.5	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.57	ug/Kg	0.38	13	J	
Naphthalene	SW8270C SIM	2.4	ug/Kg	0.53	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.1	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	63		
Phenanthrene	SW8270C SIM	5.8	ug/Kg	0.38	13	J	
Phenol	SW8270C	14	ug/Kg	3.5	38	J	
Pyrene	SW8270C SIM	1.4	ug/Kg	0.28	13	J	

Surface Sediment Analyses **Station ID: PTLA-SG08-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	3.8	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.89	g/L				
Carbon, Total Organic (TOC)	PSEP	0.53	PERCENT	0.03	0.05		
Solids, Total	E160.3M	81.8	PERCENT				
Solids, Total Volatile	E160.4M	2.2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.06	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	7.2	mg/Kg	0.1	0.3		
Barium, Total	SW6020	32.5	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.13	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	7.94	mg/Kg	0.02	0.12		
Copper, Total	SW6020	6.46	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	12000	mg/Kg	0.6	2.4		
Lead, Total	SW6020	5.01	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	12.4	mg/Kg	0.01	0.12		
Silver, Total	SW6020	0.04	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	33.5	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.87	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	62		
2-Methylnaphthalene	SW8270C SIM	3.3	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	0.32	ug/Kg	0.32	13	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	0.98	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.6	ug/Kg	0.25	13	J	
Benzo(k)fluoranthene	SW8270C SIM	0.62	ug/Kg	0.37	13	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG08-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	77	ug/Kg	21	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	16	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	2.6	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	0.85	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	0.9	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.49	ug/Kg	0.37	13	J	
Naphthalene	SW8270C SIM	1.6	ug/Kg	0.52	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	62		
Phenanthrene	SW8270C SIM	4	ug/Kg	0.37	13	J	
Phenol	SW8270C	6.7	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	1	ug/Kg	0.27	13	J	

Surface Sediment Analyses **Station ID: PTLA-SG09-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	3.2	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.71	g/L				
Carbon, Total Organic (TOC)	PSEP	1.01	PERCENT	0.03	0.05		
Solids, Total	E160.3M	74.4	PERCENT				
Solids, Total Volatile	E160.4M	4.6	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.12	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	8.6	mg/Kg	0.1	0.3		
Barium, Total	SW6020	61.1	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.29	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	13	mg/Kg	0.02	0.13		
Copper, Total	SW6020	12.6	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	16800	mg/Kg	0.7	2.7		
Lead, Total	SW6020	7.9	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	21	mg/Kg	0.01	0.13		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	56.8	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.21	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.33	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.32	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.42	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.33	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	27		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.88	6.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.96	6.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.6	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	21	68		
2-Methylnaphthalene	SW8270C SIM	8	ug/Kg	0.57	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.2	14		
4-Methylphenol	SW8270C	19	ug/Kg	3.2	14		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.57	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.44	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.52	14		
Benz(a)anthracene	SW8270C SIM	0.61	ug/Kg	0.35	14	J	
Benzo(a)pyrene	SW8270C SIM	0.47	ug/Kg	0.38	14	J	
Benzo(b)fluoranthene	SW8270C SIM	2.8	ug/Kg	0.38	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.5	ug/Kg	0.27	14	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	14		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG09-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	23	270	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.7	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	9	ug/Kg	2.3	270	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.9	14		
Chrysene	SW8270C SIM	5.6	ug/Kg	0.41	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.49	14		
Dibenzofuran	SW8270C	ND	ug/Kg	3.9	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.1	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.5	14		
Di-n-butyl Phthalate	SW8270C	7	ug/Kg	3.5	14	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	27		
Fluoranthene	SW8270C SIM	1.7	ug/Kg	0.46	14	J	
Fluorene	SW8270C SIM	2.1	ug/Kg	0.46	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.1	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.7	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.1	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.49	ug/Kg	0.41	14	J	
Naphthalene	SW8270C SIM	3.7	ug/Kg	0.57	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.3	14		
Pentachlorophenol (PCP)	SW8270C	7.8	ug/Kg	3.1	68	J	
Phenanthrene	SW8270C SIM	9.8	ug/Kg	0.41	14	J	
Phenol	SW8270C	9	ug/Kg	3.8	41	J	
Pyrene	SW8270C SIM	2.6	ug/Kg	0.3	14	J	

Surface Sediment Analyses					Station ID: PTLA-SG09-A2		
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	2.4	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.61	g/L				
Carbon, Total Organic (TOC)	PSEP	1.32	PERCENT	0.03	0.05		
Solids, Total	E160.3M	73.8	PERCENT				
Solids, Total Volatile	E160.4M	3.6	mg/Kg		0.1		
Sulfide	PSEP	0.5	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.1	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	9.1	mg/Kg	0.1	0.3		
Barium, Total	SW6020	64	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.27	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	13.8	mg/Kg	0.02	0.14		
Copper, Total	SW6020	13.2	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	17100	mg/Kg	0.7	2.7		
Lead, Total	SW6020	8.2	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.03	mg/Kg		0.01		
Nickel, Total	SW6020	21.7	mg/Kg	0.01	0.14		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	57.3	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.21	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.34	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.32	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.42	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.4	1.4	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	28		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.89	6.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.97	6.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.6	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	21	68		
2-Methylnaphthalene	SW8270C SIM	7.5	ug/Kg	0.57	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.3	14		
4-Methylphenol	SW8270C	5.8	ug/Kg	3.2	14	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.57	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.44	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.52	14		
Benz(a)anthracene	SW8270C SIM	0.7	ug/Kg	0.36	14	J	
Benzo(a)pyrene	SW8270C SIM	0.62	ug/Kg	0.38	14	J	
Benzo(b)fluoranthene	SW8270C SIM	2.4	ug/Kg	0.38	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.4	ug/Kg	0.28	14	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	14		

Surface Sediment Analyses **Station ID: PTLA-SG09-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	100	ug/Kg	23	280	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.8	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	17	ug/Kg	2.4	280	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.9	14		
Chrysene	SW8270C SIM	5.3	ug/Kg	0.41	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.49	14		
Dibenzofuran	SW8270C	ND	ug/Kg	3.9	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.2	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.5	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.5	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	28		
Fluoranthene	SW8270C SIM	1.5	ug/Kg	0.47	14	J	
Fluorene	SW8270C SIM	1.9	ug/Kg	0.47	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.1	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.8	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.2	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.41	14		
Naphthalene	SW8270C SIM	3.5	ug/Kg	0.57	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.3	14		
Pentachlorophenol (PCP)	SW8270C	3.9	ug/Kg	3.1	68	J	
Phenanthrene	SW8270C SIM	9.4	ug/Kg	0.41	14	J	
Phenol	SW8270C	6.8	ug/Kg	3.8	41	J	
Pyrene	SW8270C SIM	2.1	ug/Kg	0.3	14	J	

Surface Sediment Analyses **Station ID: PTLA-SG09-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	14.1	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.67	g/L				
Carbon, Total Organic (TOC)	PSEP	0.94	PERCENT	0.03	0.05		
Solids, Total	E160.3M	72.8	PERCENT				
Solids, Total Volatile	E160.4M	5.1	mg/Kg		0.1		
Sulfide	PSEP	1.2	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.1	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	10.2	mg/Kg	0.1	0.3		
Barium, Total	SW6020	71.9	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.3	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	14.7	mg/Kg	0.02	0.14		
Copper, Total	SW6020	14.7	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	17700	mg/Kg	0.7	2.8		
Lead, Total	SW6020	9.26	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.05	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	23.2	mg/Kg	0.01	0.14		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	61.8	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.21	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.34	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.43	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.34	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	28		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.9	6.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.98	6.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.6	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	21	69		
2-Methylnaphthalene	SW8270C SIM	6.7	ug/Kg	0.58	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.3	14		
4-Methylphenol	SW8270C	12	ug/Kg	3.3	14	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.58	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.44	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.53	14		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.36	14		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.39	14		
Benzo(b)fluoranthene	SW8270C SIM	2.3	ug/Kg	0.39	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	1	ug/Kg	0.28	14	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	14		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG09-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	23	280	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.8	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	12	ug/Kg	2.4	280	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.9	14		
Chrysene	SW8270C SIM	5.4	ug/Kg	0.42	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Dibenzofuran	SW8270C	ND	ug/Kg	4	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.2	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	28		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.47	14	J	
Fluorene	SW8270C SIM	1.8	ug/Kg	0.47	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.2	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.8	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.2	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.42	14		
Naphthalene	SW8270C SIM	3.1	ug/Kg	0.58	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.4	14		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.2	69		
Phenanthrene	SW8270C SIM	8.9	ug/Kg	0.42	14	J	
Phenol	SW8270C	470	ug/Kg	3.8	42		
Pyrene	SW8270C SIM	2.1	ug/Kg	0.31	14	J	
Phenol	SW8270C	10	ug/Kg	2.5	40	J	
Phenol	SW8270C	19	ug/Kg	2.7	42	J	

Surface Sediment Analyses — **Station ID: PTLA-SG10-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.8	g/L				
Carbon, Total Organic (TOC)	PSEP	0.24	PERCENT	0.03	0.05		
Solids, Total	E160.3M	84.8	PERCENT				
Solids, Total Volatile	E160.4M	1.7	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	ND	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	3.2	mg/Kg	0.1	0.4		
Barium, Total	SW6020	13.3	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.04	mg/Kg	0.02	0.04	B	
Chromium, Total	SW6020	4.21	mg/Kg	0.02	0.16		
Copper, Total	SW6020	2.61	mg/Kg	0.03	0.08		
Iron, Total	SW6010B	6170	mg/Kg	0.8	3.1		
Lead, Total	SW6020	1.79	mg/Kg	0.02	0.04		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	6.27	mg/Kg	0.02	0.16		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	14.2	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.97	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.97	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.77	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.97	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.24	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG10-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	74	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	44	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.36	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	0.39	ug/Kg	0.36	12	J	
Phenol	SW8270C	3.4	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses — Station ID: PTLA-SG10-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.75	g/L				
Carbon, Total Organic (TOC)	PSEP	0.27	PERCENT	0.03	0.05		
Solids, Total	E160.3M	83.5	PERCENT				
Solids, Total Volatile	E160.4M	1.6	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.05	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	3.9	mg/Kg	0.1	0.4		
Barium, Total	SW6020	20.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.1	mg/Kg	0.02	0.04		
Chromium, Total	SW6020	5.75	mg/Kg	0.02	0.16		
Copper, Total	SW6020	3.42	mg/Kg	0.03	0.08		
Iron, Total	SW6010B	7450	mg/Kg	0.8	3.2		
Lead, Total	SW6020	2.3	mg/Kg	0.02	0.04		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	8.99	mg/Kg	0.02	0.16		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	21.6	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.99	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.99	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.99	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	60		
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.51	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.24	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses — Station ID: PTLA-SG10-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	82	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	310	ug/Kg	2.1	240		
Butyl Benzyl Phthalate	SW8270C	8.4	ug/Kg	1.7	12	J	
Chrysene	SW8270C SIM	0.41	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	0.52	ug/Kg	0.41	12	J	
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.51	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	60		
Phenanthrene	SW8270C SIM	0.77	ug/Kg	0.36	12	J	
Phenol	SW8270C	6.3	ug/Kg	3.4	36	J	
Pyrene	SW8270C SIM	0.32	ug/Kg	0.27	12	J	

Surface Sediment Analyses **Station ID: PTLA-SG10-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.75	g/L				
Carbon, Total Organic (TOC)	PSEP	0.39	PERCENT	0.03	0.05		
Solids, Total	E160.3M	84.9	PERCENT				
Solids, Total Volatile	E160.4M	1.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.05	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	3.2	mg/Kg	0.1	0.4		
Barium, Total	SW6020	15.4	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.08	mg/Kg	0.02	0.04		
Chromium, Total	SW6020	4.55	mg/Kg	0.02	0.16		
Copper, Total	SW6020	2.95	mg/Kg	0.03	0.08		
Iron, Total	SW6010B	6510	mg/Kg	0.8	3.1		
Lead, Total	SW6020	2	mg/Kg	0.02	0.04		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	7.35	mg/Kg	0.02	0.16		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	16.9	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.97	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.97	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.77	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.97	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(g,h,i)perylene	SW8270C SIM	0.38	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG10-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	80	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	6.2	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	8.5	ug/Kg	1.7	12	J	
Chrysene	SW8270C SIM	0.42	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	0.5	ug/Kg	0.36	12	J	
Phenol	SW8270C	4.5	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses — **Station ID: PTLA-SG11-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	2.11	g/L				
Carbon, Total Organic (TOC)	PSEP	0.19	PERCENT	0.02	0.05		
Solids, Total	E160.3M	89.5	PERCENT				
Solids, Total Volatile	E160.4M	3.7	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.3	mg/Kg	0.1	0.5		
Barium, Total	SW6020	10.6	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.03	mg/Kg	0.02	0.05	B	
Chromium, Total	SW6020	4.38	mg/Kg	0.03	0.19		
Copper, Total	SW6020	2.67	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	6070	mg/Kg	0.9	3.7		
Lead, Total	SW6020	1.61	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	ND	mg/Kg	0.009	0.018		
Nickel, Total	SW6020	6.95	mg/Kg	0.02	0.19		
Silver, Total	SW6020	0.01	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	12.7	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.28	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.92	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.92	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.73	5.6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	5.6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	5.6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	56		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.47	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.47	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG11-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	76	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	5.7	ug/Kg	1.9	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.34	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.41	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.38	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.47	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	56		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Phenol	SW8270C	8.8	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.25	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG11-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	2.22	g/L				
Carbon, Total Organic (TOC)	PSEP	0.25	PERCENT	0.02	0.05		
Solids, Total	E160.3M	89.1	PERCENT				
Solids, Total Volatile	E160.4M	6.3	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.5	mg/Kg	0.1	0.5		
Barium, Total	SW6020	17.6	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.04	mg/Kg	0.02	0.05	B	
Chromium, Total	SW6020	3.82	mg/Kg	0.03	0.19		
Copper, Total	SW6020	2.37	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	4950	mg/Kg	0.9	3.7		
Lead, Total	SW6020	1.96	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.008	mg/Kg	0.007	0.014	B	
Nickel, Total	SW6020	5.64	mg/Kg	0.02	0.19		
Silver, Total	SW6020	ND	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	10.9	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.28	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.93	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.93	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.73	5.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	5.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	5.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	57		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.48	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.48	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG11-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	71	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.2	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.34	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.41	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.39	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.48	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	57		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Phenol	SW8270C	5.8	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.25	12		

Surface Sediment Analyses					Station ID: PTLA-SG11-A3		
Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	2.44	g/L				
Carbon, Total Organic (TOC)	PSEP	0.32	PERCENT	0.02	0.05		
Solids, Total	E160.3M	89.8	PERCENT				
Solids, Total Volatile	E160.4M	3.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.7	mg/Kg	0.1	0.5		
Barium, Total	SW6020	8.26	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.03	mg/Kg	0.02	0.05	B	
Chromium, Total	SW6020	4.11	mg/Kg	0.03	0.19		
Copper, Total	SW6020	4.3	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	5320	mg/Kg	0.9	3.7		
Lead, Total	SW6020	1.66	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	ND	mg/Kg	0.006	0.012		
Nickel, Total	SW6020	6.11	mg/Kg	0.02	0.19		
Silver, Total	SW6020	0.01	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	11.4	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.28	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.92	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.92	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.73	5.6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	5.6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	5.6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	56		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.47	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.47	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.29	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG11-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	76	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	18	ug/Kg	1.9	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.34	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.41	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.38	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	0.6	ug/Kg	0.47	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	56		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Phenol	SW8270C	6.6	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.25	12		

Surface Sediment Analyses Station ID: PTLA-SG13-A1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	3.8	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.92	g/L				
Carbon, Total Organic (TOC)	PSEP	0.45	PERCENT	0.03	0.05		
Solids, Total	E160.3M	78.5	PERCENT				
Sulfide	PSEP	4	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.06	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	9	mg/Kg	0.1	0.5		
Barium, Total	SW6020	30.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.1	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	6.98	mg/Kg	0.03	0.21		
Copper, Total	SW6020	5.4	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	11200	mg/Kg	0.4	4.3		
Lead, Total	SW6020	4.81	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	9.89	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	29.3	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.39	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.31	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	26		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	6.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	6.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.4	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	64		VLL
2-Methylnaphthalene	SW8270C SIM	2.2	ug/Kg	0.54	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.1	13		
4-Methylphenol	SW8270C	72	ug/Kg	3	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.54	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.41	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.49	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.36	13		
Benzo(b)fluoranthene	SW8270C SIM	0.98	ug/Kg	0.36	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.75	ug/Kg	0.26	13	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	13		
Benzoic Acid	SW8270C	100	ug/Kg	21	260	J	

Surface Sediment Analyses **Station ID: PTLA-SG13-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	160	260		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	2.6	ug/Kg	0.39	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.7	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.9	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	26		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.44	13		
Fluorene	SW8270C SIM	0.61	ug/Kg	0.44	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.9	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	13		
Hexachloroethane	SW8270C	ND	ug/Kg	3	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.39	13		
Naphthalene	SW8270C SIM	1.3	ug/Kg	0.54	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.1	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	64		
Phenanthrene	SW8270C SIM	3.2	ug/Kg	0.39	13	J	
Phenol	SW8270C	49	ug/Kg	3.6	39		
Pyrene	SW8270C SIM	0.74	ug/Kg	0.28	13	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG13-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.7	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	2.04	g/L				
Carbon, Total Organic (TOC)	PSEP	0.64	PERCENT	0.03	0.05		
Solids, Total	E160.3M	81.3	PERCENT				
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	ND	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	8	mg/Kg	0.1	0.6		
Barium, Total	SW6020	34	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.1	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	7.72	mg/Kg	0.04	0.25		
Copper, Total	SW6020	9.03	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	11300	mg/Kg	0.5	4.9		
Lead, Total	SW6020	5.25	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	11.1	mg/Kg	0.02	0.25		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	33.6	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.31	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	6.1		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.88	6.1		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.1		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.3	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	62		VLL
2-Methylnaphthalene	SW8270C SIM	2	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	14	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.4	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	0.75	ug/Kg	0.35	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		
Benzoic Acid	SW8270C	100	ug/Kg	21	250	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG13-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	160	250		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	2.1	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.45	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.6	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.8	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	13		
Fluorene	SW8270C SIM	0.53	ug/Kg	0.42	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.8	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	1.1	ug/Kg	0.52	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	62		
Phenanthrene	SW8270C SIM	2.8	ug/Kg	0.37	13	J	
Phenol	SW8270C	33	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	0.63	ug/Kg	0.28	13	J	

Surface Sediment Analyses **Station ID: PTLA-SG13-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.2	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	2.06	g/L				
Carbon, Total Organic (TOC)	PSEP	0.7	PERCENT	0.03	0.05		
Solids, Total	E160.3M	78.4	PERCENT				
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.07	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	7.6	mg/Kg	0.1	0.5		
Barium, Total	SW6020	41.8	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.13	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	8.98	mg/Kg	0.03	0.21		
Copper, Total	SW6020	6.88	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	13200	mg/Kg	0.4	4.2		
Lead, Total	SW6020	5.24	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.01	B	
Nickel, Total	SW6020	12.8	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.05	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	35	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	0.78	ug/Kg	0.3	1.3	J	
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.4	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.3	1.3	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	1.9	1.9	i	
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.3		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.83	6.3		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	6.3		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.3		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.4	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	64		VLL
2-Methylnaphthalene	SW8270C SIM	2.9	ug/Kg	0.54	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.1	13		
4-Methylphenol	SW8270C	38	ug/Kg	3	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.54	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.41	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.49	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.36	13		
Benzo(b)fluoranthene	SW8270C SIM	0.94	ug/Kg	0.36	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.26	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	13		
Benzoic Acid	SW8270C	120	ug/Kg	21	260	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	160	260		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	13		
Chrysene	SW8270C SIM	2.8	ug/Kg	0.39	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.7	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.9	13		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG13-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.3	13		
Di-n-butyl Phthalate	SW8270C	4.1	ug/Kg	3.3	13	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.1	26		
Fluoranthene	SW8270C SIM	0.88	ug/Kg	0.44	13	J	
Fluorene	SW8270C SIM	0.76	ug/Kg	0.44	13	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.9	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	13		
Hexachloroethane	SW8270C	ND	ug/Kg	3	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.39	13		
Naphthalene	SW8270C SIM	1.5	ug/Kg	0.54	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.1	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.9	64		
Phenanthrene	SW8270C SIM	3.8	ug/Kg	0.39	13	J	
Phenol	SW8270C	47	ug/Kg	3.6	39		
Pyrene	SW8270C SIM	0.93	ug/Kg	0.29	13	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG14-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.1	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.65	g/L				
Carbon, Total Organic (TOC)	PSEP	1.85	PERCENT	0.03	0.05		
Solids, Total	E160.3M	70.1	PERCENT				
Solids, Total Volatile	E160.4M	7.1	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.11	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	9	mg/Kg	0.1	0.4		
Barium, Total	SW6020	63.6	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.33	mg/Kg	0.01	0.04		
Chromium, Total	SW6020	15.9	mg/Kg	0.02	0.14		
Copper, Total	SW6020	17.8	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	18200	mg/Kg	0.7	2.9		
Lead, Total	SW6020	10.2	mg/Kg	0.02	0.04		
Mercury, Total	SW7471A	0.05	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	24.7	mg/Kg	0.01	0.14		
Silver, Total	SW6020	0.11	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	65.4	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.25	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.34	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.44	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.35	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	7.1		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7.1		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7.1		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.8	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	72		
2-Methylnaphthalene	SW8270C SIM	10	ug/Kg	0.6	15	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
4-Methylphenol	SW8270C	9.6	ug/Kg	3.4	15	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.6	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.46	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.55	15		
Benz(a)anthracene	SW8270C SIM	0.76	ug/Kg	0.38	15	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(b)fluoranthene	SW8270C SIM	2.6	ug/Kg	0.4	15	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.29	15	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	15		

Surface Sediment Analyses [illegible] Station ID - PTLA-SG14-A1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	130	ug/Kg	24	290	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	4	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	25	ug/Kg	2.5	290	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	6	ug/Kg	0.43	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.52	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.1	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.4	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-butyl Phthalate	SW8270C	7.1	ug/Kg	3.7	15	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.4	29		
Fluoranthene	SW8270C SIM	1.6	ug/Kg	0.49	15	J	
Fluorene	SW8270C SIM	2.3	ug/Kg	0.49	15	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.3	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	4	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Naphthalene	SW8270C SIM	5	ug/Kg	0.6	15	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.5	15		
Pentachlorophenol (PCP)	SW8270C	3.6	ug/Kg	3.3	72	J	
Phenanthrene	SW8270C SIM	12	ug/Kg	0.43	15	J	
Phenol	SW8270C	9.8	ug/Kg	4	43	J	
Pyrene	SW8270C SIM	2.4	ug/Kg	0.32	15	J	

Surface Sediment Analyses						Station ID: PTLA-SG14-A2	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	2.1	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.68	g/L				
Carbon, Total Organic (TOC)	PSEP	1.49	PERCENT	0.03	0.05		
Solids, Total	E160.3M	69.8	PERCENT				
Solids, Total Volatile	E160.4M	5.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.1	mg/Kg	0.04	0.04		
Arsenic, Total	SW6020	7.9	mg/Kg	0.1	0.4		
Barium, Total	SW6020	53.8	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.28	mg/Kg	0.01	0.04		
Chromium, Total	SW6020	13.5	mg/Kg	0.02	0.14		
Copper, Total	SW6020	15.1	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	17700	mg/Kg	0.7	2.9		
Lead, Total	SW6020	8.72	mg/Kg	0.02	0.04		
Mercury, Total	SW7471A	0.05	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	21.6	mg/Kg	0.01	0.14		
Silver, Total	SW6020	0.1	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	57.5	mg/Kg	0.1	0.4		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.36	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.25	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.34	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.44	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.35	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.22	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	7.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.8	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	72		
2-Methylnaphthalene	SW8270C SIM	12	ug/Kg	0.61	15	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.5	15		
4-Methylphenol	SW8270C	11	ug/Kg	3.4	15	J	
Acenaphthene	SW8270C SIM	0.65	ug/Kg	0.61	15	J	
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.46	15		
Anthracene	SW8270C SIM	0.75	ug/Kg	0.55	15	J	
Benz(a)anthracene	SW8270C SIM	0.68	ug/Kg	0.38	15	J	
Benzo(a)pyrene	SW8270C SIM	0.81	ug/Kg	0.41	15	J	
Benzo(b)fluoranthene	SW8270C SIM	2.5	ug/Kg	0.41	15	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.4	ug/Kg	0.29	15	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	15		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG14-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	120	ug/Kg	24	290	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	4	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	24	ug/Kg	2.5	290	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	6.5	ug/Kg	0.43	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.52	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.1	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.4	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-butyl Phthalate	SW8270C	4	ug/Kg	3.7	15	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.4	29		
Fluoranthene	SW8270C SIM	1.5	ug/Kg	0.49	15	J	
Fluorene	SW8270C SIM	2.4	ug/Kg	0.49	15	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.4	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	4	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Naphthalene	SW8270C SIM	5.9	ug/Kg	0.61	15	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.5	15		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.3	72		
Phenanthrene	SW8270C SIM	13	ug/Kg	0.43	15	J	
Phenol	SW8270C	16	ug/Kg	4	43	J	
Pyrene	SW8270C SIM	2.6	ug/Kg	0.32	15	J	

Surface Sediment Analyses — Station ID: PTLA-SG14-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	8	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.45	g/L				
Carbon, Total Organic (TOC)	PSEP	2.09	PERCENT	0.03	0.05		
Solids, Total	E160.3M	71.9	PERCENT				
Solids, Total Volatile	E160.4M	4.7	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.11	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	8.2	mg/Kg	0.1	0.3		
Barium, Total	SW6020	38.8	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.21	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	10.4	mg/Kg	0.02	0.14		
Copper, Total	SW6020	15.2	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	12400	mg/Kg	0.7	2.8		
Lead, Total	SW6020	8.28	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	16.7	mg/Kg	0.01	0.14		
Silver, Total	SW6020	0.09	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	46.4	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.4		
alpha-Chlordane	SW8081A	0.15	ug/Kg	0.15	1.4	J	
Dieldrin	SW8081A	ND	ug/Kg	0.43	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.34	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	28		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	0.91		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.99	0.99		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	1.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.7	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	70		
2-Methylnaphthalene	SW8270C SIM	10	ug/Kg	0.59	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	14		
4-Methylphenol	SW8270C	46	ug/Kg	3.3	14		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.59	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.45	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.53	14		
Benz(a)anthracene	SW8270C SIM	0.51	ug/Kg	0.37	14	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.39	14		
Benzo(b)fluoranthene	SW8270C SIM	2.2	ug/Kg	0.39	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	1	ug/Kg	0.28	14	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	14		

Surface Sediment Analyses **Station ID: PTLA-SG14-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	120	ug/Kg	23	280	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.9	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	6.8	ug/Kg	2.4	280	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	14		
Chrysene	SW8270C SIM	4.5	ug/Kg	0.42	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Dibenzofuran	SW8270C	ND	ug/Kg	4	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.3	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-butyl Phthalate	SW8270C	4.7	ug/Kg	3.6	14	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	28		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.48	14	J	
Fluorene	SW8270C SIM	2.2	ug/Kg	0.48	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.2	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.9	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.2	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.42	14		
Naphthalene	SW8270C SIM	4.9	ug/Kg	0.59	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.4	14		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.2	70		
Phenanthrene	SW8270C SIM	10	ug/Kg	0.42	14	J	
Phenol	SW8270C	200	ug/Kg	3.9	42		
Pyrene	SW8270C SIM	2	ug/Kg	0.31	14	J	

Surface Sediment Analyses **Station ID: PTLA-SG15-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.9	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.72	g/L				
Carbon, Total Organic (TOC)	PSEP	1.17	PERCENT	0.03	0.05		
Solids, Total	E160.3M	76.6	PERCENT				
Solids, Total Volatile	E160.4M	3.5	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.1	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	7.6	mg/Kg	0.1	0.3		
Barium, Total	SW6020	45.2	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.24	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	12	mg/Kg	0.02	0.13		
Copper, Total	SW6020	12.2	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	15000	mg/Kg	0.7	2.6		
Lead, Total	SW6020	8.39	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	18.9	mg/Kg	0.01	0.13		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	51.6	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.31	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.4	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.32	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	27		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.85	6.4		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	6.4		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.4		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.5	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	66		
2-Methylnaphthalene	SW8270C SIM	8.2	ug/Kg	0.55	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.2	14		
4-Methylphenol	SW8270C	8	ug/Kg	3.1	14	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.55	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.42	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.34	14		
Benzo(a)pyrene	SW8270C SIM	0.42	ug/Kg	0.37	14	J	
Benzo(b)fluoranthene	SW8270C SIM	1.9	ug/Kg	0.37	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.27	14		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.4	14		

Surface Sediment Analyses **Station ID: PTLA-SG15-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	22	270	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	6.4	ug/Kg	2.3	270	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	14		
Chrysene	SW8270C SIM	4.3	ug/Kg	0.4	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.47	14		
Dibenzofuran	SW8270C	ND	ug/Kg	3.8	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.4	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.4	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	27		
Fluoranthene	SW8270C SIM	1	ug/Kg	0.45	14	J	
Fluorene	SW8270C SIM	1.9	ug/Kg	0.45	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.1	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.4	14		
Naphthalene	SW8270C SIM	3.8	ug/Kg	0.55	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	14		
Pentachlorophenol (PCP)	SW8270C	4.9	ug/Kg	3	66	J	
Phenanthrene	SW8270C SIM	9.1	ug/Kg	0.4	14	J	
Phenol	SW8270C	13	ug/Kg	3.7	40	J	
Pyrene	SW8270C SIM	1.8	ug/Kg	0.29	14	J	

Surface Sediment Analyses — **Station ID: PTLA-SG15-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.3	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.69	g/L				
Carbon, Total Organic (TOC)	PSEP	1.12	PERCENT	0.03	0.05		
Solids, Total	E160.3M	76.4	PERCENT				
Solids, Total Volatile	E160.4M	4.8	mg/Kg		0.1		
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.11	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	7.4	mg/Kg	0.1	0.3		
Barium, Total	SW6020	39.9	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.2	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	10.7	mg/Kg	0.02	0.13		
Copper, Total	SW6020	11.1	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	15000	mg/Kg	0.7	2.6		
Lead, Total	SW6020	7.75	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.01		
Nickel, Total	SW6020	16.9	mg/Kg	0.01	0.13		
Silver, Total	SW6020	0.07	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	46.2	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.33	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.31	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.41	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.32	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	27		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	6.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	6.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.5	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	66		
2-Methylnaphthalene	SW8270C SIM	7.9	ug/Kg	0.55	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.2	14		
4-Methylphenol	SW8270C	21	ug/Kg	3.1	14		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.55	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.42	14		
Anthracene	SW8270C SIM	0.68	ug/Kg	0.5	14	J	
Benz(a)anthracene	SW8270C SIM	0.69	ug/Kg	0.34	14	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.37	14		
Benzo(b)fluoranthene	SW8270C SIM	1.8	ug/Kg	0.37	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.9	ug/Kg	0.27	14	J	
Benzo(k)fluoranthene	SW8270C SIM	0.62	ug/Kg	0.4	14	J	

Surface Sediment Analyses Station ID: PTLA-SG15-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	22	270	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.6	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	9.7	ug/Kg	2.3	270	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.8	14		
Chrysene	SW8270C SIM	4.6	ug/Kg	0.4	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	0.53	ug/Kg	0.48	14	J	
Dibenzofuran	SW8270C	ND	ug/Kg	3.8	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.4	14		
Di-n-butyl Phthalate	SW8270C	4.4	ug/Kg	3.4	14	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	27		
Fluoranthene	SW8270C SIM	1.4	ug/Kg	0.45	14	J	
Fluorene	SW8270C SIM	1.8	ug/Kg	0.45	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.6	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.1	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	0.57	ug/Kg	0.4	14	J	
Naphthalene	SW8270C SIM	3.5	ug/Kg	0.55	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	14		
Pentachlorophenol (PCP)	SW8270C	3.3	ug/Kg	3	66	J	
Phenanthrene	SW8270C SIM	9.2	ug/Kg	0.4	14	J	
Phenol	SW8270C	20	ug/Kg	3.7	40	J	
Pyrene	SW8270C SIM	2.2	ug/Kg	0.29	14	J	

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG15-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	2.6	mg/Kg	0.3	0.4		
Bulk Density	SM 2710F	1.63	g/L				
Carbon, Total Organic (TOC)	PSEP	1.34	PERCENT	0.03	0.05		
Solids, Total	E160.3M	76	PERCENT				
Solids, Total Volatile	E160.4M	6.1	mg/Kg		0.1		
Sulfide	PSEP	1.2	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.1	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	8.9	mg/Kg	0.1	0.3		
Barium, Total	SW6020	43.4	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.25	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	11.9	mg/Kg	0.02	0.13		
Copper, Total	SW6020	12.5	mg/Kg	0.03	0.07		
Iron, Total	SW6010B	15100	mg/Kg	0.7	2.6		
Lead, Total	SW6020	8.39	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	19.1	mg/Kg	0.01	0.13		
Silver, Total	SW6020	0.08	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	51.1	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.33	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.23	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.31	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.41	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.32	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.2	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.1	27		
Aroclor 1232	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.1	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.1	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	6.6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	6.6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	6.6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.5	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	20	66		
2-Methylnaphthalene	SW8270C SIM	8.8	ug/Kg	0.56	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.2	14		
4-Methylphenol	SW8270C	7.9	ug/Kg	3.1	14	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.56	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.43	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.5	14		
Benz(a)anthracene	SW8270C SIM	0.68	ug/Kg	0.35	14	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.37	14		
Benzo(b)fluoranthene	SW8270C SIM	2.2	ug/Kg	0.37	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.1	ug/Kg	0.27	14	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.4	14		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG15-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	110	ug/Kg	22	270	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.7	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	7.7	ug/Kg	2.3	270	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.9	14		
Chrysene	SW8270C SIM	4.6	ug/Kg	0.4	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.48	14		
Dibenzofuran	SW8270C	ND	ug/Kg	3.8	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.4	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.4	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.2	27		
Fluoranthene	SW8270C SIM	1.2	ug/Kg	0.45	14	J	
Fluorene	SW8270C SIM	1.9	ug/Kg	0.45	14	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.7	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.1	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.4	14		
Naphthalene	SW8270C SIM	4.2	ug/Kg	0.56	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.2	14		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3	66		
Phenanthrene	SW8270C SIM	9.5	ug/Kg	0.4	14	J	
Phenol	SW8270C	14	ug/Kg	3.7	40	J	
Pyrene	SW8270C SIM	2	ug/Kg	0.29	14	J	

Surface Sediment Analyses — Station ID: PTLA-SG16-A1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.81	g/L				
Carbon, Total Organic (TOC)	PSEP	0.64	PERCENT	0.03	0.05		
Solids, Total	E160.3M	87.3	PERCENT				
Solids, Total Volatile	E160.4M	1.3	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.06	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	4.2	mg/Kg	0.1	0.6		
Barium, Total	SW6020	11.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.13	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	5.9	mg/Kg	0.03	0.23		
Copper, Total	SW6020	3.45	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	7430	mg/Kg	0.5	4.6		
Lead, Total	SW6020	2.28	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	10	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	23	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.2	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.32	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.22	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.3	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.4	1.3		
gamma-BHC (Lindane)	SW8081A	0.56	ug/Kg	0.32	1.3	J	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.19	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.18	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.94	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.94	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.75	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.82	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	58		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.49	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.49	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.33	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses **Station ID: PTLA-SC16-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	81	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.2	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.35	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.39	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.49	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	58		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Phenol	SW8270C	11	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses Station ID: PTLA-SG16-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.9	g/L				
Carbon, Total Organic (TOC)	PSEP	0.16	PERCENT	0.03	0.05		
Solids, Total	E160.3M	91.1	PERCENT				
Solids, Total Volatile	E160.4M	1.2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.06	mg/Kg	0.05	0.05	N	
Arsenic, Total	SW6020	4.2	mg/Kg	0.1	0.5		
Barium, Total	SW6020	12.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.11	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	5.3	mg/Kg	0.03	0.22		
Copper, Total	SW6020	3.14	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	6590	mg/Kg	0.4	4.4		
Lead, Total	SW6020	2.13	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	9.18	mg/Kg	0.02	0.22		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	21.4	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.1		
4,4'-DDE	SW8081A	ND	ug/Kg	0.27	1.1		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.1		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.1		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.1		
Dieldrin	SW8081A	ND	ug/Kg	0.34	1.1		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.1		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.1		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.1		
Aroclor 1016	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1221	SW8082	ND	ug/Kg	0.91	22		
Aroclor 1232	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1242	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1248	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1254	SW8082	ND	ug/Kg	0.91	11		
Aroclor 1260	SW8082	ND	ug/Kg	0.91	11		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.72	5.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	5.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.9	11		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	55		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.46	11		
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	11		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	11		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.46	11		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	11		
Anthracene	SW8270C SIM	ND	ug/Kg	0.42	11		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.29	11		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.31	11		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.31	11		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.22	11		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.33	11		

Surface Sediment Analyses [illegible] Station ID - PTLA-SG16-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	78	ug/Kg	19	220	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	11		
Bis(2-ethylhexyl) Phthalate	SW8270C	3.9	ug/Kg	1.9	220	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	11		
Chrysene	SW8270C SIM	ND	ug/Kg	0.33	11		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.4	11		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	11		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	11		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	11		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	11		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	22		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	11		
Fluorene	SW8270C SIM	ND	ug/Kg	0.38	11		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	11		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	11		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	11		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.33	11		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.46	11		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	11		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.5	55		
Phenanthrene	SW8270C SIM	0.38	ug/Kg	0.33	11	J	
Phenol	SW8270C	13	ug/Kg	3.1	33	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.25	11		

Surface Sediment Analyses — Station ID: PTLA-SG16-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.87	g/L				
Carbon, Total Organic (TOC)	PSEP	0.18	PERCENT	0.03	0.05		
Solids, Total	E160.3M	90.1	PERCENT				
Solids, Total Volatile	E160.4M	1.3	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	5	mg/Kg	0.1	0.6		
Barium, Total	SW6020	19.4	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.12	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	6.54	mg/Kg	0.03	0.22		
Copper, Total	SW6020	3.37	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	7970	mg/Kg	0.4	4.4		
Lead, Total	SW6020	2.45	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.01	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	10.2	mg/Kg	0.02	0.22		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	24.6	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.12	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.34	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.92	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.92	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.92	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.73	5.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	5.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	56		VLL
2-Methylnaphthalene	SW8270C SIM	0.66	ug/Kg	0.48	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	12		
Acenaphthene	SW8270C SIM	0.51	ug/Kg	0.48	12	J	
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses [illegible] Station ID: PTLA-SC16-[illegible]3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	79	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.5	ug/Kg	1.9	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.35	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.39	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	3	ug/Kg	0.48	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	12		
Pentachlorophenol (PCP)	SW8270C	8.6	ug/Kg	2.6	56	J	
Phenanthrene	SW8270C SIM	0.4	ug/Kg	0.35	12	J	
Phenol	SW8270C	8.4	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses						Station ID: PTLA-SG17-A1	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.83	g/L				
Carbon, Total Organic (TOC)	PSEP	0.23	PERCENT	0.03	0.05		
Solids, Total	E160.3M	87.8	PERCENT				
Solids, Total Volatile	E160.4M	0.9	mg/Kg		0.1		
Sulfide	PSEP	0.8	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	ND	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	4.1	mg/Kg	0.1	0.6		
Barium, Total	SW6020	13.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.06	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	4.6	mg/Kg	0.03	0.23		
Copper, Total	SW6020	2.36	mg/Kg	0.05	0.11		
Iron, Total	SW6010B	6800	mg/Kg	0.5	4.6		
Lead, Total	SW6020	1.6	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	6.73	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	17.6	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.28	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.94	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.94	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.94	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.75	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	57		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.48	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.48	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.37	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.3	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	12		

Surface Sediment Analyses **Station ID : PTLA-SG17-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	83	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	3	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.35	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.41	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.39	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.39	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.5	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.7	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.35	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.48	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	57		
Phenanthrene	SW8270C SIM	0.44	ug/Kg	0.35	12	J	
Phenol	SW8270C	11	ug/Kg	3.2	35	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses — **Station ID: PTLA-SG17-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.92	g/L				
Carbon, Total Organic (TOC)	PSEP	0.09	PERCENT	0.03	0.05		
Solids, Total	E160.3M	88.6	PERCENT				
Solids, Total Volatile	E160.4M	1.2	mg/Kg		0.1		
Sulfide	PSEP	0.2	mg/Kg	0.2	0.7	J	
Antimony, Total	SW6020	0.07	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	4.6	mg/Kg	0.1	0.6		
Barium, Total	SW6020	14.3	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.08	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	4.72	mg/Kg	0.03	0.23		
Copper, Total	SW6020	2.31	mg/Kg	0.05	0.11		
Iron, Total	SW6010B	8210	mg/Kg	0.5	4.5		
Lead, Total	SW6020	1.78	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	7.27	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	18.5	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.27	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.35	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.28	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.93	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.93	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.93	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.74	5.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.81	5.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.93	5.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	57		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.24	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTLA-SG17-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	80	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.2	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	2.3	ug/Kg	2	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.36	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.3	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.5	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.9	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.2	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.8	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	57		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Phenol	SW8270C	12	ug/Kg	3.2	34	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses [illegible]

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4	X	
Bulk Density	SM 2710F	1.92	g/L				
Carbon, Total Organic (TOC)	PSEP	0.15	PERCENT	0.03	0.05		
Solids, Total	E160.3M	84.6	PERCENT				
Solids, Total Volatile	E160.4M	1.6	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.06	0.06	N	
Arsenic, Total	SW6020	5.1	mg/Kg	0.1	0.6		
Barium, Total	SW6020	19.5	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.09	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	5.26	mg/Kg	0.04	0.24		
Copper, Total	SW6020	2.66	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	7870	mg/Kg	0.5	4.7		
Lead, Total	SW6020	2.04	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	ND	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	7.95	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02	B	
Zinc, Total	SW6020	21.4	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.29	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.2	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.29	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.16	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.97	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.97	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.97	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.77	6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.84	6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.97	6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.1	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	59		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.45	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.24	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] Station ID: PTLA-SG17-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	80	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	15	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	ND	ug/Kg	0.36	12		
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.41	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.5	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.7	59		
Phenanthrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Phenol	SW8270C	7.9	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.26	12		

Surface Sediment Analyses [illegible] Station ID: [illegible]

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.2	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.78	g/L				
Carbon, Total Organic (TOC)	PSEP	0.39	PERCENT	0.02	0.05		
Solids, Total	E160.3M	82.7	PERCENT				
Solids, Total Volatile	E160.4M	2.5	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.1	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4.3	mg/Kg	0.1	0.5		
Barium, Total	SW6020	35.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.2	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	9.15	mg/Kg	0.03	0.2		
Copper, Total	SW6020	5.19	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	10000	mg/Kg	1	4		
Lead, Total	SW6020	2.88	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.016	mg/Kg	0.005	0.011		
Nickel, Total	SW6020	14.3	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	29.4	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	0.91	ug/Kg	0.51	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Benz(a)anthracene	SW8270C SIM	0.41	ug/Kg	0.32	13	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses [illegible] Station ID: [illegible]

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	88	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.8	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	0.82	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	10	ug/Kg	3.2	13	J	
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	13		
Fluorene	SW8270C SIM	ND	ug/Kg	0.42	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	0.54	ug/Kg	0.51	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	1.4	ug/Kg	0.37	13	J	
Phenol	SW8270C	13	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	0.41	ug/Kg	0.27	13	J	

Surface Sediment Analyses **Station ID: PTME-SG01-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.3	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.8	g/L				
Carbon, Total Organic (TOC)	PSEP	0.18	PERCENT	0.02	0.05		
Solids, Total	E160.3M	82.8	PERCENT				
Solids, Total Volatile	E160.4M	1.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.07	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.8	mg/Kg	0.1	0.5		
Barium, Total	SW6020	30.5	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.17	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	7.25	mg/Kg	0.03	0.2		
Copper, Total	SW6020	4.53	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9610	mg/Kg	1	4		
Lead, Total	SW6020	2.5	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.015	mg/Kg	0.006	0.012		
Nickel, Total	SW6020	12.2	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.04	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	25.6	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	0.53	ug/Kg	0.51	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	0.49	ug/Kg	0.34	13	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses [illegible] Station ID: PTME-SG01-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	89	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	10	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	0.6	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	5.7	ug/Kg	3.7	13	J	
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	0.43	ug/Kg	0.42	13	J	
Fluorene	SW8270C SIM	ND	ug/Kg	0.42	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	0.91	ug/Kg	0.37	13	J	
Phenol	SW8270C	8.9	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	0.41	ug/Kg	0.27	13	J	

Surface Sediment Analyses [illegible] **Station ID: PTME-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.4	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.83	g/L				
Carbon, Total Organic (TOC)	PSEP	0.25	PERCENT	0.02	0.05		
Solids, Total	E160.3M	82	PERCENT				
Solids, Total Volatile	E160.4M	2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4.7	mg/Kg	0.1	0.5		
Barium, Total	SW6020	47.5	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.18	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	8.62	mg/Kg	0.03	0.2		
Copper, Total	SW6020	4.58	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	10800	mg/Kg	1	4.1		
Lead, Total	SW6020	2.75	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.015	mg/Kg	0.008	0.015	B	
Nickel, Total	SW6020	13.7	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	28.8	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.14	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.8	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.87	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	0.55	ug/Kg	0.52	13	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.52	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.35	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses [illegible] **Station ID: P[illegible]ME-SG01-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	85	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.3	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	0.55	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	13		
Fluorene	SW8270C SIM	ND	ug/Kg	0.42	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.9	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	0.53	ug/Kg	0.52	13	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	0.89	ug/Kg	0.37	13	J	
Phenol	SW8270C	9.6	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.27	13		

Surface Sediment Analyses **Station ID: PTME-SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.8	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	2	g/L				
Carbon, Total Organic (TOC)	PSEP	1.02	PERCENT	0.02	0.05		
Solids, Total	E160.3M	84.3	PERCENT				
Solids, Total Volatile	E160.4M	3.6	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.06	mg/Kg	0.03	0.03		
Arsenic, Total	SW6020	5.1	mg/Kg	0.1	0.3		
Barium, Total	SW6020	60.3	mg/Kg	0.01	0.01		
Cadmium, Total	SW6020	0.16	mg/Kg	0.01	0.03		
Chromium, Total	SW6020	8.99	mg/Kg	0.02	0.12		
Copper, Total	SW6020	7.94	mg/Kg	0.02	0.06		
Iron, Total	SW6010B	11700	mg/Kg	0.6	2.4		
Lead, Total	SW6020	4.44	mg/Kg	0.02	0.03		
Mercury, Total	SW7471A	0.063	mg/Kg	0.006	0.012		
Nickel, Total	SW6020	13.5	mg/Kg	0.01	0.12		
Silver, Total	SW6020	0.04	mg/Kg	0.01	0.01		
Zinc, Total	SW6020	30.6	mg/Kg	0.1	0.3		
4,4'-DDD	SW8081A	ND	ug/Kg	0.18	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	1.2	1.2	i	
gamma-Chlordane	SW8081A	ND	ug/Kg	0.22	1.2	i	
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.98	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.98	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.98	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.85	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.98	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	18	60		VLL
2-Methylnaphthalene	SW8270C SIM	2.8	ug/Kg	0.5	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.5	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.38	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	1.2	ug/Kg	0.34	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.54	ug/Kg	0.24	12	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTMS-SG02-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	97	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	4.7	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	2.5	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.43	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.4	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.6	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	0.81	ug/Kg	0.41	12	J	
Fluorene	SW8270C SIM	0.78	ug/Kg	0.41	12	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.6	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	1.6	ug/Kg	0.5	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.9	12		
Pentachlorophenol (PCP)	SW8270C	2.8	ug/Kg	2.7	60	J	
Phenanthrene	SW8270C SIM	3.8	ug/Kg	0.36	12	J	
Phenol	SW8270C	9.4	ug/Kg	3.3	36	J	
Pyrene	SW8270C SIM	0.99	ug/Kg	0.27	12	J	

Surface Sediment Analyses					Station ID: PTME-SG02-A2		
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	ND	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.93	g/L				
Carbon, Total Organic (TOC)	PSEP	0.24	PERCENT	0.02	0.05		
Solids, Total	E160.3M	82.7	PERCENT				
Solids, Total Volatile	E160.4M	2.3	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.06	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.3	mg/Kg	0.1	0.5		
Barium, Total	SW6020	31.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.11	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	7.1	mg/Kg	0.03	0.2		
Copper, Total	SW6020	4.42	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	7990	mg/Kg	1	4		
Lead, Total	SW6020	2.31	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.015	mg/Kg	0.009	0.017	B	
Nickel, Total	SW6020	11.6	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	22.7	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses Station ID: PTME-SG02-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	84	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	2.3	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	0.44	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	13		
Fluorene	SW8270C SIM	ND	ug/Kg	0.42	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	0.78	ug/Kg	0.37	13	J	
Phenol	SW8270C	8.4	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.27	13		

Surface Sediment Analyses						Station ID: PTMF-SG02-A3	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Ammonia as Nitrogen	Plumb	0.4	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	2.12	g/L				
Carbon, Total Organic (TOC)	PSEP	0.41	PERCENT	0.02	0.05		
Solids, Total	E160.3M	90.7	PERCENT				
Solids, Total Volatile	E160.4M	2.8	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.05	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.6	mg/Kg	0.1	0.5		
Barium, Total	SW6020	33.7	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.1	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	6.26	mg/Kg	0.03	0.18		
Copper, Total	SW6020	4.02	mg/Kg	0.04	0.09		
Iron, Total	SW6010B	8940	mg/Kg	0.9	3.7		
Lead, Total	SW6020	2.32	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.009	mg/Kg	0.006	0.011	B	
Nickel, Total	SW6020	10.1	mg/Kg	0.02	0.18		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	20.3	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.17	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.28	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.19	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.26	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.34	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.27	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.17	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.15	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.91	23		
Aroclor 1232	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.91	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.91	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.72	5.5		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.5		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	5.5		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	2.9	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	17	56		VLL
2-Methylnaphthalene	SW8270C SIM	0.61	ug/Kg	0.47	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.7	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.6	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.47	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.36	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.42	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.29	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.31	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.23	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		

Surface Sediment Analyses **Station ID: PTME-SG02-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	81	ug/Kg	19	230	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.1	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	9.6	ug/Kg	1.9	230	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.6	12		
Chrysene	SW8270C SIM	0.73	ug/Kg	0.34	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.4	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.2	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.4	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	2.9	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	1.8	23		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.38	12		
Fluorene	SW8270C SIM	ND	ug/Kg	0.38	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.4	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.1	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.6	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Naphthalene	SW8270C SIM	0.59	ug/Kg	0.47	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	2.7	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.6	56		
Phenanthrene	SW8270C SIM	1.3	ug/Kg	0.34	12	J	
Phenol	SW8270C	13	ug/Kg	3.1	34	J	
Pyrene	SW8270C SIM	0.32	ug/Kg	0.25	12	J	

Surface Sediment Analyses **Station ID: PTME-SG03-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.5	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.92	g/L				
Carbon, Total Organic (TOC)	PSEP	0.3	PERCENT	0.02	0.05		
Solids, Total	E160.3M	83.4	PERCENT				
Solids, Total Volatile	E160.4M	2.3	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.11	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4.5	mg/Kg	0.1	0.5		
Barium, Total	SW6020	41	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.16	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	7.63	mg/Kg	0.03	0.2		
Copper, Total	SW6020	4.56	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9200	mg/Kg	1	4		
Lead, Total	SW6020	2.64	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.016	mg/Kg	0.007	0.013		
Nickel, Total	SW6020	12.8	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	27.4	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.99	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.99	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.99	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	60		VLL
2-Methylnaphthalene	SW8270C SIM	0.8	ug/Kg	0.51	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	0.49	ug/Kg	0.34	12	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.24	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses Station ID: PTME-SG03-A1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	82	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	11	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	0.94	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	0.5	ug/Kg	0.41	12	J	
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	0.62	ug/Kg	0.51	12	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	60		
Phenanthrene	SW8270C SIM	1.3	ug/Kg	0.36	12	J	
Phenol	SW8270C	6.9	ug/Kg	3.4	36	J	
Pyrene	SW8270C SIM	0.48	ug/Kg	0.27	12	J	

Surface Sediment Analyses — Station ID: PTME-SG05-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.6	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.85	g/L				
Carbon, Total Organic (TOC)	PSEP	0.2	PERCENT	0.02	0.05		
Solids, Total	E160.3M	83.5	PERCENT				
Solids, Total Volatile	E160.4M	2.1	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.1	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	3.9	mg/Kg	0.1	0.5		
Barium, Total	SW6020	32.5	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.18	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	6.84	mg/Kg	0.03	0.2		
Copper, Total	SW6020	3.99	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	8930	mg/Kg	1	4		
Lead, Total	SW6020	2.44	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.013	mg/Kg	0.007	0.015	B	
Nickel, Total	SW6020	11.7	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	24.9	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.2		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.2		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.2		
Aldrin	SW8081A	ND	ug/Kg	0.28	1.2		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.2		
Dieldrin	SW8081A	ND	ug/Kg	0.37	1.2		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.2		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.2		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.2		
Aroclor 1016	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1221	SW8082	ND	ug/Kg	0.99	24		
Aroclor 1232	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1242	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1248	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1254	SW8082	ND	ug/Kg	0.99	12		
Aroclor 1260	SW8082	ND	ug/Kg	0.99	12		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.78	5.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	0.99	5.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	12		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	60		VLL
2-Methylnaphthalene	SW8270C SIM	0.59	ug/Kg	0.51	12	J	
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	12		
4-Methylphenol	SW8270C	ND	ug/Kg	2.8	12		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	12		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	12		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	12		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	12		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	12		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.24	12		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.36	12		

Surface Sediment Analyses [illegible] **Station ID: PTME-SG03-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	86	ug/Kg	20	240	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.3	12		
Bis(2-ethylhexyl) Phthalate	SW8270C	14	ug/Kg	2.1	240	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	12		
Chrysene	SW8270C SIM	0.9	ug/Kg	0.36	12	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	12		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	12		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	12		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.1	12		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	24		
Fluoranthene	SW8270C SIM	0.68	ug/Kg	0.41	12	J	
Fluorene	SW8270C SIM	ND	ug/Kg	0.41	12		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	12		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.3	12		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	12		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.36	12		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.51	12		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	12		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	60		
Phenanthrene	SW8270C SIM	1.2	ug/Kg	0.36	12	J	
Phenol	SW8270C	3.6	ug/Kg	3.4	36	J	
Pyrene	SW8270C SIM	0.45	ug/Kg	0.27	12	J	

Surface Sediment Analyses **Station ID: PTMF-SG03-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.3	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.79	g/L				
Carbon, Total Organic (TOC)	PSEP	0.16	PERCENT	0.02	0.05		
Solids, Total	E160.3M	82.6	PERCENT				
Solids, Total Volatile	E160.4M	2.1	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.1	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4	mg/Kg	0.1	0.5		
Barium, Total	SW6020	33.5	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.19	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	7.05	mg/Kg	0.03	0.2		
Copper, Total	SW6020	4	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9030	mg/Kg	1	4		
Lead, Total	SW6020	2.4	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.019	mg/Kg	0.006	0.012		
Nickel, Total	SW6020	12	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	26.5	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	5.9		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	5.9		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	5.9		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.46	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses [illegible]						Station ID : BTMF-SC03-A3	
Analyte	**Method**	**Result**	**Units**	**MDL**	**MRL**	**Qualifier**	**Validator**
Benzoic Acid	SW8270C	78	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	19	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	0.8	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	13		
Fluorene	SW8270C SIM	ND	ug/Kg	0.42	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	0.93	ug/Kg	0.37	13	J	
Phenol	SW8270C	4.2	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	0.4	ug/Kg	0.27	13	J	

Surface Sediment Analyses Station ID : PTME-SG03-S1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.3	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.86	g/L				
Carbon, Total Organic (TOC)	PSEP	0.24	PERCENT	0.02	0.05		
Solids, Total	E160.3M	82.6	PERCENT				
Solids, Total Volatile	E160.4M	2.2	mg/Kg		0.1		
Sulfide	PSEP	ND	mg/Kg	0.2	0.7		
Antimony, Total	SW6020	0.09	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	4	mg/Kg	0.1	0.5		
Barium, Total	SW6020	34.1	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.15	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	7.15	mg/Kg	0.03	0.2		
Copper, Total	SW6020	4.01	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	9680	mg/Kg	1	4		
Lead, Total	SW6020	2.3	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.014	mg/Kg	0.007	0.013		
Nickel, Total	SW6020	11.8	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.02	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	25.2	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.19	1.3		
4,4'-DDE	SW8081A	ND	ug/Kg	0.3	1.3		
4,4'-DDT	SW8081A	ND	ug/Kg	0.21	1.3		
Aldrin	SW8081A	ND	ug/Kg	0.29	1.3		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.13	1.3		
Dieldrin	SW8081A	ND	ug/Kg	0.38	1.3		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.3	1.3		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.18	1.3		
Heptachlor	SW8081A	ND	ug/Kg	0.17	1.3		
Aroclor 1016	SW8082	ND	ug/Kg	1	13		
Aroclor 1221	SW8082	ND	ug/Kg	1	25		
Aroclor 1232	SW8082	ND	ug/Kg	1	13		
Aroclor 1242	SW8082	ND	ug/Kg	1	13		
Aroclor 1248	SW8082	ND	ug/Kg	1	13		
Aroclor 1254	SW8082	ND	ug/Kg	1	13		
Aroclor 1260	SW8082	ND	ug/Kg	1	13		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.79	6		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	0.86	6		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1	6		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.2	13		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	19	61		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
2-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
4-Methylphenol	SW8270C	ND	ug/Kg	2.9	13		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.51	13		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.39	13		
Anthracene	SW8270C SIM	ND	ug/Kg	0.47	13		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.32	13		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.34	13		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.25	13		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.37	13		

Surface Sediment Analyses Station ID: PTME-SC03-S1

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzoic Acid	SW8270C	75	ug/Kg	20	250	J	
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.4	13		
Bis(2-ethylhexyl) Phthalate	SW8270C	8.1	ug/Kg	2.1	250	J	
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	1.7	13		
Chrysene	SW8270C SIM	0.71	ug/Kg	0.37	13	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.44	13		
Dibenzofuran	SW8270C	ND	ug/Kg	3.5	13		
Diethyl Phthalate	SW8270C	ND	ug/Kg	3.7	13		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.2	13		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2	25		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	13		
Fluorene	SW8270C SIM	ND	ug/Kg	0.42	13		
Hexachlorobenzene	SW8270C	ND	ug/Kg	3.7	13		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.4	13		
Hexachloroethane	SW8270C	ND	ug/Kg	2.8	13		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.37	13		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.51	13		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3	13		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	2.8	61		
Phenanthrene	SW8270C SIM	0.78	ug/Kg	0.37	13	J	
Phenol	SW8270C	4.4	ug/Kg	3.4	37	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.27	13		

Surface Sediment Analyses **Station ID: PTME-SG04-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	1.8	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.62	g/L				
Carbon, Total Organic (TOC)	PSEP	0.72	PERCENT	0.03	0.05		
Solids, Total	E160.3M	64.4	PERCENT				
Sulfide	PSEP	3.6	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.1	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	8.9	mg/Kg	0.1	0.6		
Barium, Total	SW6020	80.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.27	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	15.8	mg/Kg	0.03	0.22		
Copper, Total	SW6020	13.3	mg/Kg	0.04	0.11		
Iron, Total	SW6010B	18700	mg/Kg	0.4	4.4		
Lead, Total	SW6020	8.67	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.04	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	21.9	mg/Kg	0.02	0.22		
Silver, Total	SW6020	0.09	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	57.4	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.24	1.6		
4,4'-DDE	SW8081A	ND	ug/Kg	0.39	1.6		
4,4'-DDT	SW8081A	ND	ug/Kg	0.27	1.6		
Aldrin	SW8081A	ND	ug/Kg	0.37	1.6		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.17	1.6		
Dieldrin	SW8081A	ND	ug/Kg	0.48	1.6		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.38	1.6		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.23	1.6		
Heptachlor	SW8081A	ND	ug/Kg	0.21	1.6		
Aroclor 1016	SW8082	ND	ug/Kg	1.3	16		
Aroclor 1221	SW8082	ND	ug/Kg	1.3	32		
Aroclor 1232	SW8082	ND	ug/Kg	1.3	16		
Aroclor 1242	SW8082	ND	ug/Kg	1.3	16		
Aroclor 1248	SW8082	ND	ug/Kg	1.3	16		
Aroclor 1254	SW8082	ND	ug/Kg	1.3	16		
Aroclor 1260	SW8082	ND	ug/Kg	1.3	16		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7.7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7.7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.3	7.7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	4.1	16		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	24	78		VLL
2-Methylnaphthalene	SW8270C SIM	5.4	ug/Kg	0.66	16	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.7	16		
4-Methylphenol	SW8270C	10	ug/Kg	3.7	16	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.66	16		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.5	16		
Anthracene	SW8270C SIM	ND	ug/Kg	0.6	16		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.41	16		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.44	16		
Benzo(b)fluoranthene	SW8270C SIM	1.4	ug/Kg	0.44	16	J	
Benzo(g,h,i)perylene	SW8270C SIM	1.2	ug/Kg	0.32	16	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.47	16		
Benzoic Acid	SW8270C	130	ug/Kg	26	320	J	

Surface Sediment Analyses **Station ID: PTME-SC04-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	4.3	16		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	200	320		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2.2	16		
Chrysene	SW8270C SIM	4.7	ug/Kg	0.47	16	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.56	16		
Dibenzofuran	SW8270C	ND	ug/Kg	4.5	16		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.8	16		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	4	16		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	4.1	16		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.6	32		
Fluoranthene	SW8270C SIM	1	ug/Kg	0.53	16	J	
Fluorene	SW8270C SIM	1.5	ug/Kg	0.53	16	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.7	16		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	4.3	16		
Hexachloroethane	SW8270C	ND	ug/Kg	3.6	16		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.47	16		
Naphthalene	SW8270C SIM	2.8	ug/Kg	0.66	16	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.8	16		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.6	78		
Phenanthrene	SW8270C SIM	7	ug/Kg	0.47	16	J	
Phenol	SW8270C	20	ug/Kg	4.3	47	J	
Pyrene	SW8270C SIM	1.7	ug/Kg	0.35	16	J	

Surface Sediment Analyses [illegible] **Station ID: PTME-SG04-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.4	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.8	g/L				
Carbon, Total Organic (TOC)	PSEP	2.62	PERCENT	0.03	0.05		
Solids, Total	E160.3M	69	PERCENT				
Sulfide	PSEP	0.4	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.11	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	6.4	mg/Kg	0.1	0.5		
Barium, Total	SW6020	46.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.23	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	10.2	mg/Kg	0.03	0.21		
Copper, Total	SW6020	7.32	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	13300	mg/Kg	0.4	4.1		
Lead, Total	SW6020	4.62	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.03	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	17.1	mg/Kg	0.02	0.21		
Silver, Total	SW6020	0.04	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	42	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.36	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.25	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.34	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.45	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.36	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.22	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.95	7.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.8	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	73		VLL
2-Methylnaphthalene	SW8270C SIM	2.4	ug/Kg	0.61	15	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.5	15		
4-Methylphenol	SW8270C	3.6	ug/Kg	3.4	15	J	
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.61	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.47	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.56	15		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.38	15		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.41	15		
Benzo(b)fluoranthene	SW8270C SIM	0.96	ug/Kg	0.41	15	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.94	ug/Kg	0.29	15	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.44	15		
Benzoic Acid	SW8270C	120	ug/Kg	24	290	J	

Surface Sediment Analyses [illegible] Station ID: PTME-SG04-A2

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	4	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	290		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	3.1	ug/Kg	0.44	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.53	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.2	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.4	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.8	15		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.8	15		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.4	29		
Fluoranthene	SW8270C SIM	0.69	ug/Kg	0.5	15	J	
Fluorene	SW8270C SIM	0.68	ug/Kg	0.5	15	J	
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.4	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	4	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.4	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.44	15		
Naphthalene	SW8270C SIM	1.3	ug/Kg	0.61	15	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.6	15		
Pentachlorophenol (PCP)	SW8270C	4.9	ug/Kg	3.3	73	J	
Phenanthrene	SW8270C SIM	3.7	ug/Kg	0.44	15	J	
Phenol	SW8270C	19	ug/Kg	4	44	J	
Pyrene	SW8270C SIM	0.95	ug/Kg	0.32	15	J	

Surface Sediment Analyses **Station ID: PTME-SC04-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.6	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.85	g/L				
Carbon, Total Organic (TOC)	PSEP	0.27	PERCENT	0.03	0.05		
Solids, Total	E160.3M	69.2	PERCENT				
Sulfide	PSEP	0.3	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.08	mg/Kg	0.05	0.05		
Arsenic, Total	SW6020	6.5	mg/Kg	0.1	0.5		
Barium, Total	SW6020	56.3	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.22	mg/Kg	0.02	0.05		
Chromium, Total	SW6020	11.1	mg/Kg	0.03	0.2		
Copper, Total	SW6020	6.64	mg/Kg	0.04	0.1		
Iron, Total	SW6010B	12600	mg/Kg	0.4	4.1		
Lead, Total	SW6020	4.27	mg/Kg	0.03	0.05		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	17.3	mg/Kg	0.02	0.2		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	41	mg/Kg	0.1	0.5		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.36	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.25	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.34	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.45	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.36	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.22	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.94	7.2		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7.2		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7.2		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.8	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	73		VLL
2-Methylnaphthalene	SW8270C SIM	1.5	ug/Kg	0.61	15	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.5	15		
4-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.61	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.47	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.55	15		
Benz(a)anthracene	SW8270C SIM	ND	ug/Kg	0.38	15		
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.41	15		
Benzo(b)fluoranthene	SW8270C SIM	0.57	ug/Kg	0.41	15	J	
Benzo(g,h,i)perylene	SW8270C SIM	0.93	ug/Kg	0.29	15	J	
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.44	15		
Benzoic Acid	SW8270C	100	ug/Kg	24	290	J	

Surface Sediment Analyses **Station ID: PTME-SG04-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	4	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	290		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	2.1	ug/Kg	0.44	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.52	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.2	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.4	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.8	15		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.8	15		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.4	29		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.5	15		
Fluorene	SW8270C SIM	ND	ug/Kg	0.5	15		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.4	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	4	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.4	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.44	15		
Naphthalene	SW8270C SIM	1.1	ug/Kg	0.61	15	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.6	15		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.3	73		
Phenanthrene	SW8270C SIM	2.1	ug/Kg	0.44	15	J	
Phenol	SW8270C	16	ug/Kg	4	44	J	
Pyrene	SW8270C SIM	0.6	ug/Kg	0.32	15	J	

Surface Sediment Analyses [illegible] **Station ID: PTME-SG05-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.3	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.9	g/L				
Carbon, Total Organic (TOC)	PSEP	0.22	PERCENT	0.03	0.05		
Solids, Total	E160.3M	70.9	PERCENT				
Sulfide	PSEP	ND	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.12	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	9.6	mg/Kg	0.1	0.6		
Barium, Total	SW6020	74.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.25	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	11.3	mg/Kg	0.04	0.24		
Copper, Total	SW6020	7.03	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	18100	mg/Kg	0.5	4.7		
Lead, Total	SW6020	5.33	mg/Kg	0.04	0.06		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.02	B	
Nickel, Total	SW6020	18.8	mg/Kg	0.02	0.24		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	48	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.44	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.35	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.2	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1.1	7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.7	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	71		VLL
2-Methylnaphthalene	SW8270C SIM	ND	ug/Kg	0.6	15		
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
4-Methylphenol	SW8270C	ND	ug/Kg	3.3	15		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.6	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.46	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.54	15		
Benz(a)anthracene	SW8270C SIM	0.7	ug/Kg	0.37	15	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.29	15		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	15		
Benzoic Acid	SW8270C	97	ug/Kg	24	290	J	

Surface Sediment Analyses — **Station ID : PTME-SG05-A1**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.9	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	290		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	0.44	ug/Kg	0.43	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.51	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.1	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.3	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	29		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.48	15		
Fluorene	SW8270C SIM	ND	ug/Kg	0.48	15		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.3	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.9	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Naphthalene	SW8270C SIM	ND	ug/Kg	0.6	15		
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.5	15		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.3	71		
Phenanthrene	SW8270C SIM	0.78	ug/Kg	0.43	15	J	
Phenol	SW8270C	11	ug/Kg	3.9	43	J	
Pyrene	SW8270C SIM	ND	ug/Kg	0.32	15		

Surface Sediment Analyses — **Station ID: PTME-SG05-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.2	mg/Kg	0.2	0.4	J	
Bulk Density	SM 2710F	1.88	g/L				
Carbon, Total Organic (TOC)	PSEP	0.23	PERCENT	0.03	0.05		
Solids, Total	E160.3M	71.3	PERCENT				
Sulfide	PSEP	0.5	mg/Kg	0.2	0.8	J	
Antimony, Total	SW6020	0.14	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	8.4	mg/Kg	0.1	0.6		
Barium, Total	SW6020	58.2	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.26	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	10.6	mg/Kg	0.03	0.23		
Copper, Total	SW6020	9.95	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	16300	mg/Kg	0.5	4.6		
Lead, Total	SW6020	5.15	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	19.4	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	48.4	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.5		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.5		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.5		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.5		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.16	1.5		
Dieldrin	SW8081A	ND	ug/Kg	0.43	1.5		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.35	1.5		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.5		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.5		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	29		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	15		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	15		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.92	7		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1	7		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	7		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.7	15		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	71		VLL
2-Methylnaphthalene	SW8270C SIM	0.82	ug/Kg	0.59	15	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	15		
4-Methylphenol	SW8270C	ND	ug/Kg	3.3	15		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.59	15		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.45	15		
Anthracene	SW8270C SIM	ND	ug/Kg	0.54	15		
Benz(a)anthracene	SW8270C SIM	0.51	ug/Kg	0.37	15	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(b)fluoranthene	SW8270C SIM	ND	ug/Kg	0.4	15		
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.29	15		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.43	15		
Benzoic Acid	SW8270C	100	ug/Kg	24	290	J	

Surface Sediment Analyses [illegible] **Station ID: PTME-SG05-A2**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.9	15		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	290		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	15		
Chrysene	SW8270C SIM	0.77	ug/Kg	0.43	15	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.51	15		
Dibenzofuran	SW8270C	ND	ug/Kg	4.1	15		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.3	15		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.7	15		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	29		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.48	15		
Fluorene	SW8270C SIM	ND	ug/Kg	0.48	15		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.3	15		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.9	15		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	15		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.43	15		
Naphthalene	SW8270C SIM	0.62	ug/Kg	0.59	15	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.5	15		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.2	71		
Phenanthrene	SW8270C SIM	1.2	ug/Kg	0.43	15	J	
Phenol	SW8270C	12	ug/Kg	3.9	43	J	
Pyrene	SW8270C SIM	0.33	ug/Kg	0.31	15	J	

Surface Sediment Analyses [illegible] **Station ID: PTME-SG05-A3**

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Ammonia as Nitrogen	Plumb	0.7	mg/Kg	0.2	0.4		
Bulk Density	SM 2710F	1.87	g/L				
Carbon, Total Organic (TOC)	PSEP	0.31	PERCENT	0.03	0.05		
Solids, Total	E160.3M	71.6	PERCENT				
Sulfide	PSEP	1.5	mg/Kg	0.2	0.8		
Antimony, Total	SW6020	0.16	mg/Kg	0.06	0.06		
Arsenic, Total	SW6020	9.3	mg/Kg	0.1	0.6		
Barium, Total	SW6020	65.1	mg/Kg	0.01	0.02		
Cadmium, Total	SW6020	0.25	mg/Kg	0.02	0.06		
Chromium, Total	SW6020	11.3	mg/Kg	0.03	0.23		
Copper, Total	SW6020	7.9	mg/Kg	0.05	0.12		
Iron, Total	SW6010B	17900	mg/Kg	0.5	4.7		
Lead, Total	SW6020	5.55	mg/Kg	0.03	0.06		
Mercury, Total	SW7471A	0.02	mg/Kg	0.01	0.02		
Nickel, Total	SW6020	19	mg/Kg	0.02	0.23		
Silver, Total	SW6020	0.03	mg/Kg	0.01	0.02		
Zinc, Total	SW6020	48.3	mg/Kg	0.1	0.6		
4,4'-DDD	SW8081A	ND	ug/Kg	0.22	1.4		
4,4'-DDE	SW8081A	ND	ug/Kg	0.35	1.4		
4,4'-DDT	SW8081A	ND	ug/Kg	0.24	1.4		
Aldrin	SW8081A	ND	ug/Kg	0.33	1.4		
alpha-Chlordane	SW8081A	ND	ug/Kg	0.15	1.4		
Dieldrin	SW8081A	ND	ug/Kg	0.43	1.4		
gamma-BHC (Lindane)	SW8081A	ND	ug/Kg	0.34	1.4		
gamma-Chlordane	SW8081A	ND	ug/Kg	0.21	1.4		
Heptachlor	SW8081A	ND	ug/Kg	0.19	1.4		
Aroclor 1016	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1221	SW8082	ND	ug/Kg	1.2	28		
Aroclor 1232	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1242	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1248	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1254	SW8082	ND	ug/Kg	1.2	14		
Aroclor 1260	SW8082	ND	ug/Kg	1.2	14		
1,2-Dichlorobenzene	SW8260B	ND	ug/Kg	0.91	6.8		
1,3-Dichlorobenzene	SW8260B	ND	ug/Kg	1	6.8		
1,4-Dichlorobenzene	SW8260B	ND	ug/Kg	1.2	6.8		
1,2,4-Trichlorobenzene	SW8270C	ND	ug/Kg	3.7	14		
2,4-Dimethylphenol	SW8270C	ND	ug/Kg	22	70		VLL
2-Methylnaphthalene	SW8270C SIM	1.3	ug/Kg	0.59	14	J	
2-Methylphenol	SW8270C	ND	ug/Kg	3.4	14		
4-Methylphenol	SW8270C	ND	ug/Kg	3.3	14		
Acenaphthene	SW8270C SIM	ND	ug/Kg	0.59	14		
Acenaphthylene	SW8270C SIM	ND	ug/Kg	0.45	14		
Anthracene	SW8270C SIM	ND	ug/Kg	0.54	14		
Benz(a)anthracene	SW8270C SIM	0.67	ug/Kg	0.37	14	J	
Benzo(a)pyrene	SW8270C SIM	ND	ug/Kg	0.4	14		
Benzo(b)fluoranthene	SW8270C SIM	0.43	ug/Kg	0.4	14	J	
Benzo(g,h,i)perylene	SW8270C SIM	ND	ug/Kg	0.28	14		
Benzo(k)fluoranthene	SW8270C SIM	ND	ug/Kg	0.42	14		
Benzoic Acid	SW8270C	110	ug/Kg	23	280	J	

Surface Sediment Analyses [illegible] Station ID: PTME-SC05-A3

Analyte	Method	Result	Units	MDL	MRL	Qualifier	Validator
Benzyl Alcohol	SW8270C	ND	ug/Kg	3.9	14		
Bis(2-ethylhexyl) Phthalate	SW8270C	ND	ug/Kg	180	280		
Butyl Benzyl Phthalate	SW8270C	ND	ug/Kg	2	14		
Chrysene	SW8270C SIM	0.74	ug/Kg	0.42	14	J	
Dibenz(a,h)anthracene	SW8270C SIM	ND	ug/Kg	0.51	14		
Dibenzofuran	SW8270C	ND	ug/Kg	4	14		
Diethyl Phthalate	SW8270C	ND	ug/Kg	4.3	14		
Dimethyl Phthalate	SW8270C	ND	ug/Kg	3.6	14		
Di-n-butyl Phthalate	SW8270C	ND	ug/Kg	3.7	14		
Di-n-octyl Phthalate	SW8270C	ND	ug/Kg	2.3	28		
Fluoranthene	SW8270C SIM	ND	ug/Kg	0.48	14		
Fluorene	SW8270C SIM	ND	ug/Kg	0.48	14		
Hexachlorobenzene	SW8270C	ND	ug/Kg	4.3	14		
Hexachlorobutadiene	SW8270C	ND	ug/Kg	3.9	14		
Hexachloroethane	SW8270C	ND	ug/Kg	3.3	14		
Indeno(1,2,3-cd)pyrene	SW8270C SIM	ND	ug/Kg	0.42	14		
Naphthalene	SW8270C SIM	0.91	ug/Kg	0.59	14	J	
N-Nitrosodiphenylamine	SW8270C	ND	ug/Kg	3.4	14		
Pentachlorophenol (PCP)	SW8270C	ND	ug/Kg	3.2	70		
Phenanthrene	SW8270C SIM	1.7	ug/Kg	0.42	14	J	
Phenol	SW8270C	17	ug/Kg	3.9	42	J	
Pyrene	SW8270C SIM	0.38	ug/Kg	0.31	14	J	

Appendix E

2002 SEDIMENT CHEMISTRY QA/QC SUMMARY

1.0 INTRODUCTION

This Quality Assurance/Quality Control (QA/QC) Summary Report presents the evaluation of analytical data for sediment samples collected between August 2, 2002 and August 7, 2002 in association with the ExxonMobil Point Thomson Ocean Dumping Evaluation. Surface sediment data were collected at 31 locations.

Non-conformance of data is identified, discussed, and qualified in this report.

The results of the QA/QC data associated with the analysis of the following parameters are summarized in this report:

- Bulk Density by standard method (SM) 2710F;
- Particle Size Determination by American Society for Testing and Materials (ASTM) D422 (Modified);
- Total Solids by Environmental Protection Agency (EPA) Method E160.3 (Modified);
- Total Volatile Solids by EPA Method E160.4 (Modified);
- Total Organic Carbon (TOC) by Puget Sound Estuary Protocol (PSEP) Method;
- Total Sulfides by PSEP Method;
- Ammonia by Plumb Method for sediments;
- Total Metals by inductively coupled plasma (ICP) optical emission spectroscopy, EPA Method SW6010B and ICP mass spectroscopy (ICPMS), EPA Method SW6020;
- Total Mercury by cold vapor atomic absorption (CVAA), EPA Method SW7471A and equipment blanks by EPA method SW7470A;
- Volatile Organic Compounds (VOCs); 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, and 1,4-Dichlorobenzene by GC/MS, EPA Method SW8260B (Sediment sample preparation followed EPA method SW5035 for unpreserved samples);
- Polynuclear Aromatic Hydrocarbons (PAHs) by GC/MS using single ion monitoring (SIM) mode, EPA Method SW8270C SIM;
- Semivolatile Organic Compounds (SVOCs) by GC/MS using full scan, large volume injection (LVI) mode, EPA Method SW8270C;
- Organochlorine Pesticides by GC, EPA Method SW8081A; and
- Polychlorinated Biphenyls (PCBs) by GC, EPA Method SW8082.

Sample analysis was performed by Columbia Analytical Services, Inc., (CAS) at their Kelso, Washington laboratory.

A summary of samples submitted for analysis is provided in Table 1.

Table 1

Summary of Samples

Analyses	Bulk Density	Particle Size	Total Solids	Total Volatile Solids	Total Organic Carbon	Total Sulfides	Ammonia	Total Metals	Polynuclear Aromatic Hydrocarbons	Volatile Organic Compounds	Semivolatile Organic Compounds	Pesticides	Polychlorinated Biphenyls
Sediment Samples	93	93	81	81	81	81	81	81	81	81	83	81	81
Field Dups (Splits)	4	4	3	3	3	3	3	3	3	3	3	3	3
Trip Blanks										5			
Field Blanks										6			
Equipment Blanks								6	6	6	6	6	6
MS/MSDs					2	2	2	2	2	2	2	2	2

MS/MSD – matrix spike/matrix spike duplicate

Samples were analyzed in accordance with *Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846,* Third Edition (USEPA, 1999); *EPA Methods for Chemical Analysis for Water and Wastes* (USEPA, 1983); *Annual Book of American Society for Testing and Materials (ASTM) Standards, Water*, Volume 11.01 (ASTM, 1993); *Procedures for Handling and Chemical Analysis of Sediment and Water Samples* (Plumb, 1981); and *Recommended Protocols for Measuring Conventional Sediment Variables in Puget Sound* (USEPA, 1986).

The laboratory provided a hard-copy deliverable, including method- and project-specific QC, and a digital deliverable in a Microsoft EXCEL flat file format. Sample results were reported to the laboratory method detection limit (MDL), in order to meet project specific detection levels. Standard laboratory data qualifiers (flagging) were included in the deliverables. Flags applied by URS as a result of this data review are preceded with a "V." The list of qualifiers used is included in this report as Attachment 1.

The data review focuses on criteria for the following QA/QC parameters and their overall effect on the data:

- Sample handling (chain-of-custody);
- Holding time compliance;
- Field QA/QC (field blanks, trip blanks, equipment rinse blanks, field duplicates);
- Calibration verification and laboratory control samples;
- Method reporting limits;
- Method blanks;
- Surrogates;
- Analytical methods;
- Precision and accuracy; and
- Completeness.

2.0 SAMPLE HANDLING (CHAIN-OF-CUSTODY)

URS field personnel shipped all samples via Alaska Airlines Goldstreak Service to Portland, Oregon. A courier service delivered the samples to the CAS laboratory in Kelso, Washington.

Hard copy chain-of-custody (COC) forms were utilized for the entirety of the project. Cooler receipt forms, documenting sample condition and temperature, were completed upon receipt at the laboratory.

Final sample login information, COCs, and cooler receipt forms were faxed to the URS Anchorage office by CAS.

COCs, cooler receipt forms, and laboratory case narratives were provided in the final reports and were reviewed to determine if any sample handling procedures possibly affected the integrity of the samples and the quality of the resulting data.

All sample containers were received at CAS intact and within the required $4^{o} \pm 2^{o}C$ temperature range. Temperatures were documented on the individual cooler receipt forms.

All of the COCs were signed and dated as relinquished by the field personnel and as received by the laboratory. In the first sample shipment, chemical analyses requested on the COCs for four locations were cancelled by URS after sample receipt.

3.0 HOLDING TIME AND PRESERVATION COMPLIANCE

Holding time for samples is defined as the required time frame from the date of collection within which the laboratory must perform analysis. Recommended holding times and sample preservation are based on guidance derived and adapted for use in the Beaufort Sea, Alaska from the following:

- *Dredged Material Evaluation Framework: Lower Columbia River Management Area* (United States Army Corps of Engineers [USACE] et al., 1998a);
- *Recommended Guidelines for Sampling Marine Sediment, Water Column, and Tissue in Puget Sound* (USEPA, 1997); and
- *Dredged Material Evaluation and Disposal Procedures – A Users Manual for the Puget Sound Dredged Disposal Analysis (PSDDA) Program* (USACE et al., 1998b).

The holding times and preservation for sediment sample analyses performed for this report are listed in Table 2.

Table 2

Holding Times and Preservation for Physical and Chemical Analyses

Sample Type	Holding Time	Preservative	Sample Type	Holding Time	Preservative
Ammonia	7 days/extraction 28 days/analysis	None	Total organic carbon	14 days	None
Grain Size	6 months	None	Total solids	14 days	None
Metals (except Mercury)	6 months (28 days)	None	Total sulfides	7 days	Zinc Acetate
Pesticides	14 days	None	Total volatile solids	14 days	None
Polynuclear aromatic hydrocarbons	14 days	None	Volatile organic compounds	14 days	None
Semivolatile organic compounds	14 days	None	--	--	--

Samples PTCE-RB-W01 and PTCE-RB-W04, which were equipment blanks, were re-extracted past the 7-day hold time for water samples for Method SW8270C SIM and Method SW8270C, respectively. The samples were initially extracted within hold time, but the surrogate recoveries were low. Re-extraction and re-analysis was performed with acceptable surrogate recoveries. Results are reported from the re-analysis. The results are useable for the estimation of potential field contamination.

All samples collected August 7, 2002 were extracted and analyzed on the 13th day from sample collection, six days past the 7-day method-recommended hold time for ammonia extraction. Ammonia results for these samples are qualified by the laboratory with an "X" flag. Ammonia is a semi-volatile compound by nature. As a comparison, the recommended holding time for semi-volatile analyses on sediments is 14 days. Two areas of concern are potentially related to a prolonged holding time for ammonia analysis - (1) volatilization of ammonia due to temperature elevation, and (2) oxidation of ammonia into oxidizing nitrogen species (e.g., Nitrate). For the samples in question, these concerns should not have a major impact on the ammonia results. Volatilization is very unlikely under the conditions at which the samples were stored. These samples were received in good condition with the cooler temperature at or below the 6°C limit and were stored in good condition (at or below 6°C) after receipt. The temperature remained stable, within limits, from the time the samples were shipped by URS until the completion of laboratory analysis. The oxidation of ammonia is also unlikely since the samples were not disturbed (the containers remained unopened) until analysis.

The results for ammonia samples extracted and analyzed past 7 days have a potential for a slightly low bias. However, the bias is most likely within the sampling variability seen for these sediments. The results are determined by URS to be useable for this project.

All other samples were extracted and/or analyzed within the recommended hold time for the analytical procedures utilized for this project. All samples were preserved properly.

4.0 FIELD QA/QC

Field QA/QC protocol is designed to monitor possible contamination during collection and transport so that the accuracy and precision of the samples collected in the field can be determined.

For this project, field blanks, trip blanks, equipment rinse blanks, and field duplicates (splits) were submitted in conjunction with the collected samples for analysis.

Collection and analysis of the field QA/QC samples allows for a measurement of precision that takes into account variables such as field sampling and laboratory analysis techniques. Each field QA/QC sample type is described below.

4.1 Field Blanks

Field blanks, associated with collection of the sediment samples, were collected and submitted to the laboratory for VOC analysis. Purchased high-performance liquid chromatography (HPLC) water was opened at the core sampling location, transferred to a laboratory-supplied container and submitted for analysis. Refer to Table 1 for the number of field blanks and analyses requested. The field blank results were all below the method reporting limit (MRL).

4.2 Trip Blanks

Trip blanks were prepared in the laboratory using VOC-free water and transported unopened to and from Point Thomson with each shipment of samples for VOC analyses. Upon return to the laboratory, trip blanks were analyzed for VOCs. Refer to Table 1 for the number of trip blanks and analyses requested. The trip blank results were all below the MRL.

4.3 Equipment Rinse Blanks

Equipment rinse blanks, associated with the collection of the sediment samples, were collected and submitted to the laboratory for analyses. Purchased HPLC-grade water for VOC analysis, and de-ionized water for the remaining analyses, was used as a final rinse of sampling equipment, transferred to a laboratory-supplied container and submitted for analysis. Equipment rinse blanks were submitted for analysis of VOCs (SW8260B), SVOCs (SW8270C), PAHs (SW8270C SIM), PCBs (SW8082), organochlorine pesticides (SW8081A), and total metals (SW6010B/SW6020/SW7471). Refer to Table 1 for the number of equipment blanks and analyses requested.

A summary of equipment blank results above the MRL is provided in Table 3. Antimony, barium, chromium, copper, iron, lead, nickel, silver, and zinc were detected above the MRL in one or more equipment blanks. Additionally, bis(2-ethylhexyl)phthalate, diethyl phthalate, dimethyl phthalate, and di-n-butyl phthalate were reported above the MRL in one or more equipment blanks. Equipment blank contamination seen could be a result of the de-ionized water source or contact with metal and plastic field sampling equipment. All of the equipment

Table 3

Equipment Blank Summary

Sample ID	Sample Date	Method	Analyte	MRL	Result	Units
PTCE-RB-W01	08/02/2002	SW6010B	Iron, Total	20	24	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Antimony, Total	0.05	0.08	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Barium, Total	0.05	0.27	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Chromium, Total	0.2	0.52	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Copper, Total	0.1	1.73	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Lead, Total	0.02	8.46	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Nickel, Total	0.2	0.51	ug/L
PTCE-RB-W01	08/02/2002	SW6020	Zinc, Total	0.5	2.69	ug/L
PTCE-RB-W01	08/02/2002	SW8270C	Diethyl Phthalate	0.22	0.63	ug/L
PTCE-RB-W01	08/02/2002	SW8270C	Dimethyl Phthalate	0.22	0.34	ug/L
PTCE-RB-W01	08/02/2002	SW8270C	Di-n-butyl Phthalate	0.22	0.33	ug/L
PTCE-RB-W02	08/03/2002	SW6010B	Iron, Total	20	111	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Antimony, Total	0.05	0.36	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Barium, Total	0.05	0.50	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Chromium, Total	0.2	0.31	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Copper, Total	0.1	0.83	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Lead, Total	0.02	3.21	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Nickel, Total	0.2	0.30	ug/L
PTCE-RB-W02	08/03/2002	SW6020	Zinc, Total	0.5	1.41	ug/L
PTCE-RB-W02	08/03/2002	SW8270C	Diethyl Phthalate	0.21	0.62	ug/L
PTCE-RB-W02	08/03/2002	SW8270C	Dimethyl Phthalate	0.21	0.33	ug/L
PTCE-RB-W02	08/03/2002	SW8270C	Di-n-butyl Phthalate	0.21	0.23	ug/L
PTCE-RB-W03	08/04/2002	SW6020	Antimony, Total	0.05	0.05	ug/L
PTCE-RB-W03	08/04/2002	SW6020	Barium, Total	0.05	0.17	ug/L
PTCE-RB-W03	08/04/2002	SW6020	Copper, Total	0.1	0.65	ug/L
PTCE-RB-W03	08/04/2002	SW6020	Lead, Total	0.02	11.8	ug/L
PTCE-RB-W03	08/04/2002	SW6020	Zinc, Total	0.5	0.99	ug/L
PTCE-RB-W03	08/04/2002	SW8270C	Diethyl Phthalate	0.2	0.45	ug/L
PTCE-RB-W03	08/04/2002	SW8270C	Dimethyl Phthalate	0.2	0.26	ug/L
PTCE-RB-W03	08/04/2002	SW8270C	Di-n-butyl Phthalate	0.2	0.26	ug/L
PTCE-RB-W04	08/05/2002	SW6010B	Iron, Total	20	21	ug/L
PTCE-RB-W04	08/05/2002	SW6020	Antimony, Total	0.05	0.09	ug/L
PTCE-RB-W04	08/05/2002	SW6020	Barium, Total	0.05	0.35	ug/L
PTCE-RB-W04	08/05/2002	SW6020	Copper, Total	0.1	1.32	ug/L
PTCE-RB-W04	08/05/2002	SW6020	Lead, Total	0.02	27.0	ug/L
PTCE-RB-W04	08/05/2002	SW6020	Zinc, Total	0.5	3.18	ug/L
PTCE-RB-W04	08/05/2002	SW8270C	Diethyl Phthalate	0.2	1.1	ug/L
PTCE-RB-W04	08/05/2002	SW8270C	Dimethyl Phthalate	0.2	0.63	ug/L
PTCE-RB-W04	08/05/2002	SW8270C	Di-n-butyl Phthalate	0.2	1.4	ug/L

Table 3 (continued)

Equipment Blank Summary

Sample ID	Sample Date	Method	Analyte	MRL	Result	Units
PTCE-RB-W05	08/06/2002	SW6010B	Iron, Total	20	358	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Antimony, Total	0.05	0.14	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Barium, Total	0.05	1.54	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Chromium, Total	0.2	0.29	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Copper, Total	0.1	1.61	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Lead, Total	0.02	24.4	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Nickel, Total	0.2	0.42	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Silver, Total	0.02	0.02	ug/L
PTCE-RB-W05	08/06/2002	SW6020	Zinc, Total	0.5	3.00	ug/L
PTCE-RB-W05	08/06/2002	SW8270C	Bis(2-ethylhexyl) Phthalate	2	2.7	ug/L
PTCE-RB-W05	08/06/2002	SW8270C	Diethyl Phthalate	0.2	1.0	ug/L
PTCE-RB-W05	08/06/2002	SW8270C	Dimethyl Phthalate	0.2	0.52	ug/L
PTCE-RB-W05	08/06/2002	SW8270C	Di-n-butyl Phthalate	0.2	0.98	ug/L
PTCE-RB-W06	08/07/2002	SW6010B	Iron, Total	20	24	ug/L
PTCE-RB-W06	08/07/2002	SW6020	Barium, Total	0.05	0.20	ug/L
PTCE-RB-W06	08/07/2002	SW6020	Copper, Total	0.1	0.32	ug/L
PTCE-RB-W06	08/07/2002	SW6020	Lead, Total	0.02	6.63	ug/L
PTCE-RB-W06	08/07/2002	SW6020	Zinc, Total	0.5	1.66	ug/L
PTCE-RB-W06	08/07/2002	SW8270C	Diethyl Phthalate	0.2	0.26	ug/L

ID – identification number
MRL – method reporting limit
ug/L – micrograms per liter

blank results are significantly lower than the levels reported in the submitted sediment samples and do not indicate that field contamination affected data quality.

4.4 Field Duplicates (Splits)

Four field duplicates were collected in association with select sediment samples and submitted to the laboratory blind for analyses. The field duplicates were separate samples, collected from the same sediment grab sample. Refer to Table 1 for the specific number of field duplicates and/or analyses requested.

Field duplicate data are summarized in the tables included as Attachment 2. Table 4 lists criteria used for comparing field duplicates. These are recommended for soils by the Army Corps of Engineers in *Cold Regions Research and Engineering Laboratory (CRREL) Special Report No. 96-9*. The summary tables included as Attachment 2 includes a relative percent difference (RPD) precision calculation for the original sample and field duplicate results. Differences correlate to the RPD as follows:

- A RPD greater than 120 equals a difference greater than four times the result.
- A RPD greater than 133 equals a difference greater than five times the result.
- A RPD greater than 164 equals a difference greater than ten times the result.

All of the field duplicates had results with less than a difference of four. No disagreements or major disagreements are reported for field duplicates.

Table 4

Criteria for Comparing Field Duplicate Data

Parameter	Disagreement	Major Disagreement
All	>5x difference when one result is < MDL	>10x difference when one result is < MDL
All	>3x difference when one result is < MRL	>5x difference when one result is < MRL
All, except metals and VOCs	>4x difference	>5x difference
Metals	>4x difference	>4x difference
VOCs	>5x difference	>10x difference

MDL – method detection limit
MRL – method reporting limit
VOCs – volatile organic compounds

5.0 LABORATORY QA/QC

5.1 Calibration Verification

Initial and continuing calibration verification standards were analyzed to monitor laboratory instrument performance prior to, during, and concluding sample analysis. The laboratory standard operation procedures (SOPs) specify these ranges of standards in accordance with the associated EPA method used for the analysis. The laboratory is required to report any discrepancies, if they occur, and the effect on project samples. There were no calibration verification discrepancies.

5.2 Laboratory Control Samples

Laboratory control samples and laboratory control sample duplicates (LCS/LCSD) are prepared in the laboratory by spiking a clean matrix (e.g., de-ionized water, Ottawa sand) with a known concentration of target analyte. These samples are processed with a batch of 20 or less field samples. LCS/LCSD sample results are calculated for accuracy, by percent recovery (%R), and precision, by RPD. LCS/LCSD %R and RPD are evaluated against laboratory-determined acceptance ranges to monitor if the analytical method was in control.

Cases where the LCS and/or LCSD were outside of the specified acceptance ranges are documented below:

- For CAS report K2205249, the LCS recovery was above the acceptance criterion for diethyl phthalate. The expected bias was high and the sample results were below the MRL; therefore, the data quality should not be impacted.
- For CAS report K2205249, the LCS/LCSD recoveries of 2,4-dimethylphenol were below the specified acceptance range. The LCSD recoveries were below the acceptance criteria for

hexachloroethane and hexachlorobenzene. The results in the associated samples are qualified with a "VLL" flag. The flag added by the reviewer indicates the results may be biased low, based on the LCS recovery.

- For CAS report K2205275, the LCS recovery of 2,4-dimethylphenol was below the specified acceptance range. The results in the associated samples are qualified with a "VLL" flag. The flag added by the reviewer indicates the results may be biased low, based on the LCS recovery.
- For CAS report K2205275, the LCS/LCSD recoveries of bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, dibenzofuran, diethyl phthalate, dimethyl phthalate, hexachlorobenzene, hexachlorobutadiene and n-nitrosodiphenylamine were above the specified acceptance range. The expected bias was high and the sample results were below the MRL; therefore, the data quality should not be impacted.
- For CAS report K2205327, the LCSD recoveries of diethyl phthalate, dimethyl phthalate and hexachlorobutadiene were above the specified acceptance range. The expected bias was high and the sample results were below the MRL; therefore, the data quality should not be impacted.
- For CAS report K2205380, the LCS/LCSD recoveries of 2,4-dimethylphenol were below the specified acceptance range. The results in the associated samples are qualified with a "VLL" flag. The flag added by the reviewer indicates the results may be biased low, based on the LCS recovery.
- For CAS report K2205380, the LCS/LCSD recoveries of diethyl phthalate were above the specified acceptance range. The expected bias was high and the sample results were below the MRL; therefore, the data quality should not be impacted.
- For CAS report K2205422, the LCSD recoveries of 2,4-dimethylphenol were below the specified acceptance range. The results in the associated samples are qualified with a "VLL" flag. The flag added by the reviewer indicates the results may be biased low, based on the LCS recovery.
- For CAS report K2205422, an LCSD recovery of diethyl phthalate was above the specified acceptance range. The expected bias was high and the sample results were below the MRL; therefore, the data quality should not be impacted.
- For CAS report K2205379, the percent recoveries and RPDs in the LCSD for the majority of the PAH analytes by method 8270C SIM were outside the specified acceptance range. The LCS recoveries were all acceptable. The associated sample was equipment blank PTCE-RB-W06. The sample was re-extracted and re-analyzed past the hold time as confirmation. The re-analyses confirmed the original results; therefore, only the original results were reported. The sample results were below the MRL.

5.3 Matrix Spike Samples

Matrix spike (MS) samples are prepared in the laboratory by spiking an aliquot of the submitted field sample with a known concentration of target analyte. These samples are processed with a batch of 20 or less field samples. Inorganic methods require only an MS to fulfill batch quality control requirements. Organic methods include an MS and a matrix spike duplicate (MSD). MS/MSD samples are calculated for accuracy by %R, and precision by RPD. MS/MSD %R and

RPD are evaluated against laboratory specified acceptance ranges to monitor the accuracy and precision of the analytical method for the submitted matrix.

URS personnel requested MS/MSD analyses on two specified field samples. Due to limitations in sample size, the laboratory did not perform the MSD requested on sample PTFI-SG05-A1 for method SW8260B or the MS/MSD on sample PTLA-SG03A1 for method SW8081A. MS/MSD analyses for method SW8260B and SW8081A were performed on other sediments for this project and provide the required frequency of results. The laboratory chose between four and five additional samples, depending on analysis, for MS/MSD analysis to fulfill the batch requirements. Refer to Table 1 for the specific number of MS/MSDs and analyses requested for the project.

MS sample results were reported for the following general chemistry parameters: ammonia, sulfide, total organic carbon (TOC), total metals (SW6010B/SW6020), and mercury. MS/MSD samples were reported for the following organic parameters: pesticides, PCBs, VOCs, SVOCs, and PAHs. MS/MSD data are summarized in the tables included as Attachment 4. Cases where the MS and/or MSD were outside of the specified acceptance ranges are documented below:

- The %R of iron (Fe) in all MS samples were outside the specified acceptance range. The spike concentration for the analyte was less than four times (<4x) that present in the sample. No validator flag was applied. High levels of target analyte contamination in the parent sample interfere with accurate %R calculation; therefore, the data quality should not be impacted.
- The MS %R of antimony (Sb) in MS analysis performed on samples PTCE-SB02-A3, PTFI-SG05-A1 and PTLA-SG03-A1 were below the specified acceptance range. The low recovery of Sb is likely attributable to sorption of the metal to particulates in the sediment. The method SW3050B digestion procedure is not rigorous enough to bring all of the Sb back into solution. The associated sample results are qualified by the laboratory with an "N" flag. The flag is added to indicate the results may be biased low, based on the MS recoveries.
- The MS %R of sulfide in sample PTLA-SG03-A1 was below the specified acceptance range. The associated sample result is qualified with a "VML" flag. The flag is added to indicate the results may be biased low, based on the MS recoveries.
- The MS %R of benz(a)anthracene and the MSD %R of dibenz(a,h)anthracene in sample PTLA-SG05-A3 was below the specified acceptance range. The associated sample results are qualified with a "VML" flag. The flag is added to indicate the results may be biased low, based on the MS recoveries.
- The MS %R of 1,4-Dichlorobenzene in sample PTFI-SG05-A1 was below the specified acceptance range. The associated sample results are qualified with a "VML" flag. The flag is added to indicate the results may be biased low, based on the MS recoveries.

5.4 Laboratory Duplicate Samples

Laboratory duplicates are repeated, independent determinations of the same sample, by the same analyst, at essentially the same time, and under the same conditions. The sample is split in the laboratory and each fraction is carried through all stages of sample preparation and analysis. Duplicate analyses measure the precision of each analytical method. Laboratory duplicate analyses are performed for 10% of samples analyzed, or at least one per day, for analytical methods not requiring MS/MSDs. Laboratory duplicates were reported for the following inorganic analyses: ammonia, bulk density, total metals, total solids, and total volatile solids.

Laboratory duplicate data are summarized in the tables and included as Attachment 3. Cases where the duplicates were outside of the laboratory-specified acceptance ranges are documented below:

- The RPDs for total volatile solids in the duplicates of samples PTLA-SG09-A1 and PTLA-SG01-A1 were above the specified acceptance limit. The difference is attributable to the non-homogeneous nature of the sample matrix and the results being near the detection limit of the method. The sample results are not qualified since the differences in sample results are less than 1% solids and near the detection limit of the method.
- The RPDs for total silver in the duplicates of samples PTFI-SG01-A1 and PTLA-SG10-A3 were above the specified acceptance limit. No data qualifier was applied to the sample results since the difference in results was less than the MRL.
- The RPD for total antimony in the duplicates of sample PTME-SG03-A1 was above the specified acceptance limit. No data qualifier was applied to the samples since the difference in sample results was less than the MRL.

5.5 Laboratory Triplicate Samples

Laboratory triplicate analysis is conducted in the same manner and for the same purpose as laboratory duplicates. However, for triplicate analysis, the selected samples are divided into three fractions, not two. A laboratory will perform triplicate analysis instead of a duplicate analysis when required by the method. Laboratory triplicate analyses are performed for 5% of samples analyzed, or at least one per batch, for PSEP analytical methods. Laboratory triplicates were reported for the following analyses: sulfide, TOC, and particle size determination.

Laboratory triplicate data are summarized in the tables included as Attachment 3. No laboratory-specified acceptance ranges exist for triplicate analysis of sulfide, TOC, and particle size determination. Percent relative standard deviation (%RSD) is presented as an indication of the variability in the results. In general, for inorganic methods a %RSD of 20 is used as acceptance criterion for batch control. Cases where the triplicates were outside of this criterion are documented below:

- The %RSD for particle size determination was greater than 20 in one or more of the sieve sizes for samples PTCE-SG02-A1, PTFI-SG05-A1, PTFI-SG05-A1, PTFI-SG05-A1 and PTME-SG03-A1. In general, higher variability is seen with results less than 1% due to method limitations in the accuracy of the mass determination at low percentages. No data qualifiers were applied to the sample results since the difference in results was less than the 1%.

- The %RSD for sulfide was greater than 20 for samples PTFI-SG01-A3, PTFI-SG05-A1, and PTLA-SG15-A2. No data qualifiers were applied to the sample results since the difference in results was less than the MRL.
- The %RSD for TOC was greater than 20 for sample PTFI-SG01-A1. No data qualifier was applied to the sample result since the difference in results was less than the MRL.

6.0 METHOD REPORTING LIMITS

MRLs were determined by multiplying the MDL by a factor of generally three to five. For this project, methods were selected that could provide project-specific detection limits, and results are reported to the laboratory MDL. MRLs were adjusted by the laboratory for sample weight/volume, percent solids, dilutions, and matrix interference. Reported results, which are greater than the MDL but less than the MRL, were flagged by the laboratory as applicable and should be considered estimates.

MDLs for gamma-BHC (lindane) and gamma-chlordane are elevated for several samples due to the presence of non-target background components. These results are flagged "i" to indicate the matrix interference.

7.0 METHOD BLANKS

Method blanks are clean matrices, extracted and analyzed concurrent with a batch of 20 or less samples for each of the analytical procedures performed for this project. These samples are prepared in the laboratory in conjunction with project samples to monitor for contamination during the analytical procedure performed in the laboratory. A measured result above the MRL in a method blank would indicate a laboratory method control problem that could affect data quality. For this project, method blanks were tested at the required frequency. Method blanks reported for the project did not contain target analyte results above the laboratory MRL.

8.0 SURROGATES

Surrogates are specified for organic chromatographic analytical procedures. Surrogates are compounds similar to those tested that are added to each sample tested before the extraction step of the procedure. Subsequent measurements of surrogate compounds indicate overall method performance for each sample. Organic methods SW8081A, SW8082, SW8260B, SW8270C, and SW8270C SIM utilize this technique. Samples diluted (usually by a factor of five or more prior to analysis) due to high analyte concentration or matrix interference, result in reduced surrogate concentration. The accuracy of surrogates measured at these levels is impacted and should not necessarily be compared to limit ranges developed for the method.

All surrogate recoveries were within specified acceptance ranges.

9.0 ANALYTICAL METHODS

URS used the appropriate EPA-approved methods for analysis of sediment samples and achieved the required detection limits as specified in the project work plan. Surface sediment samples were analyzed by the laboratory utilizing the following methods:

- Bulk Density by SM 2710F;
- Particle Size Determination by ASTM D422 (Modified);
- Total Solids by EPA Method E160.3 (Modified);
- Total Volatile Solids by EPA Method E160.4 (Modified);
- TOC by PSEP Method;
- Total Sulfides by PSEP Method;
- Ammonia by Plumb sediment method;
- Total Metals by EPA Method SW6010B and EPA Method SW6020;
- Total Mercury by EPA Method SW7471A;
- Organochlorine Pesticides by EPA Method SW8081A;
- Polychlorinated Biphenyls (PCBs) by EPA Method SW8082;
- PAHs by EPA Method SW8270C SIM;
- SVOCs by EPA Method SW8270C; and
- VOCs by EPA Method SW8260B.

QA/QC criteria were met for the listed methods, except as noted in the previous sections or below.

- For sample PTFI-SG05-A3, the second column confirmation RPD was not within acceptance criteria for gamma-BHC (lindane). The higher result was reported. It is flagged "J" to indicate it is below the MRL and "P" to indicate the result should be considered an estimate.

10.0 ACCURACY AND PRECISION

Accuracy criteria monitor agreement of measured results with "true values" as determined by the analytical spike recovery project samples. Accuracy was measured for this project by the analysis of LCS/LCSD (see Section 5.2), and MS/MSD (see Section 5.3) analyses. Accuracy measurements that were outside of the laboratory specified ranges are qualified appropriately.

Precision criteria monitor analytical reproducibility. Precision was measured by the analysis of sample duplicates (field and laboratory), MS duplicates (MSD), and/or LCS duplicates (LCSD). Precision measurements that were above the laboratory-specified limit are qualified appropriately.

11.0 COMPLETENESS

Completeness is based on two factors: whether or not all of the planned samples were collected (field completeness), and whether or not all of the planned analyses were acceptable (laboratory completeness). The percentage of valid results is reported as completeness. Laboratory completeness is calculated after the QC data have been evaluated and applied to the measurement data. In addition to results identified as being outside of the QC limits established for a method, broken or spilled samples, or samples that could not be analyzed for any other reason, are included in the assessment of completeness. Only sample results totally rejected are considered invalid for the calculation of completeness. Since URS collected all of the planned samples, field completeness is considered to be 100%. There were no rejected sample results for the project, so the laboratory completeness is calculated at 100%. Since both factors of completeness were achieved, the completeness goals for the project were met.

12.0 REFERENCES

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Attachment 1

Data Qualifiers

Qualifier Type	Symbol	Definition
Inorganic	J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
Inorganic	X	See case narrative.
Metals	B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
Metals	N	The MS sample recovery is not within control limits. See case narrative.
Organic	J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
Organic	P	The GC or HPLC confirmation criterion was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for pesticides).
Organic	i	The MRL/MDL has been elevated due to a chromatographic interference.
Validator	VLL	The LCS recovery was below control limits. The qualified result may be biased low.
Validator	VML	The MS recovery was below control limits. The qualified result may be biased low.

Attachment 2
Field Duplicate Data

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Clay	11.3	13.4	PERCENT	17
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Gravel, Fine	0.41	0.17	PERCENT	83
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Gravel, Medium	0.00	0.00	PERCENT	NC
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Sand, Coarse	0.63	0.52	PERCENT	19
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Sand, Fine	13.9	12.5	PERCENT	11
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Sand, Medium	0.91	0.82	PERCENT	10
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Sand, Very Coarse	0.64	0.46	PERCENT	33
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Sand, Very Fine	26.9	22.8	PERCENT	16
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	ASTM D422M	Silt	47.9	50	PERCENT	4
PTFI-SG03-A1	PTFI-SG03-S1	08/03/2002	Sediment	SM 2710F	Bulk Density	1.68	1.67	g/L	1
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	E160.3M	Solids, Total	86.5	82.5	PERCENT	5
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	E160.4M	Solids, Total Volatile	6.2	5.0	mg/Kg	21
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6010B	Iron, Total	16,400	15,600	mg/Kg	5
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Antimony, Total	0.10	0.13	mg/Kg	26
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Arsenic, Total	8.3	8.5	mg/Kg	2
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Barium, Total	62.9	58.8	mg/Kg	7
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Cadmium, Total	0.34	0.33	mg/Kg	3
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Chromium, Total	15.3	14.7	mg/Kg	4
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Copper, Total	14.9	13.7	mg/Kg	8
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Lead, Total	8.23	7.21	mg/Kg	13
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Nickel, Total	23.8	23.2	mg/Kg	3
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW6020	Silver, Total	0.11	0.09	mg/Kg	20
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW7471A	Mercury, Total	0.04	0.04	mg/Kg	0
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	4,4'-DDD	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	4,4'-DDE	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	4,4'-DDT	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	Aldrin	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	alpha-Chlordane	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	Dieldrin	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	gamma-BHC (Lindane)	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	gamma-Chlordane	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8081A	Heptachlor	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1016	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1221	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1232	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1242	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1248	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1254	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8082	Aroclor 1260	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8260B	1,2-Dichlorobenzene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8260B	1,3-Dichlorobenzene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8260B	1,4-Dichlorobenzene	ND	ND	ug/Kg	NC

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	1,2,4-Trichlorobenzene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	2,4-Dimethylphenol	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	2-Methylphenol	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	4-Methylphenol	9.7	12	ug/Kg	21
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Benzoic Acid	110	160	ug/Kg	37
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Benzyl Alcohol	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Bis(2-ethylhexyl) Phthalate	4.5	14	ug/Kg	103
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Butyl Benzyl Phthalate	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Dibenzofuran	3.4	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Diethyl Phthalate	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Dimethyl Phthalate	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Di-n-butyl Phthalate	3.8	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Di-n-octyl Phthalate	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Hexachlorobenzene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Hexachlorobutadiene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Hexachloroethane	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	N-Nitrosodiphenylamine	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Pentachlorophenol (PCP)	5.5	17	ug/Kg	102
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C	Phenol	14	14	ug/Kg	0
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	2-Methylnaphthalene	9.2	9.8	ug/Kg	6
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Acenaphthene	0.52	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Acenaphthylene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Anthracene	0.80	0.53	ug/Kg	41
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Benz(a)anthracene	0.87	0.69	ug/Kg	23
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(a)pyrene	0.93	0.70	ug/Kg	28
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(b)fluoranthene	2.7	2.5	ug/Kg	8
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	1.9	1.1	ug/Kg	53
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(k)fluoranthene	ND	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Chrysene	6.2	5.9	ug/Kg	5
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	0.56	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Fluoranthene	2.0	1.4	ug/Kg	35
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Fluorene	2.2	2.0	ug/Kg	10
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	0.76	ND	ug/Kg	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Naphthalene	4.4	4.6	ug/Kg	4
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Phenanthrene	11	11	ug/Kg	0
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SW8270C SIM	Pyrene	2.8	2.3	ug/Kg	20

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Clay	16.7	13.1	PERCENT	24
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Gravel, Fine	0.19	0.15	PERCENT	24
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Gravel, Medium	0.32	0.00	PERCENT	NC
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Sand, Coarse	0.37	0.39	PERCENT	5
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Sand, Fine	1.54	2.60	PERCENT	51
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Sand, Medium	0.48	0.47	PERCENT	2
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Sand, Very Coarse	0.23	0.37	PERCENT	47
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Sand, Very Fine	5.93	6.15	PERCENT	4
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	ASTM D422M	Silt	71.2	75.6	PERCENT	6
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	Plumb	Ammonia as Nitrogen	8.6	2.2	mg/Kg	119
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	PSEP	Carbon, Total Organic (TOC)	1.67	1.29	PERCENT	26
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	PSEP	Sulfide	1.4	0.7	mg/Kg	67
PTFI-SG05-A1	PTFI-SG05-S1	08/07/2002	Sediment	SM 2710F	Bulk Density	1.64	1.72	g/L	5
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	E160.3M	Solids, Total	86.3	85.0	PERCENT	2
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	E160.4M	Solids, Total Volatile	4.2	4.2	mg/Kg	0
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6010B	Iron, Total	14,800	14,300	mg/Kg	3
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Antimony, Total	0.09	0.09	mg/Kg	0
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Arsenic, Total	7.5	7.9	mg/Kg	5
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Barium, Total	45.0	51.1	mg/Kg	13
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Cadmium, Total	0.28	0.27	mg/Kg	4
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Chromium, Total	11.2	12.2	mg/Kg	9
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Copper, Total	11.1	11.5	mg/Kg	4
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Lead, Total	6.19	6.35	mg/Kg	3
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Nickel, Total	18.7	19.7	mg/Kg	5
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Silver, Total	0.07	0.07	mg/Kg	0
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW6020	Zinc, Total	51.0	51.4	mg/Kg	1
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW7471A	Mercury, Total	0.03	0.03	mg/Kg	0
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	4,4'-DDD	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	4,4'-DDE	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	4,4'-DDT	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	Aldrin	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	alpha-Chlordane	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	Dieldrin	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	gamma-BHC (Lindane)	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	gamma-Chlordane	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8081A	Heptachlor	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1016	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1221	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1232	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1242	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1248	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1254	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8082	Aroclor 1260	ND	ND	ug/Kg	NC

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8260B	1,2-Dichlorobenzene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8260B	1,3-Dichlorobenzene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8260B	1,4-Dichlorobenzene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	1,2,4-Trichlorobenzene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	2,4-Dimethylphenol	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	2-Methylphenol	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	4-Methylphenol	6.1	6.5	ug/Kg	6
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Benzoic Acid	33	97	ug/Kg	98
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Benzyl Alcohol	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Bis(2-ethylhexyl) Phthalate	5.2	4.2	ug/Kg	21
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Butyl Benzyl Phthalate	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Dibenzofuran	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Diethyl Phthalate	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Dimethyl Phthalate	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Di-n-butyl Phthalate	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Di-n-octyl Phthalate	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Hexachlorobenzene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Hexachlorobutadiene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Hexachloroethane	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	N-Nitrosodiphenylamine	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Pentachlorophenol (PCP)	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C	Phenol	21	23	ug/Kg	9
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	2-Methylnaphthalene	5.3	6.2	ug/Kg	16
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Acenaphthene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Acenaphthylene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Anthracene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Benz(a)anthracene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(a)pyrene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(b)fluoranthene	1.2	1.8	ug/Kg	40
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	0.86	0.88	ug/Kg	2
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Benzo(k)fluoranthene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Chrysene	3.2	3.7	ug/Kg	14
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Fluoranthene	0.80	0.86	ug/Kg	7
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Fluorene	1.4	1.3	ug/Kg	7
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	ND	ND	ug/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Naphthalene	2.5	2.8	ug/Kg	11
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Phenanthrene	5.7	6.5	ug/Kg	13
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SW8270C SIM	Pyrene	1.3	1.4	ug/Kg	7

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Clay	10.7	11.1	PERCENT	4
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Gravel, Fine	0.18	0.25	PERCENT	33
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Gravel, Medium	0.00	0.00	PERCENT	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Sand, Coarse	0.51	0.67	PERCENT	27
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Sand, Fine	35.8	33.0	PERCENT	8
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Sand, Medium	2.19	1.93	PERCENT	13
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Sand, Very Coarse	0.42	0.96	PERCENT	78
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Sand, Very Fine	11.8	11.5	PERCENT	3
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	ASTM D422M	Silt	38.6	38.2	PERCENT	1
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	Plumb	Ammonia as Nitrogen	3.4	4.8	mg/Kg	34
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	PSEP	Carbon, Total Organic (TOC)	1.72	1.03	PERCENT	50
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	PSEP	Sulfide	ND	0.3	mg/Kg	NC
PTLA-SG06-A1	PTLA-SG06-S1	08/07/2002	Sediment	SM 2710F	Bulk Density	1.81	1.82	g/L	1
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	E160.3M	Solids, Total	82.6	82.6	PERCENT	0
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	E160.4M	Solids, Total Volatile	2.1	2.2	mg/Kg	5
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6010B	Iron, Total	9,030	9,680	mg/Kg	7
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Antimony, Total	0.10	0.09	mg/Kg	11
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Arsenic, Total	4.0	4.0	mg/Kg	0
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Barium, Total	33.5	34.1	mg/Kg	2
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Cadmium, Total	0.19	0.15	mg/Kg	24
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Chromium, Total	7.05	7.15	mg/Kg	1
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Copper, Total	4.00	4.01	mg/Kg	0
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Lead, Total	2.40	2.30	mg/Kg	4
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Nickel, Total	12.0	11.8	mg/Kg	2
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Silver, Total	0.03	0.02	mg/Kg	40
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW6020	Zinc, Total	26.5	25.2	mg/Kg	5
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW7471A	Mercury, Total	0.019	0.014	mg/Kg	30
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	4,4'-DDD	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	4,4'-DDE	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	4,4'-DDT	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	Aldrin	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	alpha-Chlordane	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	Dieldrin	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	gamma-BHC (Lindane)	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	gamma-Chlordane	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8081A	Heptachlor	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1016	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1221	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1232	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1242	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1248	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1254	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8082	Aroclor 1260	ND	ND	ug/Kg	NC

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8260B	1,2-Dichlorobenzene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8260B	1,3-Dichlorobenzene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8260B	1,4-Dichlorobenzene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	1,2,4-Trichlorobenzene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	2,4-Dimethylphenol	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	2-Methylphenol	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	4-Methylphenol	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Benzoic Acid	78	75	ug/Kg	4
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Benzyl Alcohol	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Bis(2-ethylhexyl) Phthalate	19	8.1	ug/Kg	80
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Butyl Benzyl Phthalate	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Dibenzofuran	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Diethyl Phthalate	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Dimethyl Phthalate	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Di-n-butyl Phthalate	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Di-n-octyl Phthalate	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Hexachlorobenzene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Hexachlorobutadiene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Hexachloroethane	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	N-Nitrosodiphenylamine	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Pentachlorophenol (PCP)	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C	Phenol	4.2	4.4	ug/Kg	5
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	2-Methylnaphthalene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Acenaphthene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Acenaphthylene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Anthracene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Benz(a)anthracene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Benzo(a)pyrene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Benzo(b)fluoranthene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Benzo(k)fluoranthene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Chrysene	0.80	0.71	ug/Kg	12
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Fluoranthene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Fluorene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Naphthalene	ND	ND	ug/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Phenanthrene	0.93	0.78	ug/Kg	18
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SW8270C SIM	Pyrene	0.40	ND	ug/Kg	NC

Field Duplicate Results

Sample ID	Sample Dup ID	Sample Date	Sample Description	Method	Analyte	Sample Result	Duplicate Result	Units	RPD
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Clay	1.36	1.28	PERCENT	6
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Gravel, Fine	0.08	0.00	PERCENT	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Gravel, Medium	0.00	0.00	PERCENT	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Sand, Coarse	2.00	1.47	PERCENT	31
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Sand, Fine	62.50	62.70	PERCENT	0
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Sand, Medium	21.70	20.10	PERCENT	8
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Sand, Very Coarse	0.26	0.14	PERCENT	60
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Sand, Very Fine	8.84	10.40	PERCENT	16
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	ASTM D422M	Silt	3.77	3.92	PERCENT	4
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	Plumb	Ammonia as Nitrogen	0.3	0.3	mg/Kg	0
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	PSEP	Carbon, Total Organic (TOC)	0.16	0.24	PERCENT	40
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	PSEP	Sulfide	ND	ND	mg/Kg	NC
PTME-SG03-A3	PTME-SG03-S1	08/06/2002	Sediment	SM 2710F	Bulk Density	1.79	1.86	g/L	4

g/L - grams per liter
mg/Kg - milligrams per liter
ug/Kg - micrograms per liter
Dup - duplicate
ID - identification number
NC - not calculated
ND - not detected
RPD - relative percent difference

Attachment 3

Lab Duplicate/Triplicate Data

Total Solids by E160.3M
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SB02-A1	Sediment	E160.3M	Solids, Total	PERCENT	76.3	81.1	6	20
PTCE-SG02-A1	Sediment	E160.3M	Solids, Total	PERCENT	72.5	79.1	9	20
PTFI-SG05-S1	Sediment	E160.3M	Solids, Total	PERCENT	82.5	84.7	3	20
PTLA-SG01-A1	Sediment	E160.3M	Solids, Total	PERCENT	97.2	97.4	<1	20
PTLA-SG09-A1	Sediment	E160.3M	Solids, Total	PERCENT	74.4	75.1	<1	20
PTLA-SG11-A1	Sediment	E160.3M	Solids, Total	PERCENT	89.5	89.5	<1	20
PTLA-SG14-A3	Sediment	E160.3M	Solids, Total	PERCENT	71.9	72.4	<1	20
PTLA-SG17-A3	Sediment	E160.3M	Solids, Total	PERCENT	84.6	87.3	3	20
PTME-SG03-A1	Sediment	E160.3M	Solids, Total	PERCENT	83.4	83.3	<1	20
PTME-SG05-A3	Sediment	E160.3M	Solids, Total	PERCENT	71.6	73.7	3	20

Total Volatile Solids by E160.4M
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SB02-A1	Sediment	E160.4M	Solids, Total Volatile	mg/Kg	1.8	2.0	11	20
PTFI-SG05-S1	Sediment	E160.4M	Solids, Total Volatile	mg/Kg	5.0	4.9	2	20
PTLA-SG01-A1	Sediment	E160.4M	Solids, Total Volatile	mg/Kg	0.8	1.1	**30**	20
PTLA-SG09-A1	Sediment	E160.4M	Solids, Total Volatile	mg/Kg	4.6	3.6	**24**	20
PTLA-SG17-A3	Sediment	E160.4M	Solids, Total Volatile	mg/Kg	1.6	1.5	6	20
PTME-SG03-A1	Sediment	E160.4M	Solids, Total Volatile	mg/Kg	2.3	2.2	4	20

Bulk Density by SM 2710F
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SB02-A1	Sediment	SM 2710F	Bulk Density	g/L	1.89	1.88	<1	20
PTCE-SG02-A1	Sediment	SM 2710F	Bulk Density	g/L	1.65	1.60	3	20
PTFI-SG05-A1	Sediment	SM 2710F	Bulk Density	g/L	1.64	1.64	<1	20
PTLA-SG03-A1	Sediment	SM 2710F	Bulk Density	g/L	1.61	1.62	<1	20
PTLA-SG08-A3	Sediment	SM 2710F	Bulk Density	g/L	1.89	1.92	1	20
PTME-SG03-A1	Sediment	SM 2710F	Bulk Density	g/L	1.92	1.89	1	20

Dup - duplicate
ID - identification number
RPD - relative percent difference
mg/Kg - milligrams per kilogram
g/L - grams per liter
Bold - RPD exceeds criteria; see section 5.4 for discussion

Ammonia by Plumb Method
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SG02-A1	Sediment	Plumb	Ammonia as Nitrogen	mg/Kg	2.9	2.5	15	20
PTFI-SG05-A1	Sediment	Plumb	Ammonia as Nitrogen	mg/Kg	8.6	7.6	12	20
PTLA-SG03-A1	Sediment	Plumb	Ammonia as Nitrogen	mg/Kg	2.7	2.5	8	20
PTLA-SG09-A1	Sediment	Plumb	Ammonia as Nitrogen	mg/Kg	3.2	2.7	17	20
PTME-SG03-A1	Sediment	Plumb	Ammonia as Nitrogen	mg/Kg	0.5	0.4	20	20

Dup - duplicate
ID- identification number
RPD - relative percent difference
mg/Kg - milligrams per kilogram

Metals By SW6020
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SB02-A3	Sediment	SW6020	Antimony, Total	mg/Kg	0.11	0.14	18	30
PTCE-SB02-A3	Sediment	SW6020	Arsenic, Total	mg/Kg	6.66	6.24	7	30
PTCE-SB02-A3	Sediment	SW6020	Cadmium, Total	mg/Kg	0.22	0.2	8	30
PTCE-SB02-A3	Sediment	SW6020	Copper, Total	mg/Kg	13.1	12.1	8	30
PTCE-SB02-A3	Sediment	SW6020	Lead, Total	mg/Kg	7.2	6.2	15	30
PTCE-SB02-A3	Sediment	SW6020	Nickel, Total	mg/Kg	16.8	15.4	9	30
PTCE-SB02-A3	Sediment	SW6020	Silver, Total	mg/Kg	0.084	0.089	5	30
PTFI-SG01-A1	Sediment	SW6020	Antimony, Total	mg/Kg	0.07	ND	NC	30
PTFI-SG01-A1	Sediment	SW6020	Arsenic, Total	mg/Kg	4.2	4.6	9	30
PTFI-SG01-A1	Sediment	SW6020	Barium, Total	mg/Kg	18.9	19.6	4	30
PTFI-SG01-A1	Sediment	SW6020	Cadmium, Total	mg/Kg	0.12	0.13	5	30
PTFI-SG01-A1	Sediment	SW6020	Chromium, Total	mg/Kg	5.43	5.84	7	30
PTFI-SG01-A1	Sediment	SW6020	Copper, Total	mg/Kg	3.7	3.96	7	30
PTFI-SG01-A1	Sediment	SW6020	Lead, Total	mg/Kg	2.73	2.77	1	30
PTFI-SG01-A1	Sediment	SW6020	Nickel, Total	mg/Kg	8.91	9.83	10	30
PTFI-SG01-A1	Sediment	SW6020	Silver, Total	mg/Kg	0.02	0.03	**43**	30
PTFI-SG01-A1	Sediment	SW6020	Zinc, Total	mg/Kg	20.9	24.1	15	30
PTFI-SG05-A1	Sediment	SW6020	Arsenic, Total	mg/Kg	8.3	8.2	2	30
PTFI-SG05-A1	Sediment	SW6020	Barium, Total	mg/Kg	62.9	60.1	5	30
PTFI-SG05-A1	Sediment	SW6020	Cadmium, Total	mg/Kg	0.34	0.34	1	30
PTFI-SG05-A1	Sediment	SW6020	Chromium, Total	mg/Kg	15.3	15	2	30
PTFI-SG05-A1	Sediment	SW6020	Copper, Total	mg/Kg	14.9	15	1	30
PTFI-SG05-A1	Sediment	SW6020	Lead, Total	mg/Kg	8.23	8.05	2	30
PTFI-SG05-A1	Sediment	SW6020	Nickel, Total	mg/Kg	23.8	22.6	5	30
PTFI-SG05-A1	Sediment	SW6020	Zinc, Total	mg/Kg	65.5	66	1	30
PTLA-SG03-A1	Sediment	SW6020	Arsenic, Total	mg/Kg	6.4	6.5	1	30
PTLA-SG03-A1	Sediment	SW6020	Barium, Total	mg/Kg	67	60.1	11	30
PTLA-SG03-A1	Sediment	SW6020	Cadmium, Total	mg/Kg	0.29	0.28	5	30
PTLA-SG03-A1	Sediment	SW6020	Chromium, Total	mg/Kg	12.8	11.7	9	30
PTLA-SG03-A1	Sediment	SW6020	Copper, Total	mg/Kg	12.2	12.2	0	30
PTLA-SG03-A1	Sediment	SW6020	Lead, Total	mg/Kg	7.18	7.16	0	30
PTLA-SG03-A1	Sediment	SW6020	Nickel, Total	mg/Kg	20.1	18.6	8	30
PTLA-SG03-A1	Sediment	SW6020	Zinc, Total	mg/Kg	51.5	51.2	1	30
PTLA-SG10-A3	Sediment	SW6020	Antimony, Total	mg/Kg	0.05	0.04	26	30
PTLA-SG10-A3	Sediment	SW6020	Arsenic, Total	mg/Kg	3.2	3.7	14	30
PTLA-SG10-A3	Sediment	SW6020	Barium, Total	mg/Kg	15.4	17.7	14	30
PTLA-SG10-A3	Sediment	SW6020	Cadmium, Total	mg/Kg	0.08	0.09	10	30
PTLA-SG10-A3	Sediment	SW6020	Chromium, Total	mg/Kg	4.55	5.25	14	30
PTLA-SG10-A3	Sediment	SW6020	Copper, Total	mg/Kg	2.95	3.2	8	30
PTLA-SG10-A3	Sediment	SW6020	Lead, Total	mg/Kg	2.00	2.16	8	30
PTLA-SG10-A3	Sediment	SW6020	Nickel, Total	mg/Kg	7.35	8.26	12	30
PTLA-SG10-A3	Sediment	SW6020	Silver, Total	mg/Kg	0.03	0.02	**36**	30
PTLA-SG10-A3	Sediment	SW6020	Zinc, Total	mg/Kg	16.9	18.9	11	30

Metals By SW6020
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTME-SG03-A1	Sediment	SW6020	Antimony, Total	mg/Kg	0.11	0.07	**38**	30
PTME-SG03-A1	Sediment	SW6020	Arsenic, Total	mg/Kg	4.5	3.6	3	30
PTME-SG03-A1	Sediment	SW6020	Barium, Total	mg/Kg	41	31.8	7	30
PTME-SG03-A1	Sediment	SW6020	Cadmium, Total	mg/Kg	0.16	0.15	11	30
PTME-SG03-A1	Sediment	SW6020	Chromium, Total	mg/Kg	7.63	6.58	3	30
PTME-SG03-A1	Sediment	SW6020	Copper, Total	mg/Kg	4.56	3.75	1	30
PTME-SG03-A1	Sediment	SW6020	Lead, Total	mg/Kg	2.64	2.24	2	30
PTME-SG03-A1	Sediment	SW6020	Nickel, Total	mg/Kg	12.8	11.1	5	30
PTME-SG03-A1	Sediment	SW6020	Silver, Total	mg/Kg	0.03	0.03	30	30
PTME-SG03-A1	Sediment	SW6020	Zinc, Total	mg/Kg	27.4	23.9	4	30

Dup - duplicate
ID- identification number
RPD - relative percent difference
mg/Kg - milligrams per kilogram
ND - not dectected
NC - not calculated
Bold - RPD exceeds criteria; see section 5.4 for discussion

Metals By SW6010B
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SB02-A3	Sediment	SW6010B	Barium, Total	mg/Kg	36.4	35.8	2	30
PTCE-SB02-A3	Sediment	SW6010B	Chromium, Total	mg/Kg	10.7	10.8	2	30
PTCE-SB02-A3	Sediment	SW6010B	Iron, Total	mg/Kg	13,100	13,600	4	30
PTCE-SB02-A3	Sediment	SW6010B	Zinc, Total	mg/Kg	47.8	50.8	6	30
PTFI-SG01-A1	Sediment	SW6010B	Iron, Total	mg/Kg	8,730	9,100	4	30
PTFI-SG05-A1	Sediment	SW6010B	Iron, Total	mg/Kg	16,400	16,400	0	30
PTLA-SG03-A1	Sediment	SW6010B	Iron, Total	mg/Kg	15,500	14,600	6	30
PTLA-SG10-A3	Sediment	SW6010B	Iron, Total	mg/Kg	6,510	6,780	4	30
PTME-SG03-A1	Sediment	SW6010B	Iron, Total	mg/Kg	9,200	10,100	9	30

Dup - duplicate
ID - identification number
RPD - relative percent difference
mg/Kg - milligrams per kilogram

Mercury by SW7471A
Duplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	RPD	Precision Limit
PTCE-SB02-A1	Sediment	SW7471A	Mercury, Total	mg/Kg	0.04	0.04	9	30
PTCE-SG02-A1	Sediment	SW7471A	Mercury, Total	mg/Kg	0.03	0.03	9	30
PTFI-SG05-A1	Sediment	SW7471A	Mercury, Total	mg/Kg	0.04	0.04	7	30
PTLA-SG03-A1	Sediment	SW7471A	Mercury, Total	mg/Kg	0.04	0.04	3	30
PTLA-SG09-A1	Sediment	SW7471A	Mercury, Total	mg/Kg	0.04	0.04	4	30
PTME-SG03-A1	Sediment	SW7471A	Mercury, Total	mg/Kg	0.016	0.015	5	30

Dup - duplicate
ID - identification number
RPD - relative percent difference
mg/Kg - milligrams per kilogram

Pesticides by SW8081A
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8081A	4,4'-DDD	106	108	2	58-154	50
PTFI-SG05-A1	Sediment	SW8081A	4,4'-DDE	106	109	3	57-152	50
PTFI-SG05-A1	Sediment	SW8081A	4,4'-DDT	111	111	0	52-138	50
PTFI-SG05-A1	Sediment	SW8081A	Aldrin	97	99	3	50-146	50
PTFI-SG05-A1	Sediment	SW8081A	alpha-Chlordane	102	105	3	51-142	50
PTFI-SG05-A1	Sediment	SW8081A	Dieldrin	102	105	3	64-137	50
PTFI-SG05-A1	Sediment	SW8081A	gamma-BHC (Lindane)	106	109	3	56-137	50
PTFI-SG05-A1	Sediment	SW8081A	gamma-Chlordane	105	109	4	48-143	50
PTFI-SG05-A1	Sediment	SW8081A	Heptachlor	96	98	3	51-132	50
PTLA-SG15-A1	Sediment	SW8081A	4,4'-DDD	96	93	4	58-154	50
PTLA-SG15-A1	Sediment	SW8081A	4,4'-DDE	97	94	3	57-152	50
PTLA-SG15-A1	Sediment	SW8081A	4,4'-DDT	99	96	4	52-138	50
PTLA-SG15-A1	Sediment	SW8081A	Aldrin	93	86	8	50-146	50
PTLA-SG15-A1	Sediment	SW8081A	alpha-Chlordane	94	89	5	51-142	50
PTLA-SG15-A1	Sediment	SW8081A	Dieldrin	94	90	4	64-137	50
PTLA-SG15-A1	Sediment	SW8081A	gamma-BHC (Lindane)	95	93	2	56-137	50
PTLA-SG15-A1	Sediment	SW8081A	gamma-Chlordane	104	88	16	48-143	50
PTLA-SG15-A1	Sediment	SW8081A	Heptachlor	89	86	3	51-132	50
PTLA-SG16-A2	Sediment	SW8081A	4,4'-DDD	89	95	6	58-154	50
PTLA-SG16-A2	Sediment	SW8081A	4,4'-DDE	92	98	7	57-152	50
PTLA-SG16-A2	Sediment	SW8081A	4,4'-DDT	105	110	5	52-138	50
PTLA-SG16-A2	Sediment	SW8081A	Aldrin	84	91	8	50-146	50
PTLA-SG16-A2	Sediment	SW8081A	alpha-Chlordane	88	94	6	51-142	50
PTLA-SG16-A2	Sediment	SW8081A	Dieldrin	97	105	8	64-137	50
PTLA-SG16-A2	Sediment	SW8081A	gamma-BHC (Lindane)	89	93	5	56-137	50
PTLA-SG16-A2	Sediment	SW8081A	gamma-Chlordane	86	93	8	48-143	50
PTLA-SG16-A2	Sediment	SW8081A	Heptachlor	77	85	10	51-132	50
PTME-SG03-S1	Sediment	SW8081A	4,4'-DDD	104	109	4	58-154	50
PTME-SG03-S1	Sediment	SW8081A	4,4'-DDE	102	107	5	57-152	50
PTME-SG03-S1	Sediment	SW8081A	4,4'-DDT	104	108	4	52-138	50
PTME-SG03-S1	Sediment	SW8081A	Aldrin	97	101	4	50-146	50
PTME-SG03-S1	Sediment	SW8081A	alpha-Chlordane	96	102	6	51-142	50
PTME-SG03-S1	Sediment	SW8081A	Dieldrin	100	105	5	64-137	50
PTME-SG03-S1	Sediment	SW8081A	gamma-BHC (Lindane)	100	107	6	56-137	50
PTME-SG03-S1	Sediment	SW8081A	gamma-Chlordane	96	101	5	48-143	50
PTME-SG03-S1	Sediment	SW8081A	Heptachlor	96	99	4	51-132	50
PTME-SG04-A1	Sediment	SW8081A	4,4'-DDD	101	100	0	58-154	50
PTME-SG04-A1	Sediment	SW8081A	4,4'-DDE	100	100	1	57-152	50
PTME-SG04-A1	Sediment	SW8081A	4,4'-DDT	102	100	2	52-138	50
PTME-SG04-A1	Sediment	SW8081A	Aldrin	90	93	3	50-146	50
PTME-SG04-A1	Sediment	SW8081A	alpha-Chlordane	93	93	0	51-142	50
PTME-SG04-A1	Sediment	SW8081A	Dieldrin	97	97	0	64-137	50
PTME-SG04-A1	Sediment	SW8081A	gamma-BHC (Lindane)	98	101	3	56-137	50
PTME-SG04-A1	Sediment	SW8081A	gamma-Chlordane	94	94	1	48-143	50
PTME-SG04-A1	Sediment	SW8081A	Heptachlor	88	90	2	51-132	50

ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference

PCBs by SW8082
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8082	Aroclor 1016	104	105	1	51-145	50
PTFI-SG05-A1	Sediment	SW8082	Aroclor 1260	119	120	1	58-147	50
PTLA-SG10-A3	Sediment	SW8082	Aroclor 1016	95	93	3	51-145	50
PTLA-SG10-A3	Sediment	SW8082	Aroclor 1260	114	112	2	58-147	50
PTLA-SG17-A2	Sediment	SW8082	Aroclor 1016	98	98	0	51-145	50
PTLA-SG17-A2	Sediment	SW8082	Aroclor 1260	109	108	0	58-147	50
PTME-SG02-A2	Sediment	SW8082	Aroclor 1016	115	109	5	51-145	50
PTME-SG02-A2	Sediment	SW8082	Aroclor 1260	126	121	4	58-147	50
PTME-SG05-A3	Sediment	SW8082	Aroclor 1016	99	96	3	51-145	50
PTME-SG05-A3	Sediment	SW8082	Aroclor 1260	111	109	2	58-147	50

ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference

VOCs by SW8260B
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTCE-SG01-A3	Sediment	SW8260B	1,2-Dichlorobenzene	28	-	-	19-138	-
PTCE-SG01-A3	Sediment	SW8260B	1,3-Dichlorobenzene	26	-	-	18-136	-
PTCE-SG01-A3	Sediment	SW8260B	1,4-Dichlorobenzene	22	-	-	21-134	-
PTFI-SG05-A1	Sediment	SW8260B	1,2-Dichlorobenzene	24	-	-	19-138	-
PTFI-SG05-A1	Sediment	SW8260B	1,3-Dichlorobenzene	20	-	-	18-136	-
PTFI-SG05-A1	Sediment	SW8260B	1,4-Dichlorobenzene	**18**	-	-	21-134	-
PTLA-SG03-A1	Sediment	SW8260B	1,2-Dichlorobenzene	42	34	20	19-138	40
PTLA-SG03-A1	Sediment	SW8260B	1,3-Dichlorobenzene	41	31	27	18-136	40
PTLA-SG03-A1	Sediment	SW8260B	1,4-Dichlorobenzene	37	28	28	21-134	40
PTLA-SG05-A1	Sediment	SW8260B	1,2-Dichlorobenzene	55	53	4	19-138	40
PTLA-SG05-A1	Sediment	SW8260B	1,3-Dichlorobenzene	51	50	2	18-136	40
PTLA-SG05-A1	Sediment	SW8260B	1,4-Dichlorobenzene	48	47	2	21-134	40
PTLA-SG10-A1	Sediment	SW8260B	1,2-Dichlorobenzene	65	66	3	19-138	40
PTLA-SG10-A1	Sediment	SW8260B	1,3-Dichlorobenzene	63	63	1	18-136	40
PTLA-SG10-A1	Sediment	SW8260B	1,4-Dichlorobenzene	61	61	1	21-134	40
PTLA-SG13-A3	Sediment	SW8260B	1,2-Dichlorobenzene	33	-	-	19-138	-
PTLA-SG13-A3	Sediment	SW8260B	1,3-Dichlorobenzene	30	-	-	18-136	-
PTLA-SG13-A3	Sediment	SW8260B	1,4-Dichlorobenzene	26	-	-	21-134	-

SVOCs by SW8270C
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8270C	1,2,4-Trichlorobenzene	71	77	8	42-100	40
PTFI-SG05-A1	Sediment	SW8270C	Pentachlorophenol (PCP)	63	80	24	30-129	40
PTFI-SG05-A1	Sediment	SW8270C	Phenol	78	86	9	30-113	40
PTLA-SG03-A1	Sediment	SW8270C	1,2,4-Trichlorobenzene	60	59	2	42-100	40
PTLA-SG03-A1	Sediment	SW8270C	Pentachlorophenol (PCP)	66	58	12	30-129	40
PTLA-SG03-A1	Sediment	SW8270C	Phenol	63	65	2	30-113	40
PTLA-SG05-A3	Sediment	SW8270C	1,2,4-Trichlorobenzene	73	83	12	42-100	40
PTLA-SG05-A3	Sediment	SW8270C	Pentachlorophenol (PCP)	80	90	11	30-129	40
PTLA-SG05-A3	Sediment	SW8270C	Phenol	71	95	26	30-113	40
PTLA-SG10-A3	Sediment	SW8270C	1,2,4-Trichlorobenzene	88	82	8	42-100	40
PTLA-SG10-A3	Sediment	SW8270C	Pentachlorophenol (PCP)	101	97	4	30-129	40
PTLA-SG10-A3	Sediment	SW8270C	Phenol	93	87	7	30-113	40
PTME-SG04-A2	Sediment	SW8270C	1,2,4-Trichlorobenzene	93	78	17	42-100	40
PTME-SG04-A2	Sediment	SW8270C	Pentachlorophenol (PCP)	97	89	9	30-129	40
PTME-SG04-A2	Sediment	SW8270C	Phenol	93	86	8	30-113	40

ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference
Bold - recovery outside method acceptance criteria; see section 5.3

Sulfide by PSEP Method
Triplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	Trip Result	%RSD
PTFI-SG01-A3	Sediment	PSEP	Sulfide	mg/Kg	0.2	0.3	0.2	**25**
PTFI-SG05-A1	Sediment	PSEP	Sulfide	mg/Kg	1.4	0.7	0.3	**70**
PTLA-SG03-A1	Sediment	PSEP	Sulfide	mg/Kg	2.8	2.9	3.5	12
PTLA-SG15-A2	Sediment	PSEP	Sulfide	mg/Kg	0.3	0.2	ND	**28**
PLTA-SG05-A3	Sediment	PSEP	Sulfide	mg/Kg	ND	ND	-	0

Note: A triplicate was not analyzed on PTLA-SG05-A3 due to limited sample size

Total Organic Carbon by PSEP Method
Triplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	Trip Result	%RSD
PTCE-SB02-A2	Sediment	PSEP	Carbon, Total Organic	PERCENT	1.34	0.94	1.08	18
PTFI-SG01-A1	Sediment	PSEP	Carbon, Total Organic	PERCENT	0.22	0.14	0.14	**28**
PTFI-SG05-A1	Sediment	PSEP	Carbon, Total Organic	PERCENT	1.67	1.43	1.57	8
PTLA-SG03-A1	Sediment	PSEP	Carbon, Total Organic	PERCENT	1.08	1.08	1.12	2
PTLA-SG09-A1	Sediment	PSEP	Carbon, Total Organic	PERCENT	1.01	0.92	1.08	8
PTME-SG03-A1	Sediment	PSEP	Carbon, Total Organic	PERCENT	0.30	0.35	0.31	8

Dup - duplicate

% RSD - percent relative standard deviation

Trip - triplicate

mg/Kg - milligrams per kilogram

Bold - %RSD exceeds criteria; see section 5.5 for discussion

Particle Size Determination by ASTM D422M
Triplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	Trip Result	% RSD
PTCE-SB02-A1	Sediment	ASTM D422M	Clay	PERCENT	6.58	7.60	7.24	7
PTCE-SB02-A1	Sediment	ASTM D422M	Gravel, Fine	PERCENT	5.02	4.41	4.89	7
PTCE-SB02-A1	Sediment	ASTM D422M	Gravel, Medium	PERCENT	47.1	35.5	41.1	14
PTCE-SB02-A1	Sediment	ASTM D422M	Sand, Coarse	PERCENT	3.52	3.73	3.64	3
PTCE-SB02-A1	Sediment	ASTM D422M	Sand, Fine	PERCENT	7.99	9.76	9.49	11
PTCE-SB02-A1	Sediment	ASTM D422M	Sand, Medium	PERCENT	7.17	8.25	8.34	8
PTCE-SB02-A1	Sediment	ASTM D422M	Sand, Very Coarse	PERCENT	1.97	1.86	1.61	10
PTCE-SB02-A1	Sediment	ASTM D422M	Sand, Very Fine	PERCENT	2.18	2.70	2.57	11
PTCE-SB02-A1	Sediment	ASTM D422M	Silt	PERCENT	20.9	25.1	23.0	9
PTCE-SG02-A1	Sediment	ASTM D422M	Clay	PERCENT	3.97	3.03	2.99	17
PTCE-SG02-A1	Sediment	ASTM D422M	Gravel, Fine	PERCENT	6.92	5.52	5.96	12
PTCE-SG02-A1	Sediment	ASTM D422M	Gravel, Medium	PERCENT	43.4	59.7	60.6	18
PTCE-SG02-A1	Sediment	ASTM D422M	Sand, Coarse	PERCENT	2.40	1.76	1.79	18
PTCE-SG02-A1	Sediment	ASTM D422M	Sand, Fine	PERCENT	12.7	9.49	9.32	18
PTCE-SG02-A1	Sediment	ASTM D422M	Sand, Medium	PERCENT	9.88	7.18	7.33	19
PTCE-SG02-A1	Sediment	ASTM D422M	Sand, Very Coarse	PERCENT	1.25	0.89	0.80	**24**
PTCE-SG02-A1	Sediment	ASTM D422M	Sand, Very Fine	PERCENT	1.12	0.81	0.79	20
PTCE-SG02-A1	Sediment	ASTM D422M	Silt	PERCENT	14.1	10.4	10.0	20
PTFI-SG05-A1	Sediment	ASTM D422M	Clay	PERCENT	16.7	17.9	17.6	4
PTFI-SG05-A1	Sediment	ASTM D422M	Gravel, Fine	PERCENT	0.19	0.09	0.06	**60**
PTFI-SG05-A1	Sediment	ASTM D422M	Gravel, Medium	PERCENT	0.32	0.00	0.00	NC
PTFI-SG05-A1	Sediment	ASTM D422M	Sand, Coarse	PERCENT	0.37	0.50	0.44	15
PTFI-SG05-A1	Sediment	ASTM D422M	Sand, Fine	PERCENT	1.54	1.73	1.47	9
PTFI-SG05-A1	Sediment	ASTM D422M	Sand, Medium	PERCENT	0.48	0.56	0.50	8
PTFI-SG05-A1	Sediment	ASTM D422M	Sand, Very Coarse	PERCENT	0.23	0.31	0.28	15
PTFI-SG05-A1	Sediment	ASTM D422M	Sand, Very Fine	PERCENT	5.93	5.33	5.46	6
PTFI-SG05-A1	Sediment	ASTM D422M	Silt	PERCENT	71.2	74.7	72.8	2
PTLA-SG03-A1	Sediment	ASTM D422M	Clay	PERCENT	18.8	20.5	19.6	4
PTLA-SG03-A1	Sediment	ASTM D422M	Gravel, Fine	PERCENT	0.04	0.11	0.01	**96**
PTLA-SG03-A1	Sediment	ASTM D422M	Gravel, Medium	PERCENT	0.00	0.00	0.00	NC
PTLA-SG03-A1	Sediment	ASTM D422M	Sand, Coarse	PERCENT	0.46	0.32	0.27	**28**
PTLA-SG03-A1	Sediment	ASTM D422M	Sand, Fine	PERCENT	4.97	5.07	5.18	2
PTLA-SG03-A1	Sediment	ASTM D422M	Sand, Medium	PERCENT	0.43	0.40	0.36	9
PTLA-SG03-A1	Sediment	ASTM D422M	Sand, Very Coarse	PERCENT	0.62	0.23	0.24	**61**
PTLA-SG03-A1	Sediment	ASTM D422M	Sand, Very Fine	PERCENT	9.09	8.75	10.0	7
PTLA-SG03-A1	Sediment	ASTM D422M	Silt	PERCENT	62.9	61.4	60.5	2
PTLA-SG09-A1	Sediment	ASTM D422M	Clay	PERCENT	10.5	10.5	10.8	2
PTLA-SG09-A1	Sediment	ASTM D422M	Gravel, Fine	PERCENT	0.30	0.62	0.27	**49**
PTLA-SG09-A1	Sediment	ASTM D422M	Gravel, Medium	PERCENT	0.47	0.53	0.00	**87**
PTLA-SG09-A1	Sediment	ASTM D422M	Sand, Coarse	PERCENT	0.42	0.59	0.54	17
PTLA-SG09-A1	Sediment	ASTM D422M	Sand, Fine	PERCENT	22.9	25.6	23.8	6
PTLA-SG09-A1	Sediment	ASTM D422M	Sand, Medium	PERCENT	0.60	1.16	0.68	**37**
PTLA-SG09-A1	Sediment	ASTM D422M	Sand, Very Coarse	PERCENT	0.62	1.00	0.78	**23**
PTLA-SG09-A1	Sediment	ASTM D422M	Sand, Very Fine	PERCENT	14.3	14.9	15.1	3
PTLA-SG09-A1	Sediment	ASTM D422M	Silt	PERCENT	44.3	45.4	45.9	2

Particle Size Determination by ASTM D422M
Triplicate Analysis

Sample ID	Matrix	Method	Analyte	Units	Sample Result	Dup Result	Trip Result	% RSD
PTME-SG03-A1	Sediment	ASTM D422M	Clay	PERCENT	1.52	1.49	1.48	1
PTME-SG03-A1	Sediment	ASTM D422M	Gravel, Fine	PERCENT	0.12	0.06	0.37	**72**
PTME-SG03-A1	Sediment	ASTM D422M	Gravel, Medium	PERCENT	0.00	0.00	0.00	NC
PTME-SG03-A1	Sediment	ASTM D422M	Sand, Coarse	PERCENT	2.69	2.70	2.64	2
PTME-SG03-A1	Sediment	ASTM D422M	Sand, Fine	PERCENT	58.8	57.4	59.6	2
PTME-SG03-A1	Sediment	ASTM D422M	Sand, Medium	PERCENT	23.3	24.7	23.3	3
PTME-SG03-A1	Sediment	ASTM D422M	Sand, Very Coarse	PERCENT	0.36	0.29	0.36	12
PTME-SG03-A1	Sediment	ASTM D422M	Sand, Very Fine	PERCENT	8.07	8.37	8.33	2
PTME-SG03-A1	Sediment	ASTM D422M	Silt	PERCENT	3.78	3.59	3.87	4

Dup - duplicate

% RSD - percent relative standard deviation

Trip - triplicate

NC - not calculated

Bold - %RSD exceeds criteria; see section 5.5 for discussion

Ammonia By Plumb Method
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PTCE-SG02-A1	Sediment	Plumb	Ammonia as Nitrogen	99	75-125
PTFI-SG05-A1	Sediment	Plumb	Ammonia as Nitrogen	80	75-125
PTLA-SG03-A1	Sediment	Plumb	Ammonia as Nitrogen	95	75-125
PTLA-SG04-A1	Sediment	Plumb	Ammonia as Nitrogen	108	75-125
PTLA-SG09-A1	Sediment	Plumb	Ammonia as Nitrogen	100	75-125
PTME-SG03-A1	Sediment	Plumb	Ammonia as Nitrogen	99	75-125

Sulfide by PSEP
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PLTA-SG05-A3	Sediment	PSEP	Sulfide	69	60-130
PTFI-SG01-A3	Sediment	PSEP	Sulfide	78	60-130
PTFI-SG05-A1	Sediment	PSEP	Sulfide	70	60-130
PTLA-SG03-A1	Sediment	PSEP	Sulfide	**50**	60-130
PTLA-SG15-A2	Sediment	PSEP	Sulfide	83	60-130

Total Organic Carbon (TOC) by PSEP
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PTCE-SB02-A2	Sediment	PSEP	Total Organic Carbon	94	75-125
PTFI-SG01-A1	Sediment	PSEP	Total Organic Carbon	90	75-125
PTFI-SG05-A1	Sediment	PSEP	Total Organic Carbon	100	75-125
PTLA-SG03-A1	Sediment	PSEP	Total Organic Carbon	98	75-125
PTLA-SG09-A1	Sediment	PSEP	Total Organic Carbon	94	75-125
PTME-SG03-A1	Sediment	PSEP	Total Organic Carbon	101	75-125

ID - identification number
MS - matrix spike
%R - percent recovery
Bold - recovery outside method acceptance criteria; see section 5.3

Metals By SW6010B
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PTCE-SB02-A3	Sediment	SW6010B	Barium, Total	92	74-121
PTCE-SB02-A3	Sediment	SW6010B	Chromium, Total	95	45-144
PTCE-SB02-A3	Sediment	SW6010B	Iron, Total	**861**	75-125
PTCE-SB02-A3	Sediment	SW6010B	Zinc, Total	116	42-149
PTFI-SG01-A1	Sediment	SW6010B	Iron, Total	**268**	75-125
PTFI-SG05-A1	Sediment	SW6010B	Iron, Total	**303**	75-125
PTLA-SG03-A1	Sediment	SW6010B	Iron, Total	**-44**	75-125
PTLA-SG10-A3	Sediment	SW6010B	Iron, Total	439	75-125
PTME-SG03-A1	Sediment	SW6010B	Iron, Total	**600**	75-125

Mercury by SW7471A
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PTCE-SB02-A1	Sediment	SW7471A	Mercury, Total	99	71-124
PTCE-SG02-A1	Sediment	SW7471A	Mercury, Total	106	71-124
PTFI-SG05-A1	Sediment	SW7471A	Mercury, Total	92	71-124
PTLA-SG03-A1	Sediment	SW7471A	Mercury, Total	96	71-124
PTLA-SG09-A1	Sediment	SW7471A	Mercury, Total	95	60-130
PTME-SG03-A1	Sediment	SW7471A	Mercury, Total	128	60-130

ID - identification number

MS - matrix spike

%R - percent recovery

Bold - recovery outside method acceptance criteria; see section 5.3

Metals By SW6020
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PTCE-SB02-A3	Sediment	SW6020	Antimony, Total	**35**	70-130
PTCE-SB02-A3	Sediment	SW6020	Arsenic, Total	97	70-130
PTCE-SB02-A3	Sediment	SW6020	Cadmium, Total	96	70-130
PTCE-SB02-A3	Sediment	SW6020	Copper, Total	98	70-130
PTCE-SB02-A3	Sediment	SW6020	Lead, Total	100	70-130
PTCE-SB02-A3	Sediment	SW6020	Nickel, Total	99	70-130
PTCE-SB02-A3	Sediment	SW6020	Silver, Total	93	70-130
PTFI-SG01-A1	Sediment	SW6020	Antimony, Total	73	70-130
PTFI-SG01-A1	Sediment	SW6020	Arsenic, Total	100	70-130
PTFI-SG01-A1	Sediment	SW6020	Barium, Total	97	70-130
PTFI-SG01-A1	Sediment	SW6020	Cadmium, Total	105	70-130
PTFI-SG01-A1	Sediment	SW6020	Chromium, Total	97	70-130
PTFI-SG01-A1	Sediment	SW6020	Copper, Total	96	70-130
PTFI-SG01-A1	Sediment	SW6020	Lead, Total	103	70-130
PTFI-SG01-A1	Sediment	SW6020	Nickel, Total	98	70-130
PTFI-SG01-A1	Sediment	SW6020	Silver, Total	93	70-130
PTFI-SG01-A1	Sediment	SW6020	Zinc, Total	108	70-130
PTFI-SG05-A1	Sediment	200.8	Antimony, Total	**24**	70-130
PTFI-SG05-A1	Sediment	SW6020	Arsenic, Total	102	70-130
PTFI-SG05-A1	Sediment	SW6020	Barium, Total	89	70-130
PTFI-SG05-A1	Sediment	SW6020	Cadmium, Total	107	70-130
PTFI-SG05-A1	Sediment	SW6020	Chromium, Total	79	70-130
PTFI-SG05-A1	Sediment	SW6020	Copper, Total	84	70-130
PTFI-SG05-A1	Sediment	SW6020	Lead, Total	94	70-130
PTFI-SG05-A1	Sediment	SW6020	Nickel, Total	92	70-130
PTFI-SG05-A1	Sediment	200.8	Silver, Total	92	70-130
PTFI-SG05-A1	Sediment	SW6020	Zinc, Total	106	70-130
PTLA-SG03-A1	Sediment	200.8	Antimony, Total	**31**	70-130
PTLA-SG03-A1	Sediment	SW6020	Arsenic, Total	101	70-130
PTLA-SG03-A1	Sediment	SW6020	Barium, Total	94	70-130
PTLA-SG03-A1	Sediment	SW6020	Cadmium, Total	102	70-130
PTLA-SG03-A1	Sediment	SW6020	Chromium, Total	82	70-130
PTLA-SG03-A1	Sediment	SW6020	Copper, Total	85	70-130
PTLA-SG03-A1	Sediment	SW6020	Lead, Total	97	70-130
PTLA-SG03-A1	Sediment	SW6020	Nickel, Total	96	70-130
PTLA-SG03-A1	Sediment	200.8	Silver, Total	98	70-130
PTLA-SG03-A1	Sediment	SW6020	Zinc, Total	110	70-130
PTLA-SG10-A3	Sediment	SW6020	Antimony, Total	81	70-130
PTLA-SG10-A3	Sediment	SW6020	Arsenic, Total	91	70-130
PTLA-SG10-A3	Sediment	SW6020	Barium, Total	92	70-130
PTLA-SG10-A3	Sediment	SW6020	Cadmium, Total	97	70-130
PTLA-SG10-A3	Sediment	SW6020	Chromium, Total	96	70-130
PTLA-SG10-A3	Sediment	SW6020	Copper, Total	92	70-130
PTLA-SG10-A3	Sediment	SW6020	Lead, Total	98	70-130
PTLA-SG10-A3	Sediment	SW6020	Nickel, Total	90	70-130
PTLA-SG10-A3	Sediment	SW6020	Silver, Total	87	70-130
PTLA-SG10-A3	Sediment	SW6020	Zinc, Total	95	70-130

Metals By SW6020
Matrix Spike (MS)

Sample ID	Matrix	Method	Analyte	MS %R	Accuracy Limit
PTME-SG03-A1	Sediment	SW6020	Antimony, Total	77	70-130
PTME-SG03-A1	Sediment	SW6020	Arsenic, Total	94	70-130
PTME-SG03-A1	Sediment	SW6020	Barium, Total	92	70-130
PTME-SG03-A1	Sediment	SW6020	Cadmium, Total	92	70-130
PTME-SG03-A1	Sediment	SW6020	Chromium, Total	85	70-130
PTME-SG03-A1	Sediment	SW6020	Copper, Total	82	70-130
PTME-SG03-A1	Sediment	SW6020	Lead, Total	90	70-130
PTME-SG03-A1	Sediment	SW6020	Nickel, Total	89	70-130
PTME-SG03-A1	Sediment	SW6020	Silver, Total	102	70-130
PTME-SG03-A1	Sediment	SW6020	Zinc, Total	93	70-130

ID - identification number

MS - matrix spike

%R - percent recovery

Bold - recovery outside method acceptance criteria; see section 5.3

Pesticides by SW8081A
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8081A	4,4'-DDD	106	108	2	58-154	50
PTFI-SG05-A1	Sediment	SW8081A	4,4'-DDE	106	109	3	57-152	50
PTFI-SG05-A1	Sediment	SW8081A	4,4'-DDT	111	111	0	52-138	50
PTFI-SG05-A1	Sediment	SW8081A	Aldrin	97	99	3	50-146	50
PTFI-SG05-A1	Sediment	SW8081A	alpha-Chlordane	102	105	3	51-142	50
PTFI-SG05-A1	Sediment	SW8081A	Dieldrin	102	105	3	64-137	50
PTFI-SG05-A1	Sediment	SW8081A	gamma-BHC (Lindane)	106	109	3	56-137	50
PTFI-SG05-A1	Sediment	SW8081A	gamma-Chlordane	105	109	4	48-143	50
PTFI-SG05-A1	Sediment	SW8081A	Heptachlor	96	98	3	51-132	50
PTLA-SG15-A1	Sediment	SW8081A	4,4'-DDD	96	93	4	58-154	50
PTLA-SG15-A1	Sediment	SW8081A	4,4'-DDE	97	94	3	57-152	50
PTLA-SG15-A1	Sediment	SW8081A	4,4'-DDT	99	96	4	52-138	50
PTLA-SG15-A1	Sediment	SW8081A	Aldrin	93	86	8	50-146	50
PTLA-SG15-A1	Sediment	SW8081A	alpha-Chlordane	94	89	5	51-142	50
PTLA-SG15-A1	Sediment	SW8081A	Dieldrin	94	90	4	64-137	50
PTLA-SG15-A1	Sediment	SW8081A	gamma-BHC (Lindane)	95	93	2	56-137	50
PTLA-SG15-A1	Sediment	SW8081A	gamma-Chlordane	104	88	16	48-143	50
PTLA-SG15-A1	Sediment	SW8081A	Heptachlor	89	86	3	51-132	50
PTLA-SG16-A2	Sediment	SW8081A	4,4'-DDD	89	95	6	58-154	50
PTLA-SG16-A2	Sediment	SW8081A	4,4'-DDE	92	98	7	57-152	50
PTLA-SG16-A2	Sediment	SW8081A	4,4'-DDT	105	110	5	52-138	50
PTLA-SG16-A2	Sediment	SW8081A	Aldrin	84	91	8	50-146	50
PTLA-SG16-A2	Sediment	SW8081A	alpha-Chlordane	88	94	6	51-142	50
PTLA-SG16-A2	Sediment	SW8081A	Dieldrin	97	105	8	64-137	50
PTLA-SG16-A2	Sediment	SW8081A	gamma-BHC (Lindane)	89	93	5	56-137	50
PTLA-SG16-A2	Sediment	SW8081A	gamma-Chlordane	86	93	8	48-143	50
PTLA-SG16-A2	Sediment	SW8081A	Heptachlor	77	85	10	51-132	50
PTME-SG03-S1	Sediment	SW8081A	4,4'-DDD	104	109	4	58-154	50
PTME-SG03-S1	Sediment	SW8081A	4,4'-DDE	102	107	5	57-152	50
PTME-SG03-S1	Sediment	SW8081A	4,4'-DDT	104	108	4	52-138	50
PTME-SG03-S1	Sediment	SW8081A	Aldrin	97	101	4	50-146	50
PTME-SG03-S1	Sediment	SW8081A	alpha-Chlordane	96	102	6	51-142	50
PTME-SG03-S1	Sediment	SW8081A	Dieldrin	100	105	5	64-137	50
PTME-SG03-S1	Sediment	SW8081A	gamma-BHC (Lindane)	100	107	6	56-137	50
PTME-SG03-S1	Sediment	SW8081A	gamma-Chlordane	96	101	5	48-143	50
PTME-SG03-S1	Sediment	SW8081A	Heptachlor	96	99	4	51-132	50
PTME-SG04-A1	Sediment	SW8081A	4,4'-DDD	101	100	0	58-154	50
PTME-SG04-A1	Sediment	SW8081A	4,4'-DDE	100	100	1	57-152	50
PTME-SG04-A1	Sediment	SW8081A	4,4'-DDT	102	100	2	52-138	50
PTME-SG04-A1	Sediment	SW8081A	Aldrin	90	93	3	50-146	50
PTME-SG04-A1	Sediment	SW8081A	alpha-Chlordane	93	93	0	51-142	50
PTME-SG04-A1	Sediment	SW8081A	Dieldrin	97	97	0	64-137	50
PTME-SG04-A1	Sediment	SW8081A	gamma-BHC (Lindane)	98	101	3	56-137	50
PTME-SG04-A1	Sediment	SW8081A	gamma-Chlordane	94	94	1	48-143	50
PTME-SG04-A1	Sediment	SW8081A	Heptachlor	88	90	2	51-132	50

ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference

PCBs by SW8082
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8082	Aroclor 1016	104	105	1	51-145	50
PTFI-SG05-A1	Sediment	SW8082	Aroclor 1260	119	120	1	58-147	50
PTLA-SG10-A3	Sediment	SW8082	Aroclor 1016	95	93	3	51-145	50
PTLA-SG10-A3	Sediment	SW8082	Aroclor 1260	114	112	2	58-147	50
PTLA-SG17-A2	Sediment	SW8082	Aroclor 1016	98	98	0	51-145	50
PTLA-SG17-A2	Sediment	SW8082	Aroclor 1260	109	108	0	58-147	50
PTME-SG02-A2	Sediment	SW8082	Aroclor 1016	115	109	5	51-145	50
PTME-SG02-A2	Sediment	SW8082	Aroclor 1260	126	121	4	58-147	50
PTME-SG05-A3	Sediment	SW8082	Aroclor 1016	99	96	3	51-145	50
PTME-SG05-A3	Sediment	SW8082	Aroclor 1260	111	109	2	58-147	50

ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference

VOCs by SW8260B
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTCE-SG01-A3	Sediment	SW8260B	1,2-Dichlorobenzene	28	-	-	19-138	-
PTCE-SG01-A3	Sediment	SW8260B	1,3-Dichlorobenzene	26	-	-	18-136	-
PTCE-SG01-A3	Sediment	SW8260B	1,4-Dichlorobenzene	22	-	-	21-134	-
PTFI-SG05-A1	Sediment	SW8260B	1,2-Dichlorobenzene	24	-	-	19-138	-
PTFI-SG05-A1	Sediment	SW8260B	1,3-Dichlorobenzene	20	-	-	18-136	-
PTFI-SG05-A1	Sediment	SW8260B	1,4-Dichlorobenzene	**18**	-	-	21-134	-
PTLA-SG03-A1	Sediment	SW8260B	1,2-Dichlorobenzene	42	34	20	19-138	40
PTLA-SG03-A1	Sediment	SW8260B	1,3-Dichlorobenzene	41	31	27	18-136	40
PTLA-SG03-A1	Sediment	SW8260B	1,4-Dichlorobenzene	37	28	28	21-134	40
PTLA-SG05-A1	Sediment	SW8260B	1,2-Dichlorobenzene	55	53	4	19-138	40
PTLA-SG05-A1	Sediment	SW8260B	1,3-Dichlorobenzene	51	50	2	18-136	40
PTLA-SG05-A1	Sediment	SW8260B	1,4-Dichlorobenzene	48	47	2	21-134	40
PTLA-SG10-A1	Sediment	SW8260B	1,2-Dichlorobenzene	65	66	3	19-138	40
PTLA-SG10-A1	Sediment	SW8260B	1,3-Dichlorobenzene	63	63	1	18-136	40
PTLA-SG10-A1	Sediment	SW8260B	1,4-Dichlorobenzene	61	61	1	21-134	40
PTLA-SG13-A3	Sediment	SW8260B	1,2-Dichlorobenzene	33	-	-	19-138	-
PTLA-SG13-A3	Sediment	SW8260B	1,3-Dichlorobenzene	30	-	-	18-136	-
PTLA-SG13-A3	Sediment	SW8260B	1,4-Dichlorobenzene	26	-	-	21-134	-

SVOCs by SW8270C
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8270C	1,2,4-Trichlorobenzene	71	77	8	42-100	40
PTFI-SG05-A1	Sediment	SW8270C	Pentachlorophenol (PCP)	63	80	24	30-129	40
PTFI-SG05-A1	Sediment	SW8270C	Phenol	78	86	9	30-113	40
PTLA-SG03-A1	Sediment	SW8270C	1,2,4-Trichlorobenzene	60	59	2	42-100	40
PTLA-SG03-A1	Sediment	SW8270C	Pentachlorophenol (PCP)	66	58	12	30-129	40
PTLA-SG03-A1	Sediment	SW8270C	Phenol	63	65	2	30-113	40
PTLA-SG05-A3	Sediment	SW8270C	1,2,4-Trichlorobenzene	73	83	12	42-100	40
PTLA-SG05-A3	Sediment	SW8270C	Pentachlorophenol (PCP)	80	90	11	30-129	40
PTLA-SG05-A3	Sediment	SW8270C	Phenol	71	95	26	30-113	40
PTLA-SG10-A3	Sediment	SW8270C	1,2,4-Trichlorobenzene	88	82	8	42-100	40
PTLA-SG10-A3	Sediment	SW8270C	Pentachlorophenol (PCP)	101	97	4	30-129	40
PTLA-SG10-A3	Sediment	SW8270C	Phenol	93	87	7	30-113	40
PTME-SG04-A2	Sediment	SW8270C	1,2,4-Trichlorobenzene	93	78	17	42-100	40
PTME-SG04-A2	Sediment	SW8270C	Pentachlorophenol (PCP)	97	89	9	30-129	40
PTME-SG04-A2	Sediment	SW8270C	Phenol	93	86	8	30-113	40

ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference
Bold - recovery outside method acceptance criteria; see section 5.3

PAHs by SW8270C SIM
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTFI-SG05-A1	Sediment	SW8270C SIM	2-Methylnaphthalene	54	62	13	36-95	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Acenaphthene	61	70	13	33-102	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Acenaphthylene	59	68	15	40-99	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Anthracene	64	79	21	40-114	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Benz(a)anthracene	66	78	17	32-134	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Benzo(a)pyrene	68	82	19	26-146	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Benzo(b)fluoranthene	71	83	16	31-136	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	66	77	15	31-122	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Benzo(k)fluoranthene	75	85	13	32-131	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Chrysene	71	83	15	27-135	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	63	77	20	42-114	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Fluoranthene	70	85	20	41-117	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Fluorene	64	73	14	38-103	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	62	78	23	33-133	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Naphthalene	57	64	11	19-105	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Phenanthrene	62	74	17	33-113	40
PTFI-SG05-A1	Sediment	SW8270C SIM	Pyrene	73	80	9	26-139	40
PTLA-SG03-A1	Sediment	SW8270C SIM	2-Methylnaphthalene	63	52	18	36-95	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Acenaphthene	69	57	18	33-102	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Acenaphthylene	71	59	18	40-99	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Anthracene	76	63	19	40-114	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Benz(a)anthracene	85	70	19	32-134	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Benzo(a)pyrene	93	77	19	26-146	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Benzo(b)fluoranthene	87	73	18	31-136	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	73	63	14	31-122	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Benzo(k)fluoranthene	79	67	16	32-131	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Chrysene	82	69	17	27-135	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	85	71	17	42-114	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Fluoranthene	87	72	19	41-117	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Fluorene	74	60	20	38-103	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	84	70	18	33-133	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Naphthalene	63	53	17	19-105	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Phenanthrene	72	59	18	33-113	40
PTLA-SG03-A1	Sediment	SW8270C SIM	Pyrene	84	70	18	26-139	40

PAHs by SW8270C SIM
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTLA-SG05-A3	Sediment	SW8270C SIM	2-Methylnaphthalene	50	58	14	10-140	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Acenaphthene	59	66	11	16-147	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Acenaphthylene	56	63	11	34-138	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Anthracene	65	71	8	27-152	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Benz(a)anthracene	**62**	66	7	64-145	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Benzo(a)pyrene	69	73	5	57-149	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Benzo(b)fluoranthene	70	71	0	64-138	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	68	66	3	40-127	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Benzo(k)fluoranthene	76	80	4	62-130	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Chrysene	74	75	2	54-128	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	62	**60**	3	61-144	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Fluoranthene	70	72	4	28-166	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Fluorene	63	68	8	43-139	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	60	59	1	52-156	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Naphthalene	55	63	13	10-158	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Phenanthrene	61	64	5	10-192	40
PTLA-SG05-A3	Sediment	SW8270C SIM	Pyrene	70	74	5	28-162	40
PTLA-SG10-A3	Sediment	SW8270C SIM	2-Methylnaphthalene	62	61	2	10-140	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Acenaphthene	71	68	3	16-147	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Acenaphthylene	70	67	4	34-138	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Anthracene	80	76	4	27-152	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Benz(a)anthracene	76	73	4	64-145	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Benzo(a)pyrene	85	82	4	57-149	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Benzo(b)fluoranthene	90	85	5	64-138	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	62	63	1	40-127	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Benzo(k)fluoranthene	84	84	0	62-130	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Chrysene	82	79	3	54-128	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	81	74	10	61-144	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Fluoranthene	86	83	3	28-166	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Fluorene	75	71	5	43-139	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	85	77	10	52-156	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Naphthalene	65	65	0	10-158	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Phenanthrene	76	73	4	10-192	40
PTLA-SG10-A3	Sediment	SW8270C SIM	Pyrene	83	82	1	28-162	40

PAHs by SW8270C SIM
Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample ID	Matrix	Method	Analyte	MS %R	MSD %R	RPD	Accuracy Limit	Precision Limit
PTME-SG04-A2	Sediment	SW8270C SIM	2-Methylnaphthalene	52	53	0	36-95	40
PTME-SG04-A2	Sediment	SW8270C SIM	Acenaphthene	61	63	2	33-102	40
PTME-SG04-A2	Sediment	SW8270C SIM	Acenaphthylene	61	62	1	40-99	40
PTME-SG04-A2	Sediment	SW8270C SIM	Anthracene	71	71	0	40-114	40
PTME-SG04-A2	Sediment	SW8270C SIM	Benz(a)anthracene	73	68	7	32-134	40
PTME-SG04-A2	Sediment	SW8270C SIM	Benzo(a)pyrene	82	77	6	26-146	40
PTME-SG04-A2	Sediment	SW8270C SIM	Benzo(b)fluoranthene	77	73	4	31-136	40
PTME-SG04-A2	Sediment	SW8270C SIM	Benzo(g,h,i)perylene	77	66	15	31-122	40
PTME-SG04-A2	Sediment	SW8270C SIM	Benzo(k)fluoranthene	83	78	6	32-131	40
PTME-SG04-A2	Sediment	SW8270C SIM	Chrysene	79	74	6	27-135	40
PTME-SG04-A2	Sediment	SW8270C SIM	Dibenz(a,h)anthracene	76	64	18	42-114	40
PTME-SG04-A2	Sediment	SW8270C SIM	Fluoranthene	75	75	0	41-117	40
PTME-SG04-A2	Sediment	SW8270C SIM	Fluorene	63	66	6	38-103	40
PTME-SG04-A2	Sediment	SW8270C SIM	Indeno(1,2,3-cd)pyrene	77	66	15	33-133	40
PTME-SG04-A2	Sediment	SW8270C SIM	Naphthalene	57	55	3	19-105	40
PTME-SG04-A2	Sediment	SW8270C SIM	Phenanthrene	59	62	5	33-113	40
PTME-SG04-A2	Sediment	SW8270C SIM	Pyrene	79	76	4	26-139	40

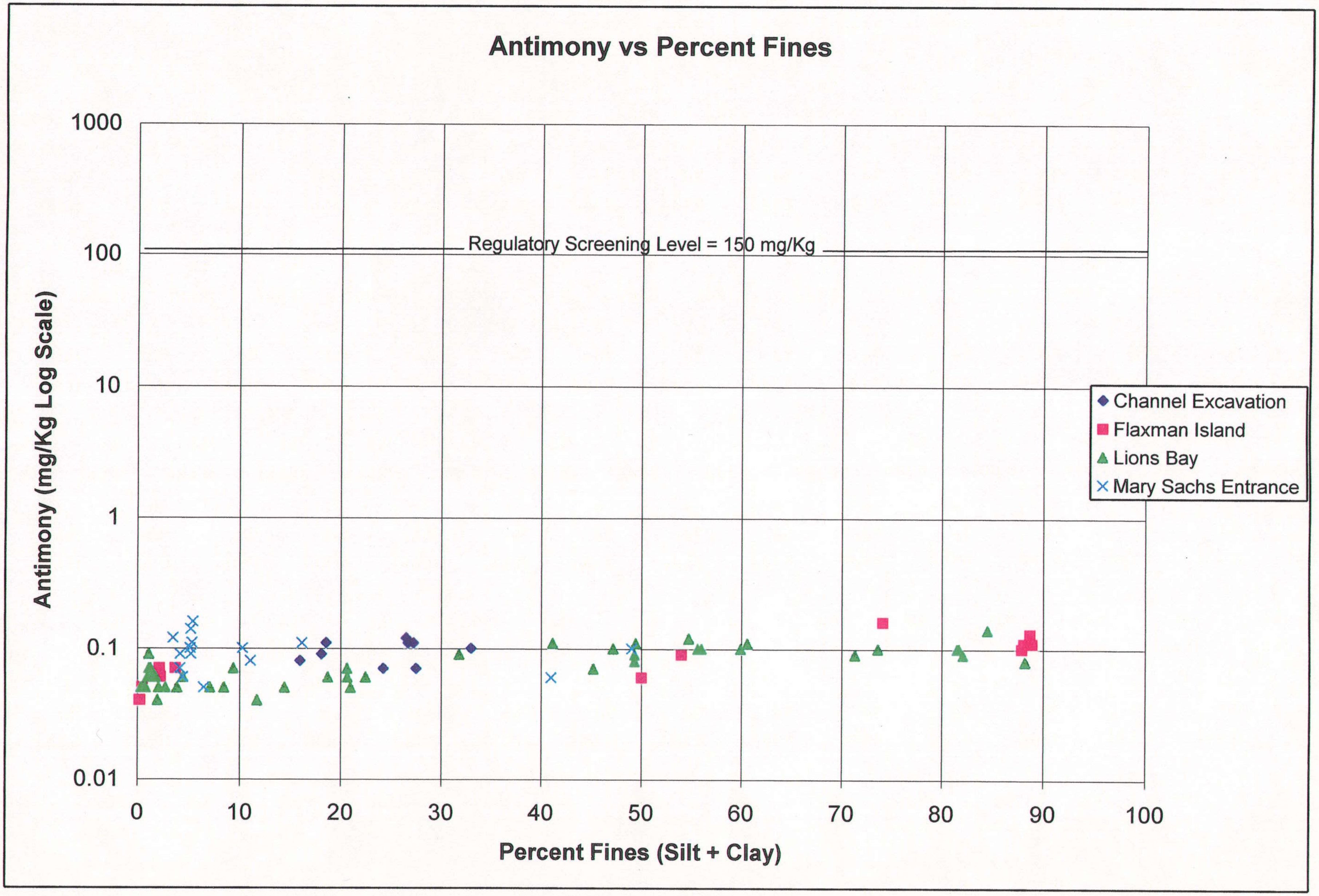
ID - identification number
MS - matrix spike
MSD - matrix spike duplicate
%R - percent recovery
RPD - relative percent difference
Bold - recovery outside method acceptance criteria; see section 5.3

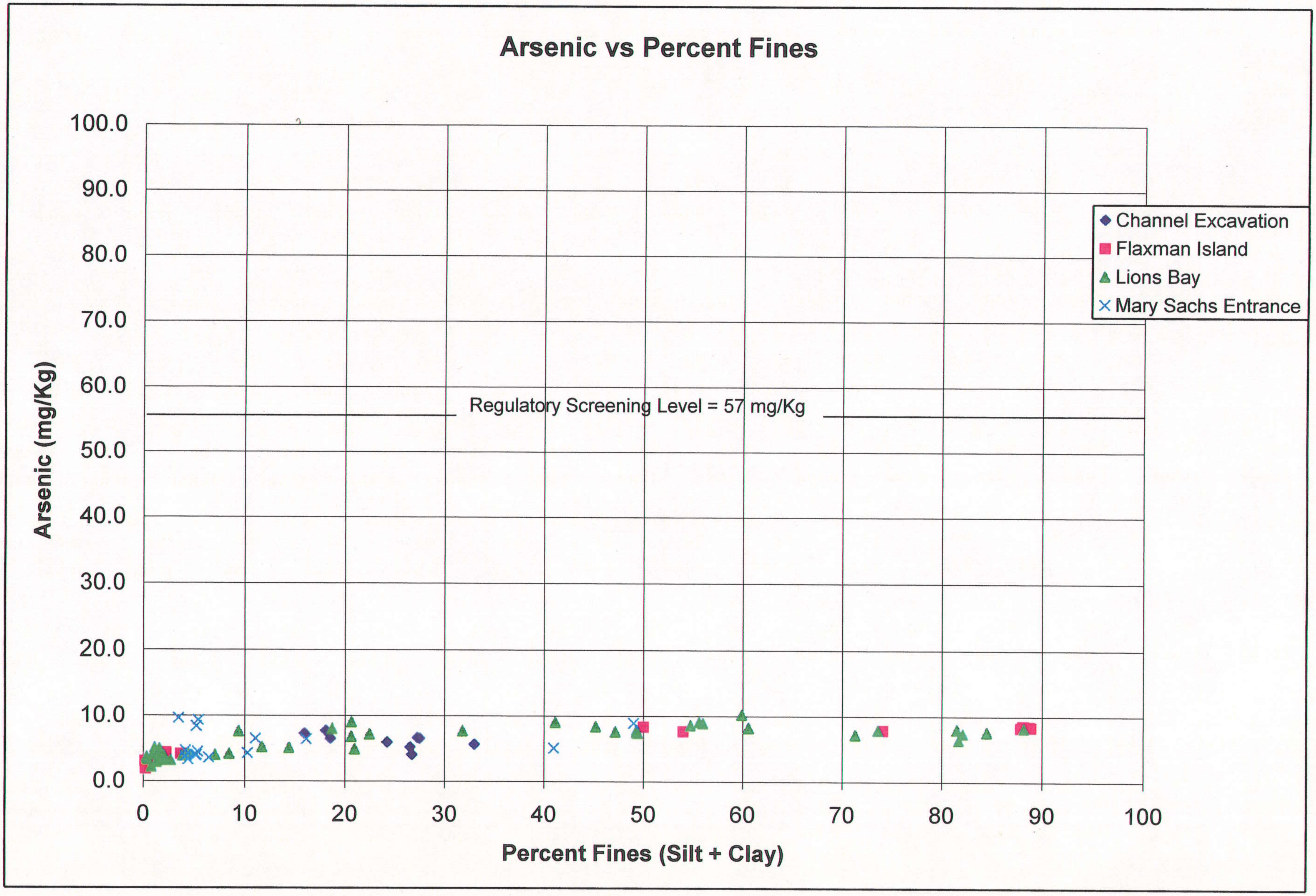
Appendix F

Appendix F

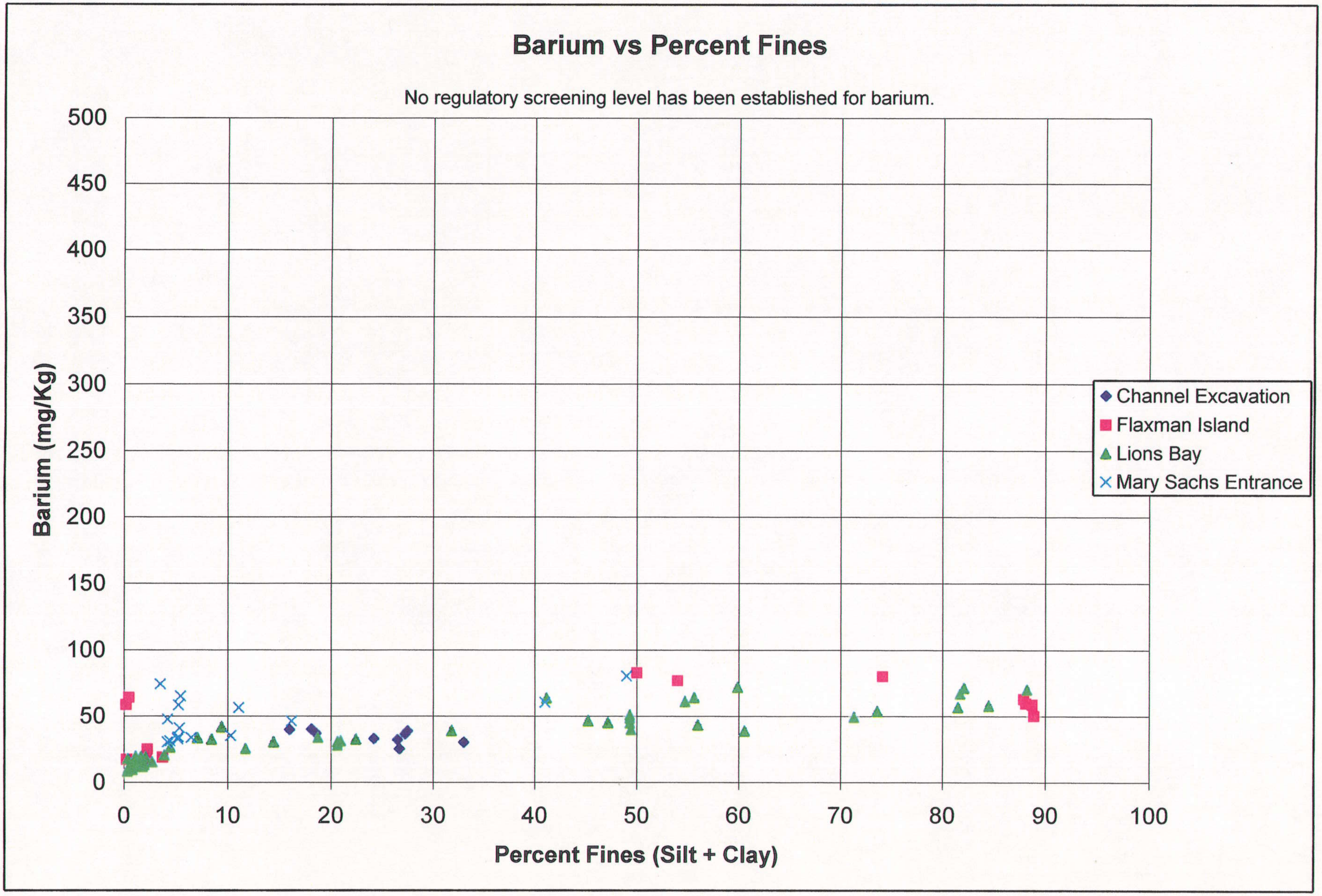
Cross Plots and Histograms

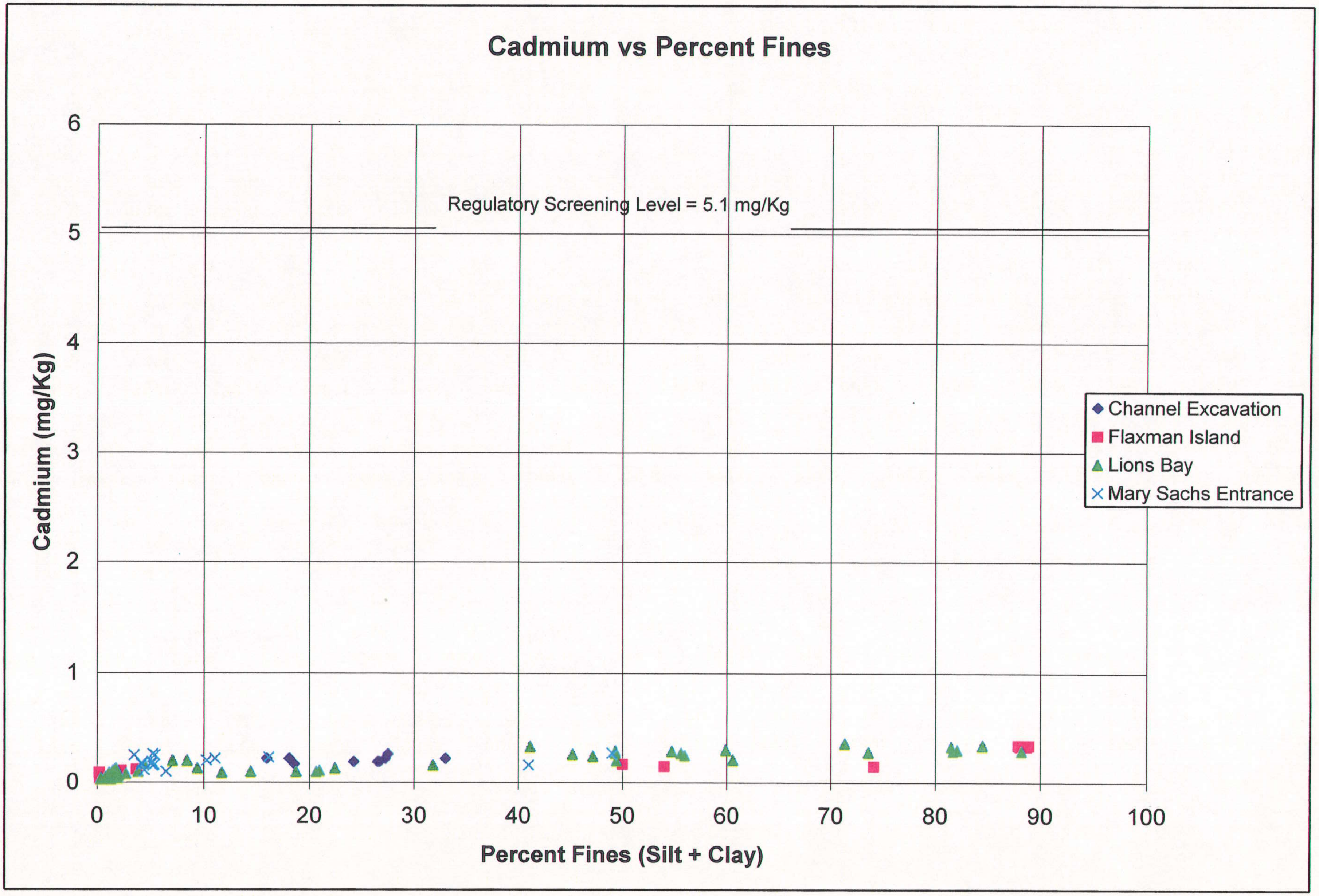
Cross Plots

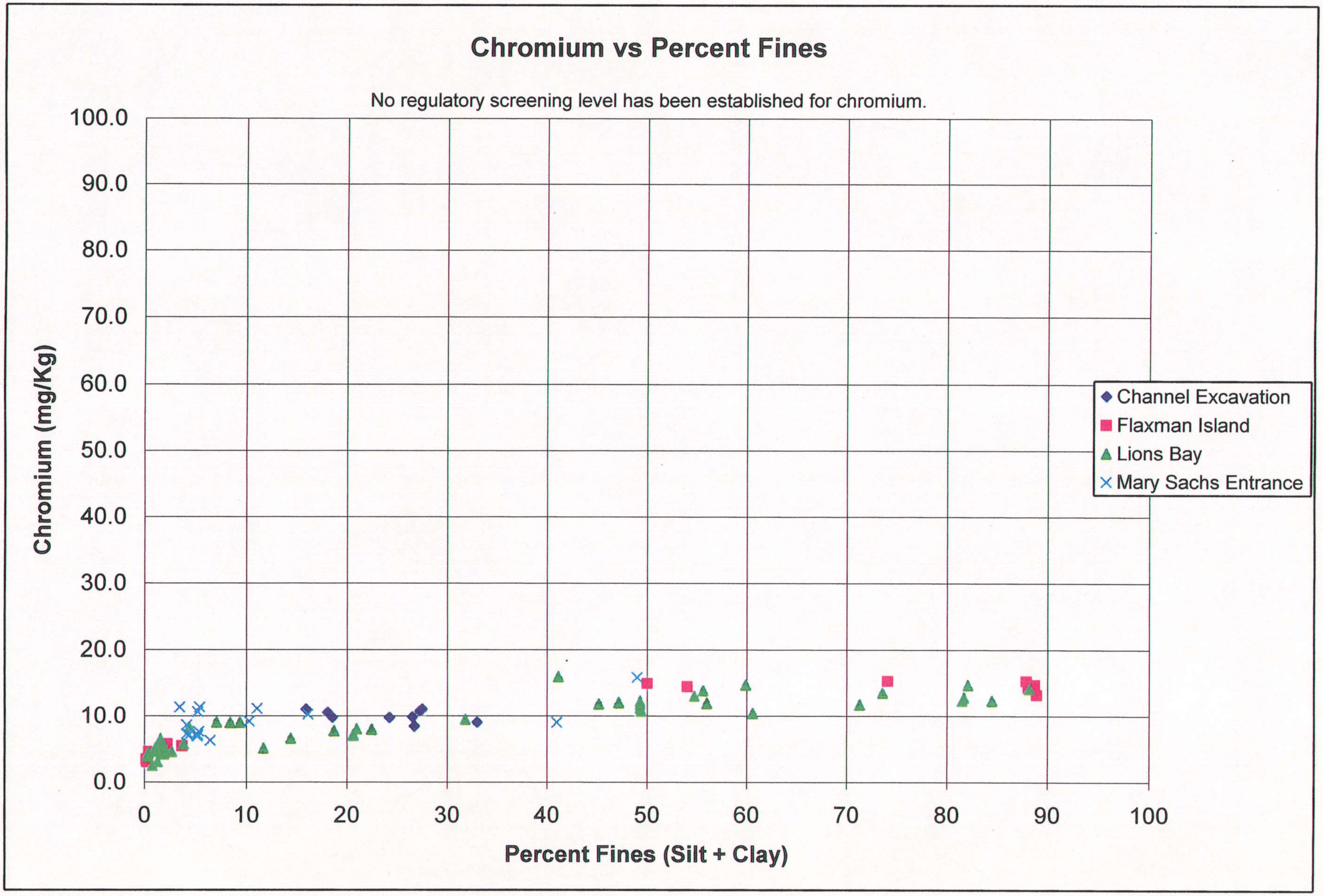

Antimony vs Percent Fines
Regulatory Screening Level = 150 mg/Kg
Antimony (mg/Kg Log Scale)
1000
100
10
1
0.1
0.01
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

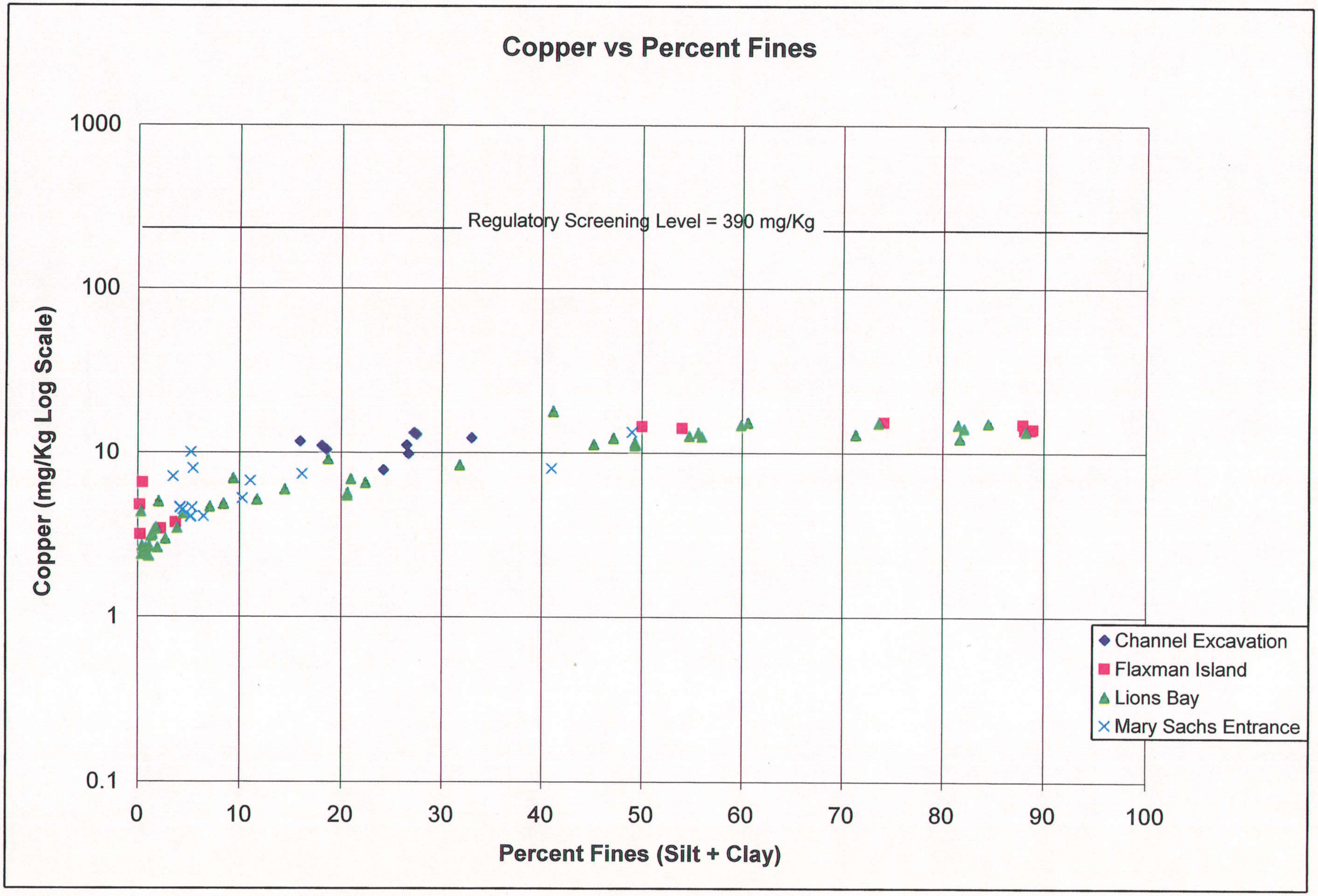


Arsenic vs Percent Fines
Arsenic (mg/Kg)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Regulatory Screening Level = 57 mg/Kg
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)

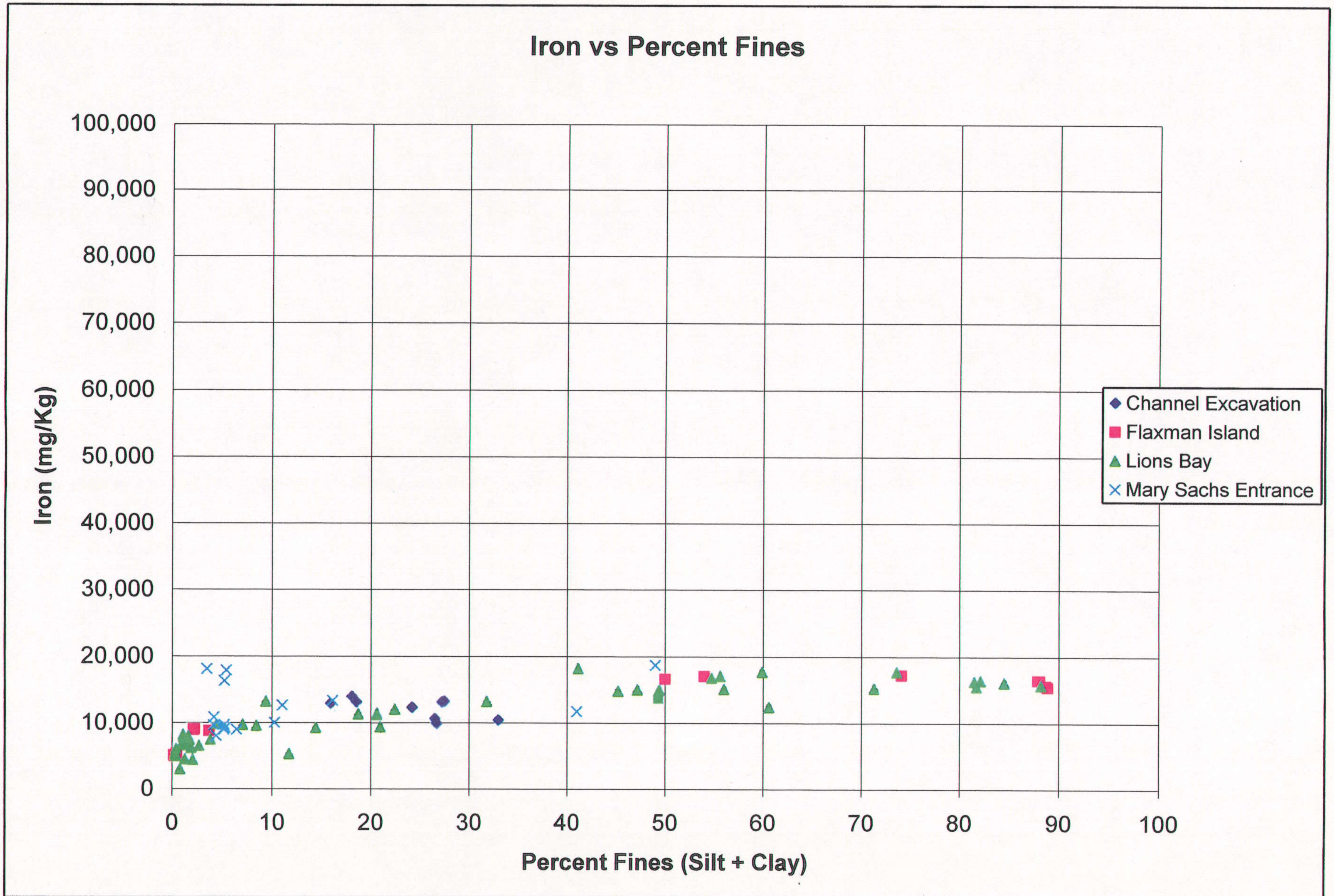

Barium vs Percent Fines
No regulatory screening level has been established for barium.
Barium (mg/Kg)
500
450
400
350
300
250
200
150
100
50
0
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

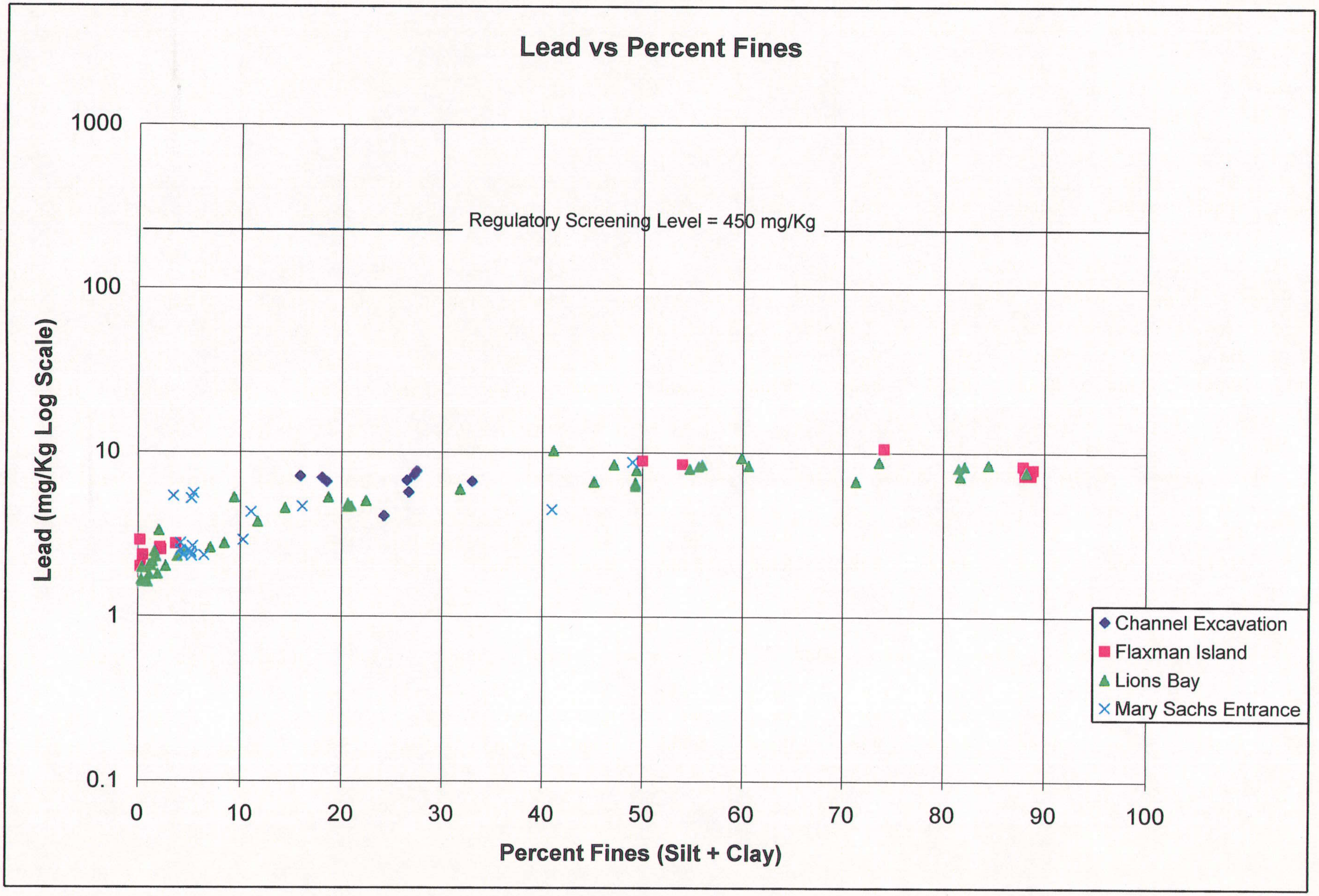

Cadmium vs Percent Fines
Regulatory Screening Level = 5.1 mg/Kg
Cadmium (mg/Kg)
0
1
2
3
4
5
6
Percent Fines (Silt + Clay)
0
10
20
30
40
50
60
70
80
90
100
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance


Chromium vs Percent Fines
No regulatory screening level has been established for chromium.
Chromium (mg/Kg)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

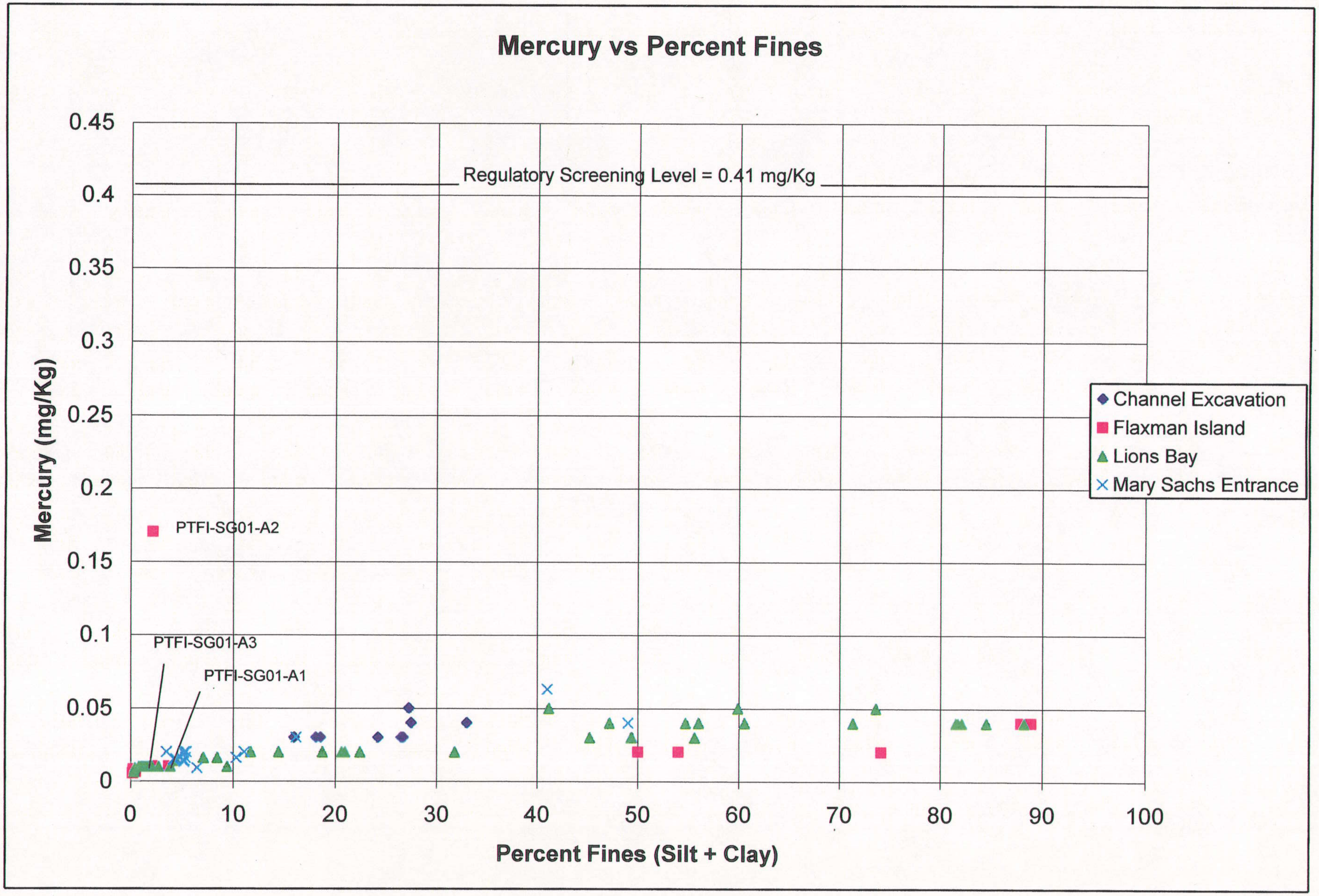


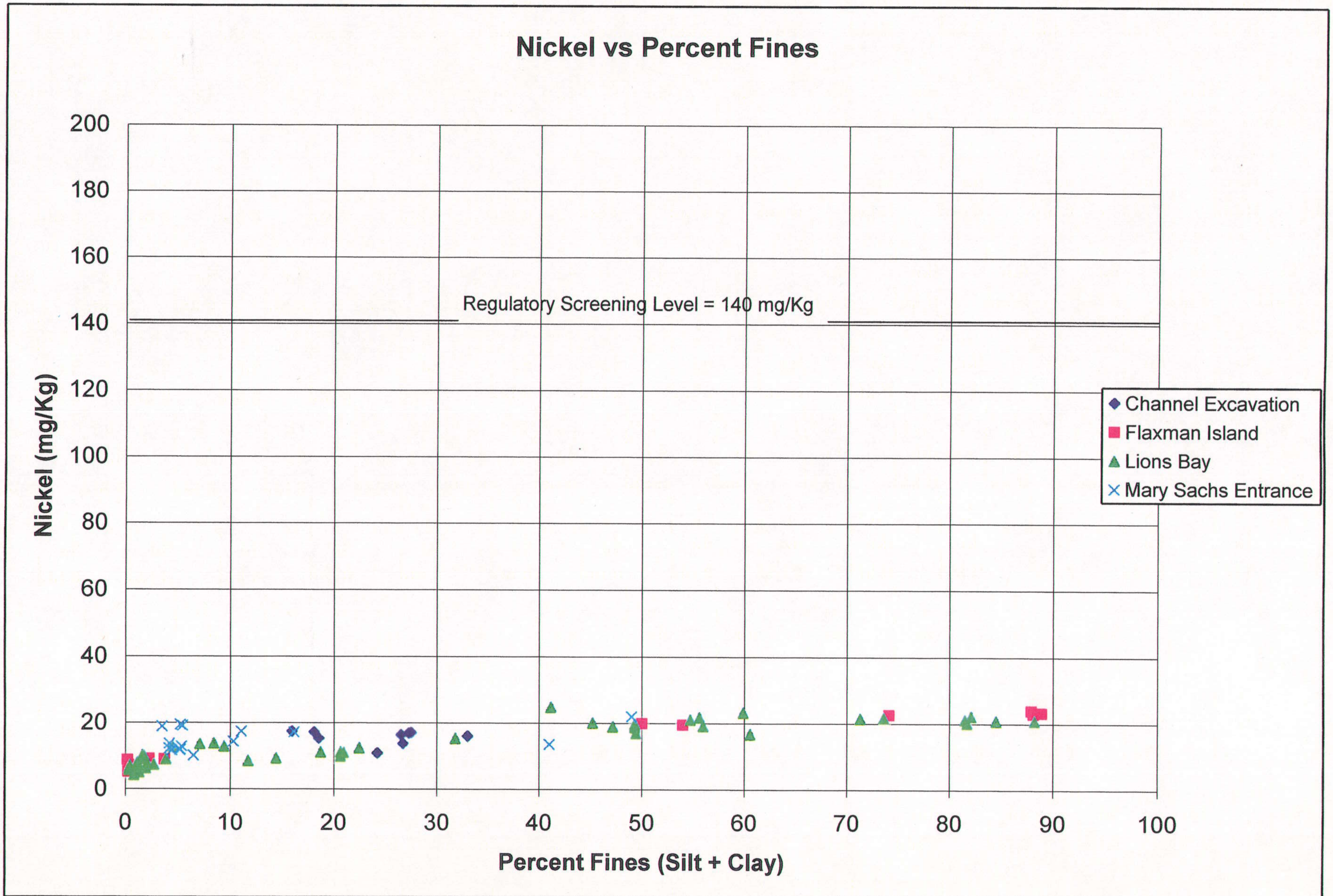
Copper vs Percent Fines
Regulatory Screening Level = 390 mg/Kg
Copper (mg/Kg Log Scale)
1000
100
10
1
0.1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance


Iron vs Percent Fines
Iron (mg/Kg)
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

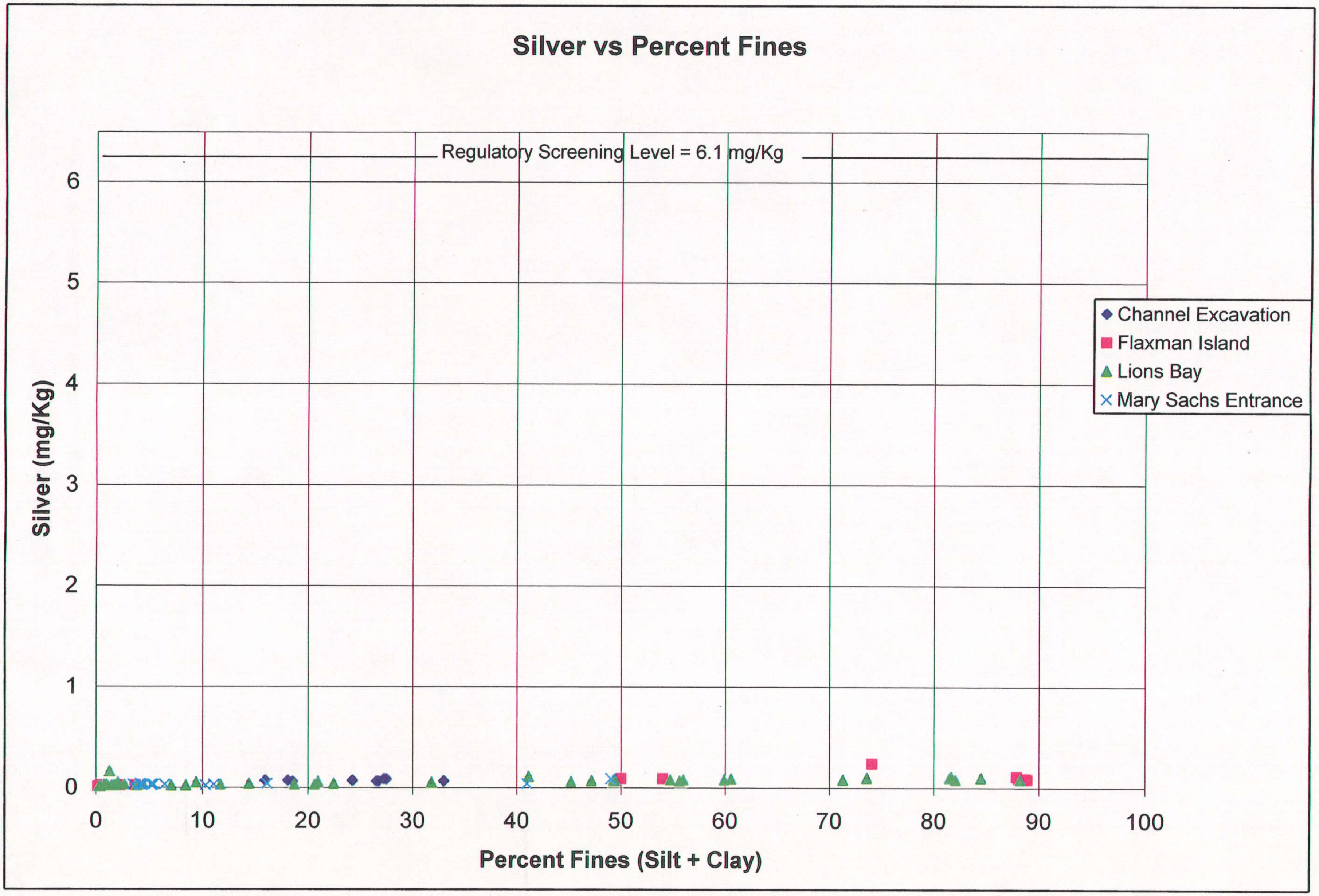


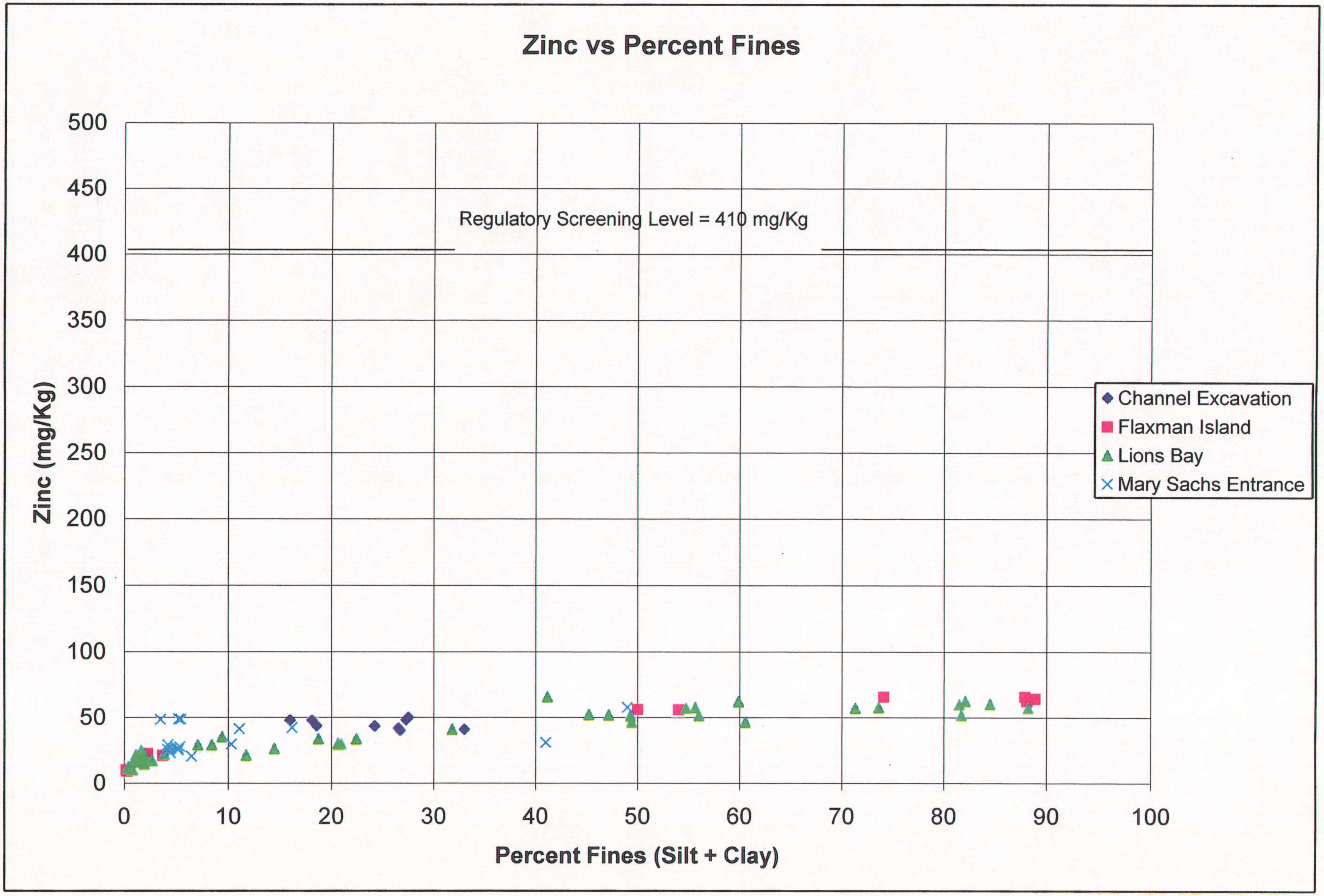
Lead vs Percent Fines
Regulatory Screening Level = 450 mg/Kg
1000
100
10
1
0.1
Lead (mg/Kg Log Scale)
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance


Mercury vs Percent Fines
Regulatory Screening Level = 0.41 mg/Kg
Mercury (mg/Kg)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
PTFI-SG01-A2
PTFI-SG01-A3
PTFI-SG01-A1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

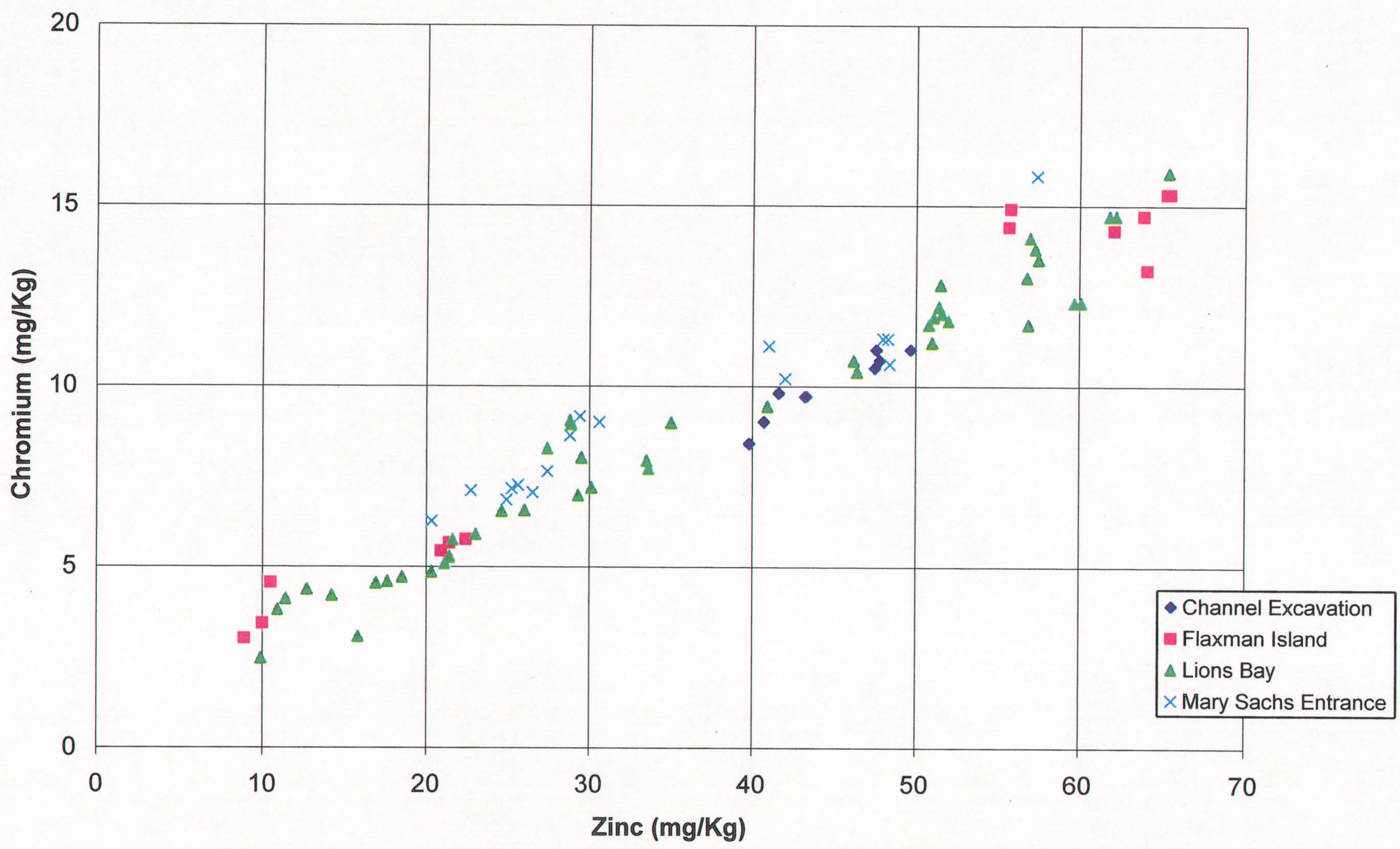


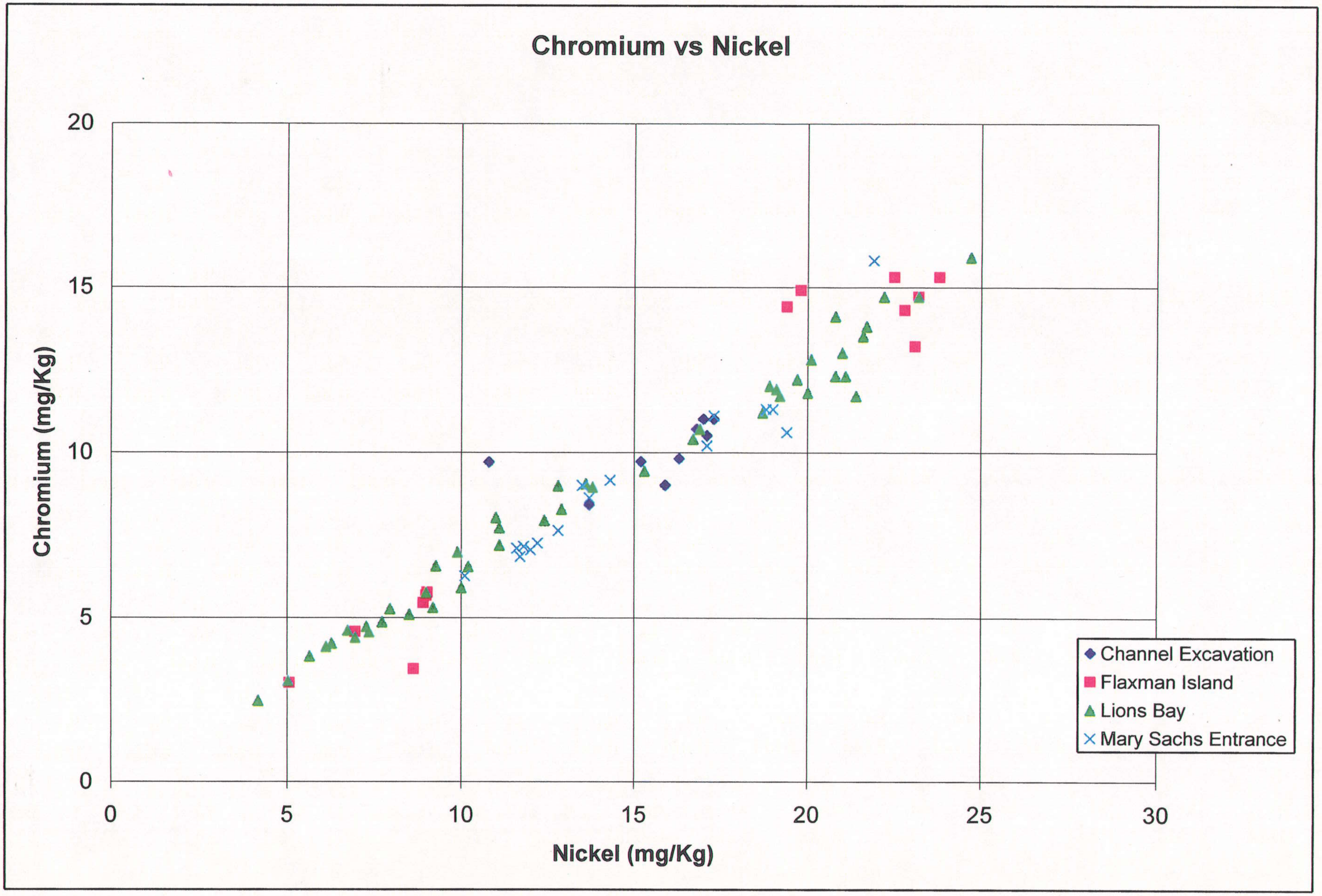
Nickel vs Percent Fines
Regulatory Screening Level = 140 mg/Kg
Nickel (mg/Kg)
200
180
160
140
120
100
80
60
40
20
0
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

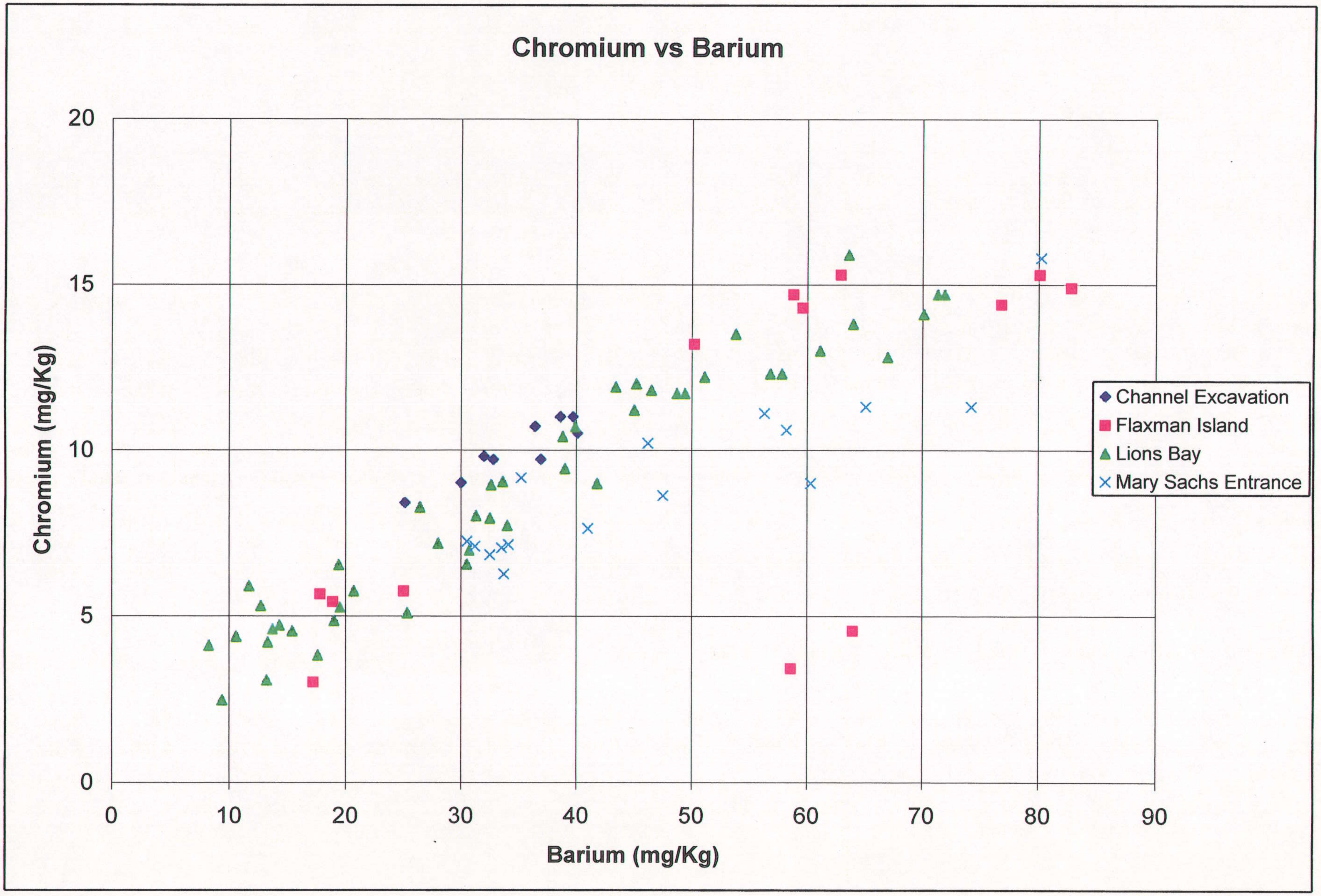

Silver vs Percent Fines
Regulatory Screening Level = 6.1 mg/Kg
Silver (mg/Kg)
0
1
2
3
4
5
6
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

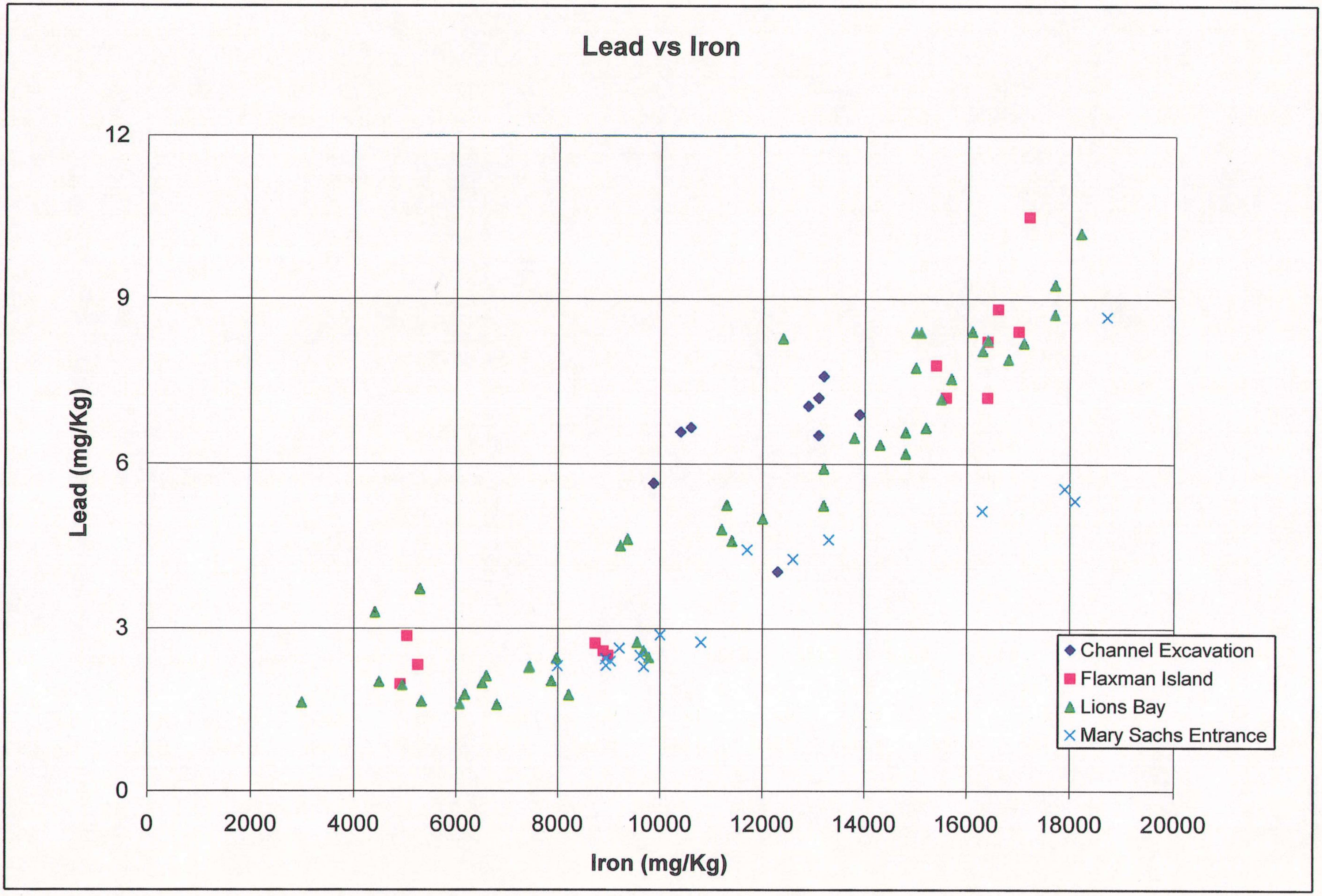

Zinc vs Percent Fines
Regulatory Screening Level = 410 mg/Kg
Zinc (mg/Kg)
500
450
400
350
300
250
200
150
100
50
0
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

Chromium vs Zinc

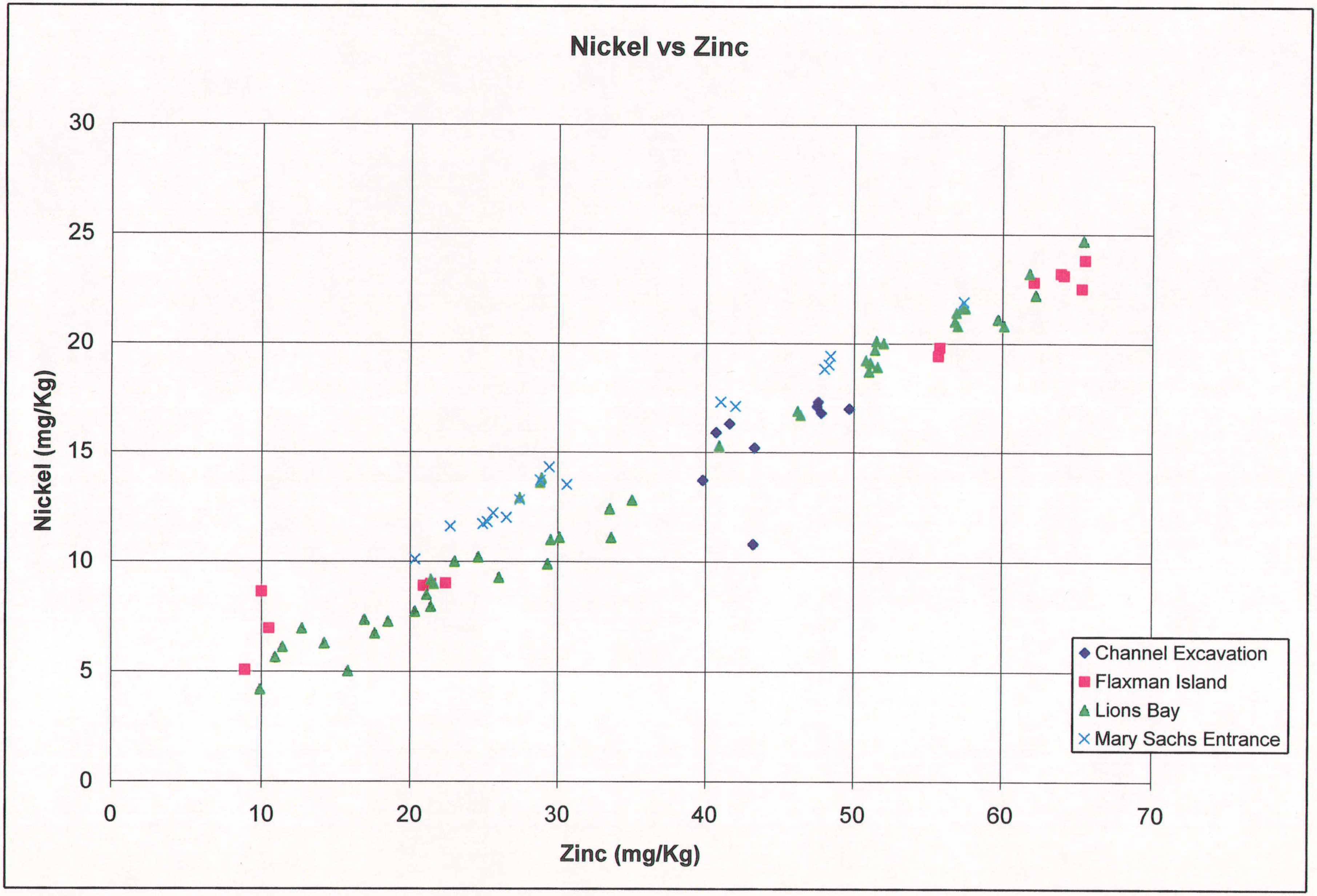


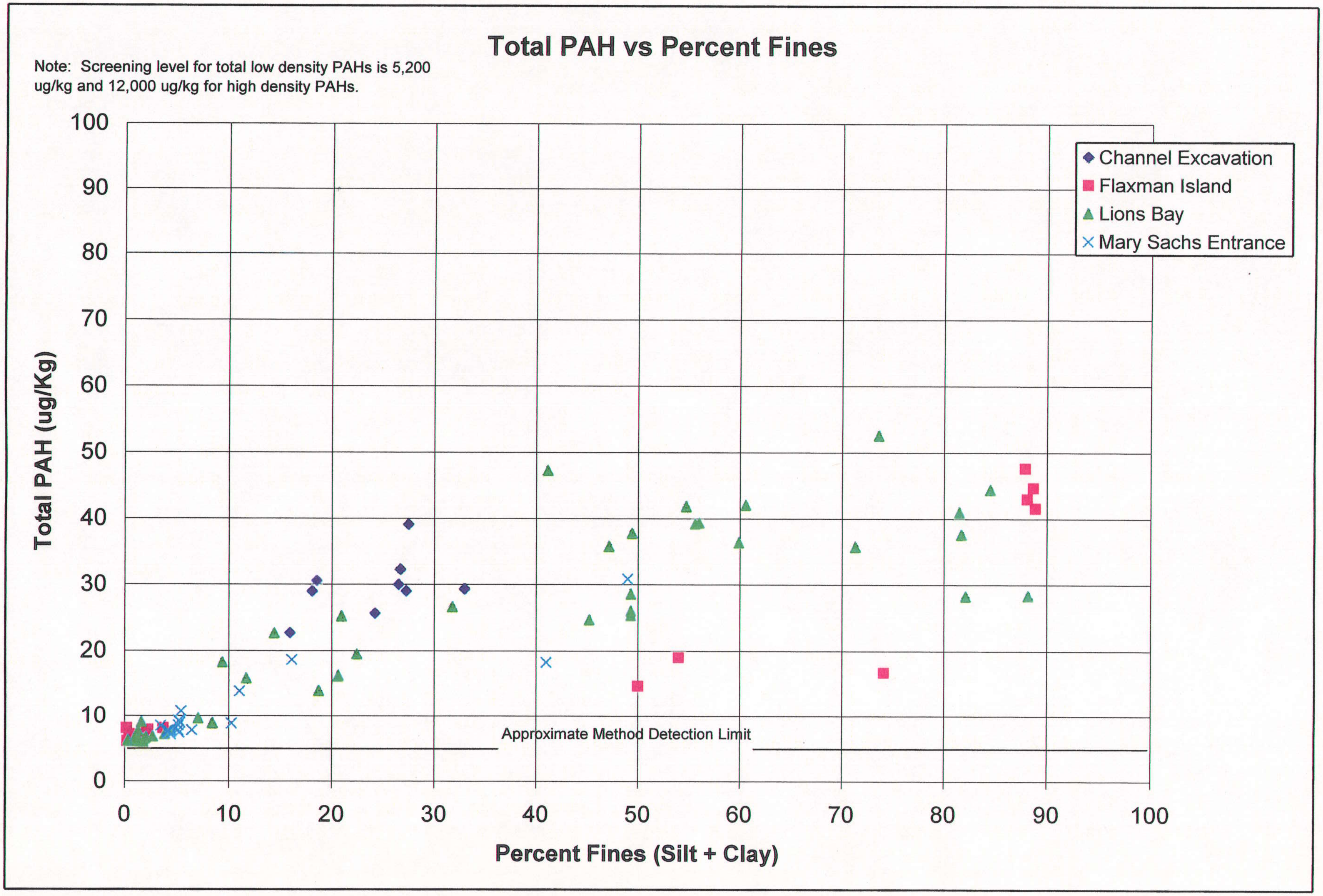

Chromium vs Nickel
Chromium (mg/Kg)
Nickel (mg/Kg)
0
5
10
15
20
25
30
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

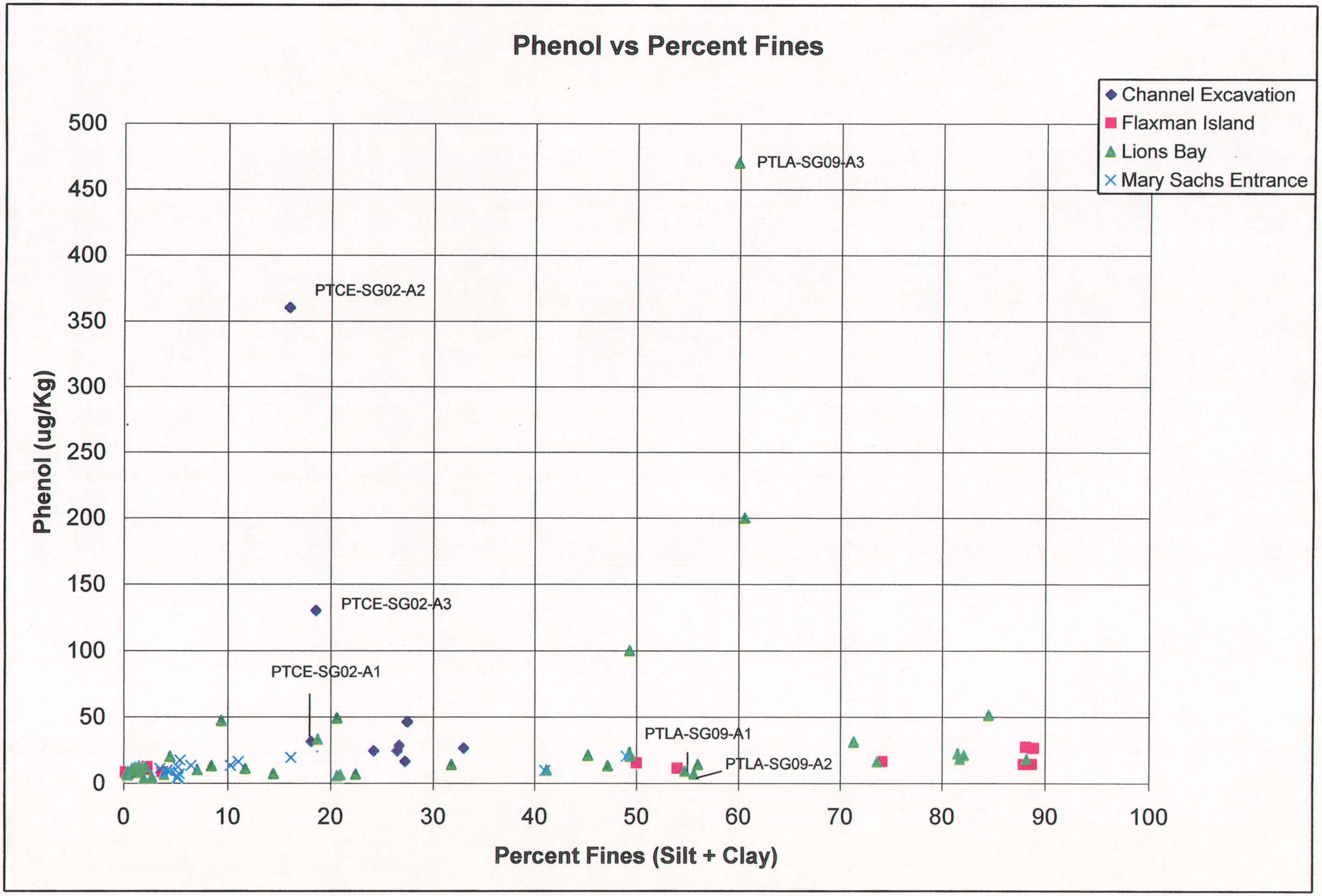

Chromium vs Barium
Chromium (mg/Kg)
20
15
10
5
0
0
10
20
30
40
50
60
70
80
90
Barium (mg/Kg)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

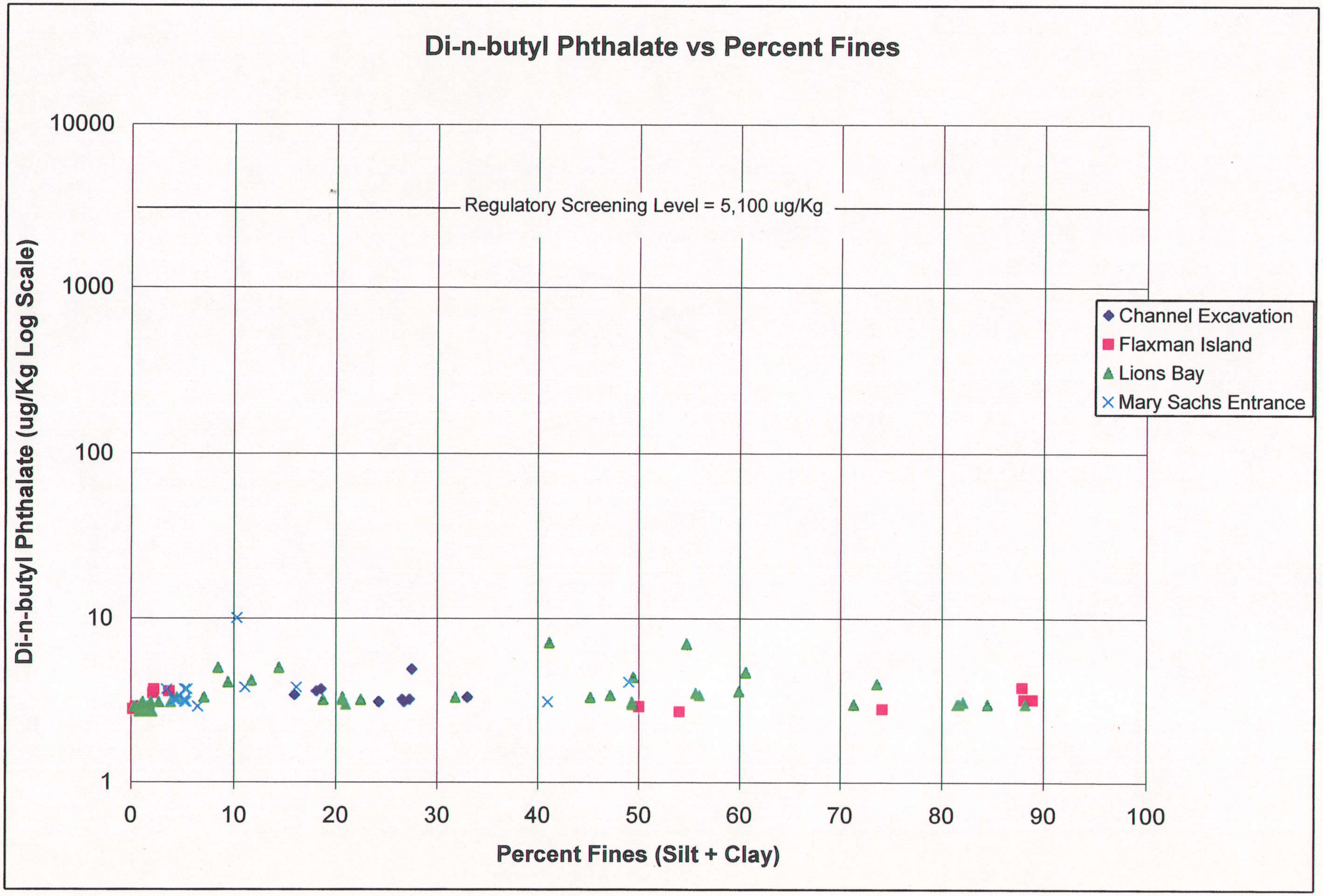


Lead vs Iron
Lead (mg/Kg)
12
9
6
3
0
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
Iron (mg/Kg)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

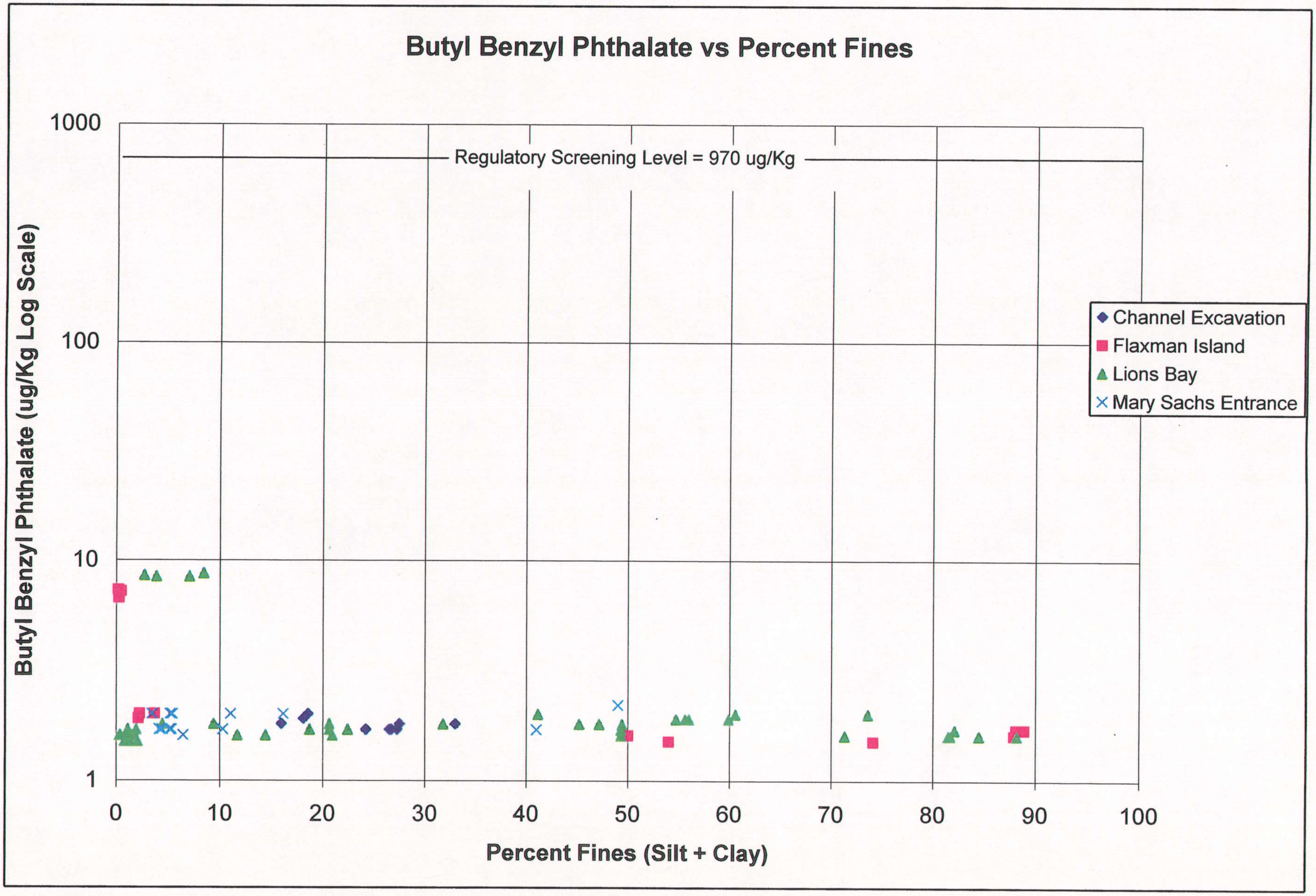

Nickel vs Zinc
Nickel (mg/Kg)
30
25
20
15
10
5
0
0
10
20
30
40
50
60
70
Zinc (mg/Kg)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance


Total PAH vs Percent Fines
Note: Screening level for total low density PAHs is 5,200 ug/kg and 12,000 ug/kg for high density PAHs.
Total PAH (ug/Kg)
100
90
80
70
60
50
40
30
20
10
0
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance
Approximate Method Detection Limit
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)

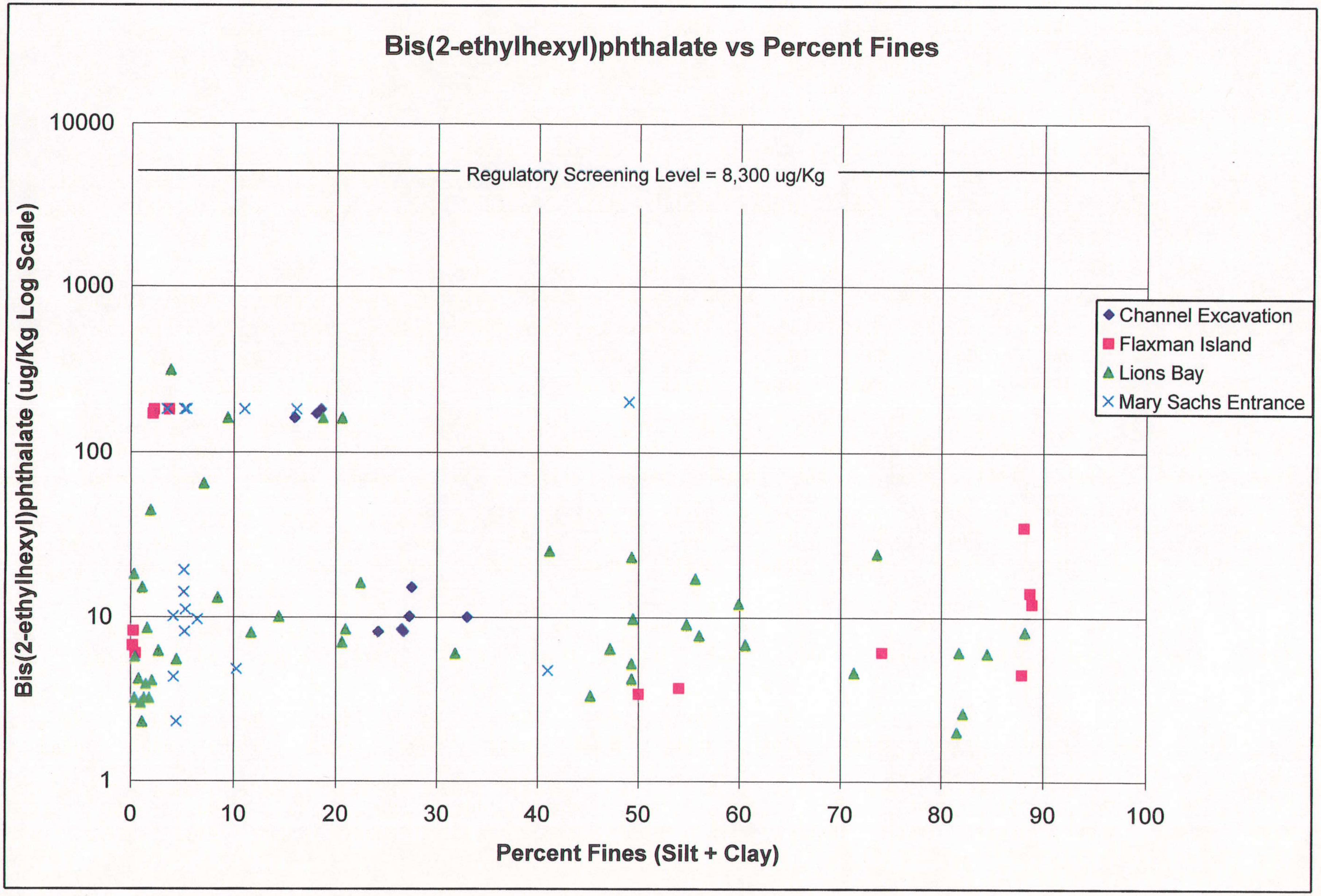

Phenol vs Percent Fines
Phenol (ug/Kg)
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance
PTLA-SG09-A3
PTCE-SG02-A2
PTCE-SG02-A3
PTCE-SG02-A1
PTLA-SG09-A1
PTLA-SG09-A2
0
50
100
150
200
250
300
350
400
450
500
0
10
20
30
40
50
60
70
80
90
100



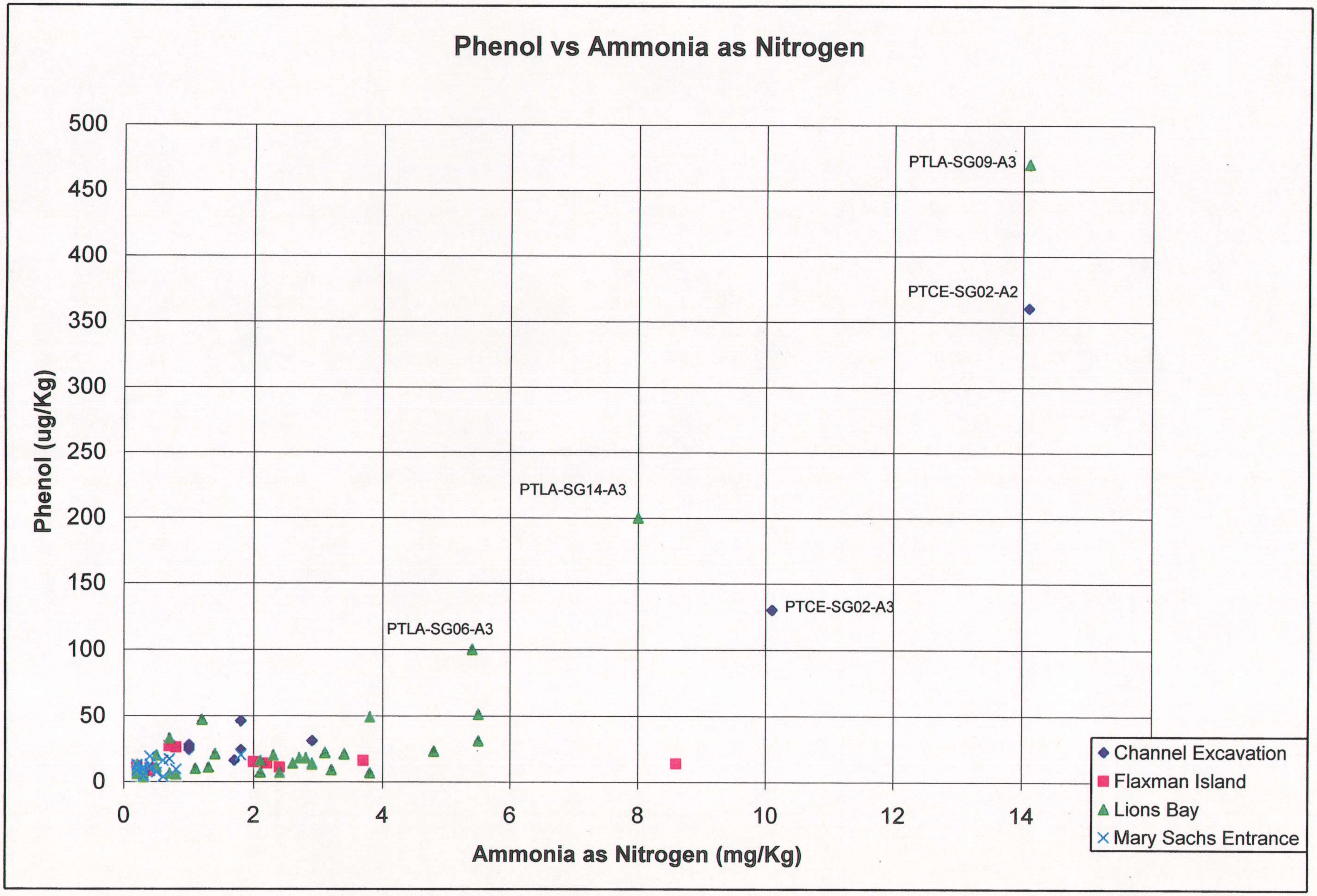
Di-n-butyl Phthalate vs Percent Fines
Regulatory Screening Level = 5,100 ug/Kg
Di-n-butyl Phthalate (ug/Kg Log Scale)
10000
1000
100
10
1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance



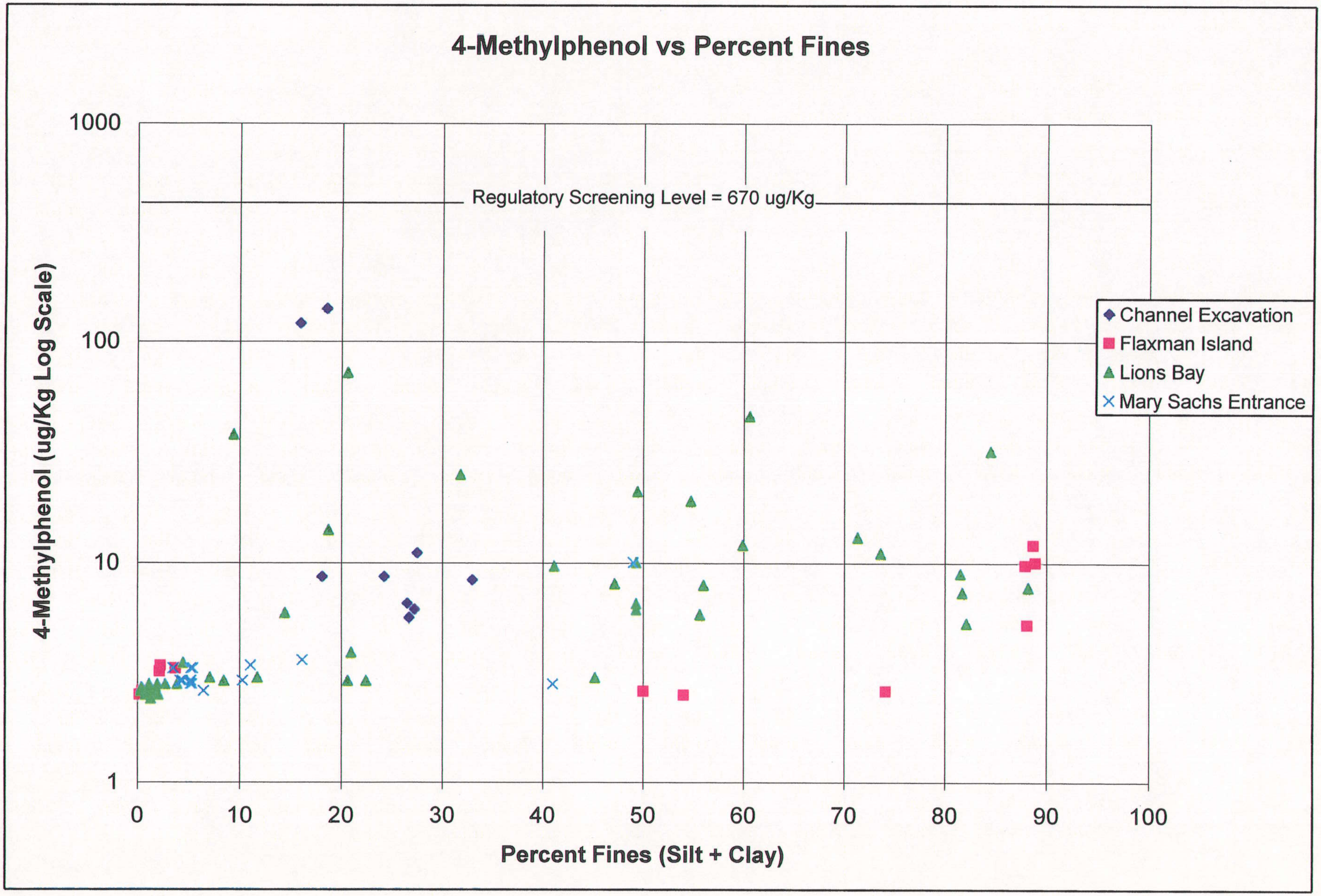
Butyl Benzyl Phthalate vs Percent Fines
Regulatory Screening Level = 970 ug/Kg
Butyl Benzyl Phthalate (ug/Kg Log Scale)
1000
100
10
1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

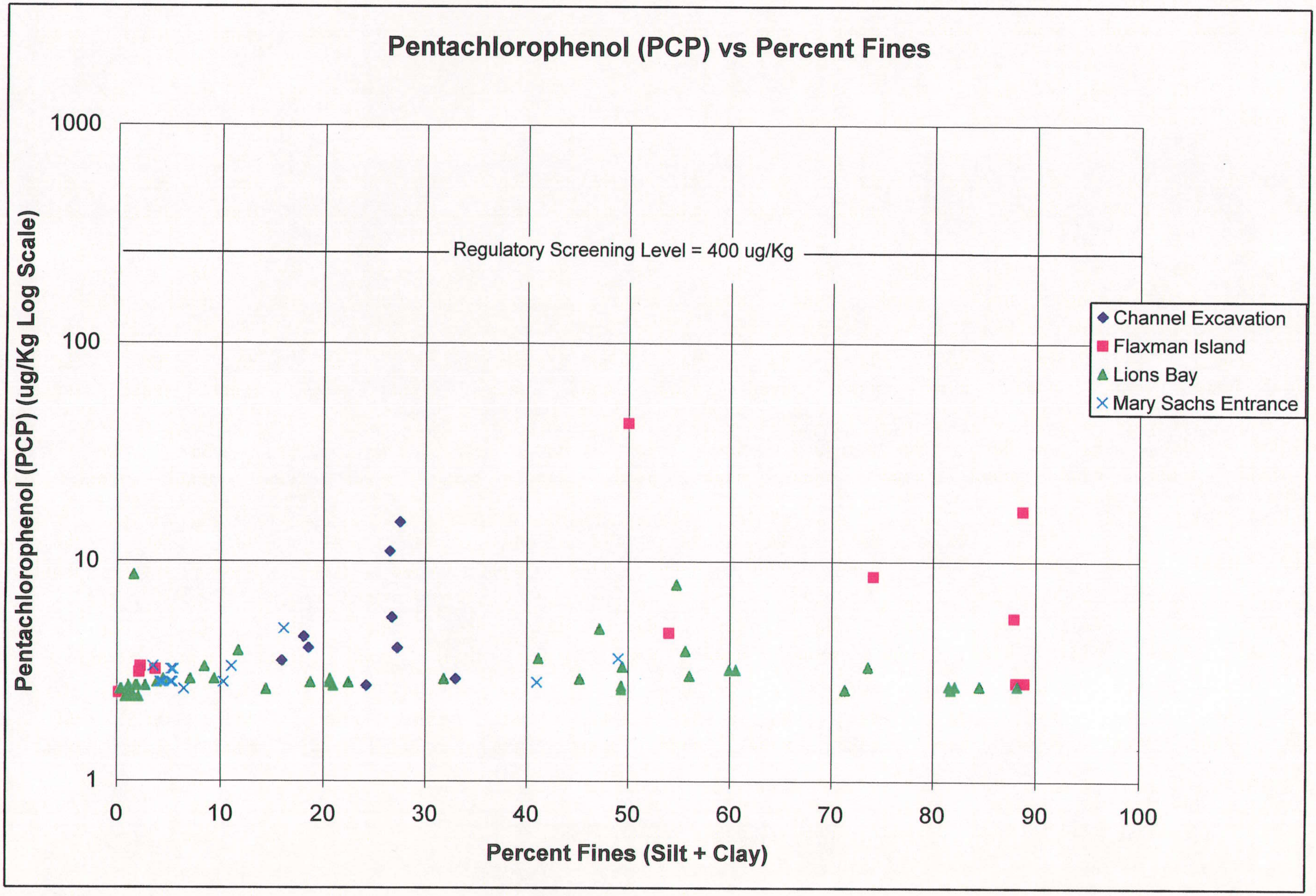


Bis(2-ethylhexyl)phthalate vs Percent Fines
Regulatory Screening Level = 8,300 ug/Kg
Bis(2-ethylhexyl)phthalate (ug/Kg Log Scale)
10000
1000
100
10
1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

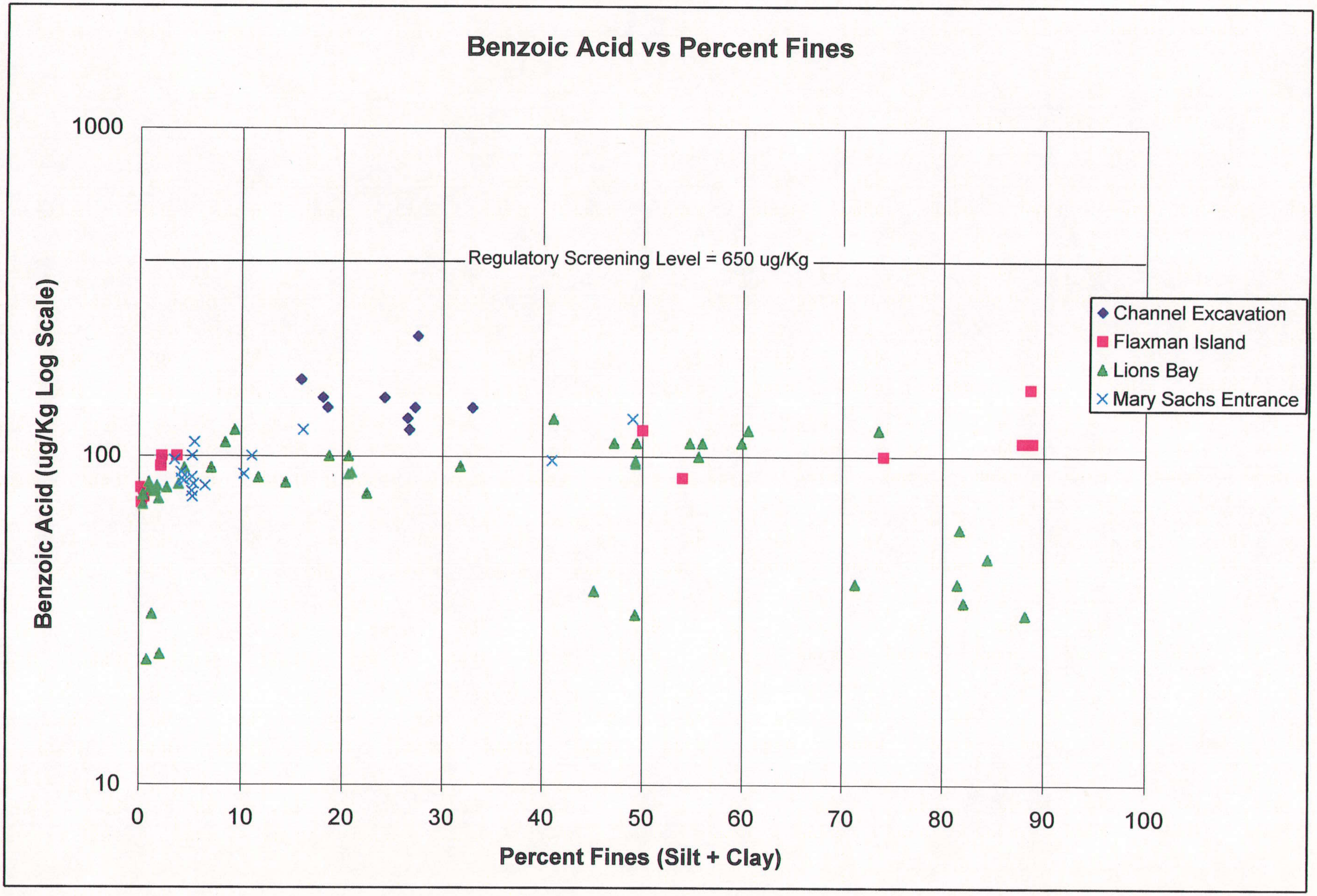


Phenol vs Ammonia as Nitrogen
Phenol (ug/Kg)
500
450
400
350
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
Ammonia as Nitrogen (mg/Kg)
PTLA-SG09-A3
PTCE-SG02-A2
PTLA-SG14-A3
PTCE-SG02-A3
PTLA-SG06-A3
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

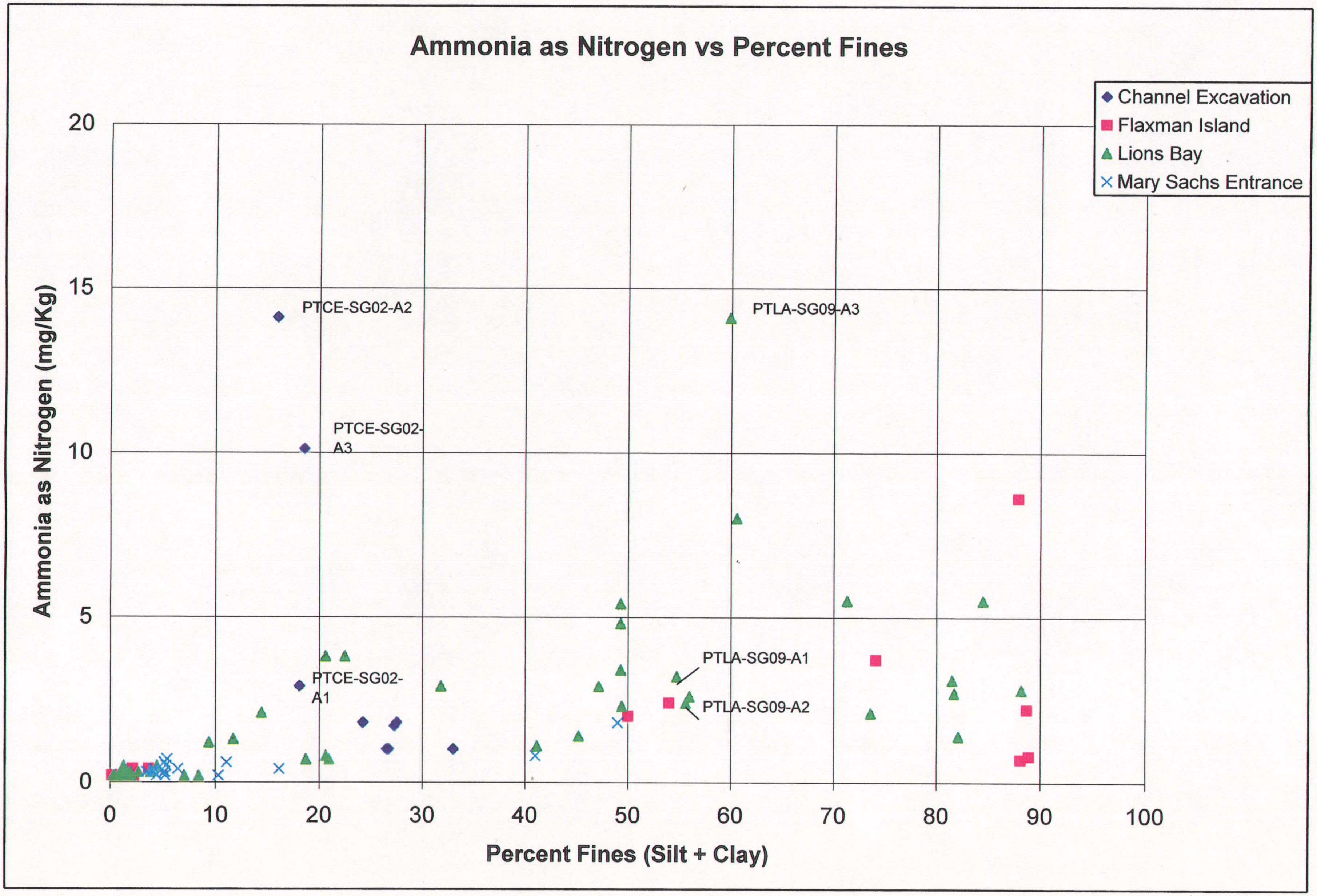

4-Methylphenol vs Percent Fines
Regulatory Screening Level = 670 ug/Kg
4-Methylphenol (ug/Kg Log Scale)
1000
100
10
1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

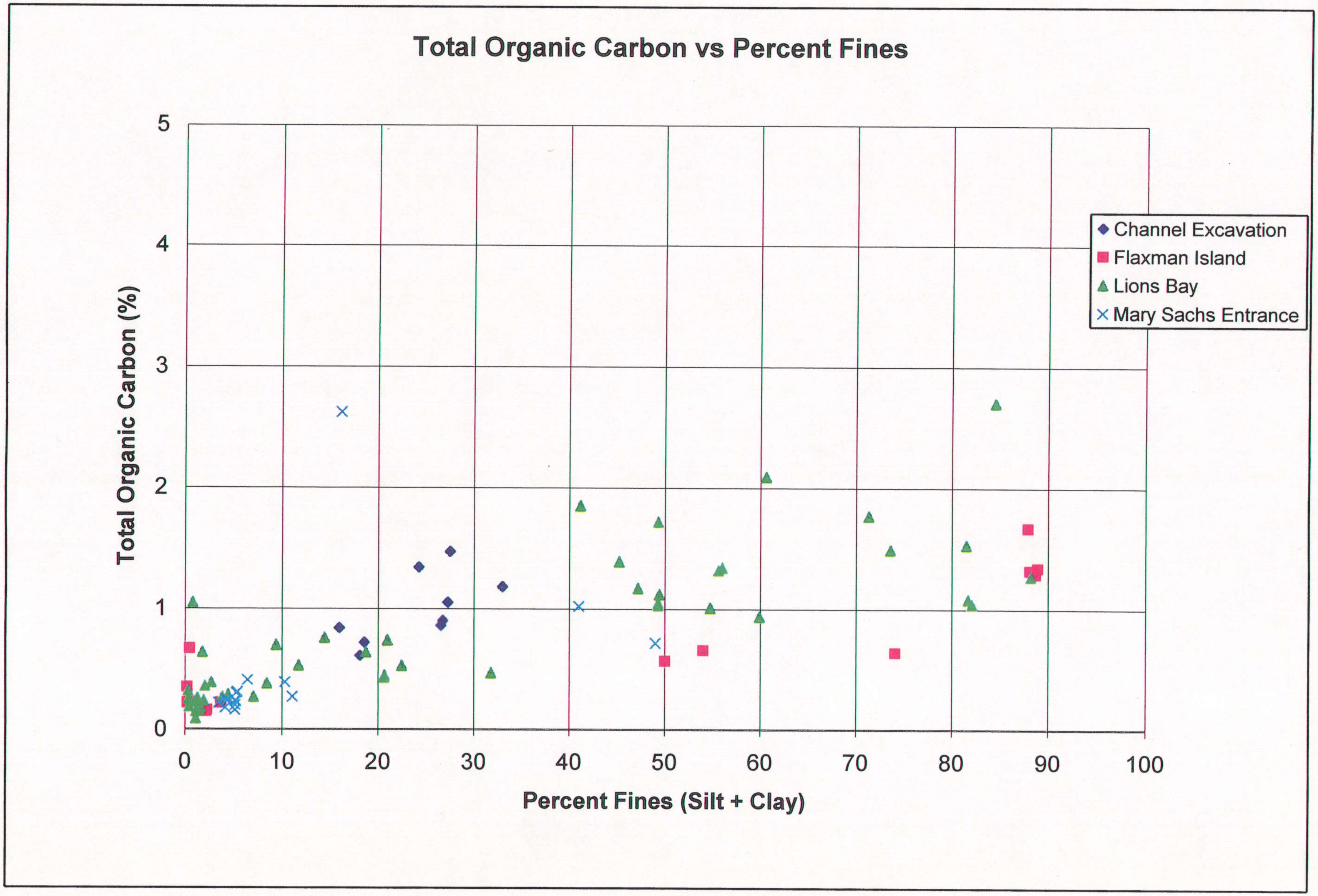


Pentachlorophenol (PCP) vs Percent Fines
Pentachlorophenol (PCP) (ug/Kg Log Scale)
1000
100
10
1
Regulatory Screening Level = 400 ug/Kg
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)

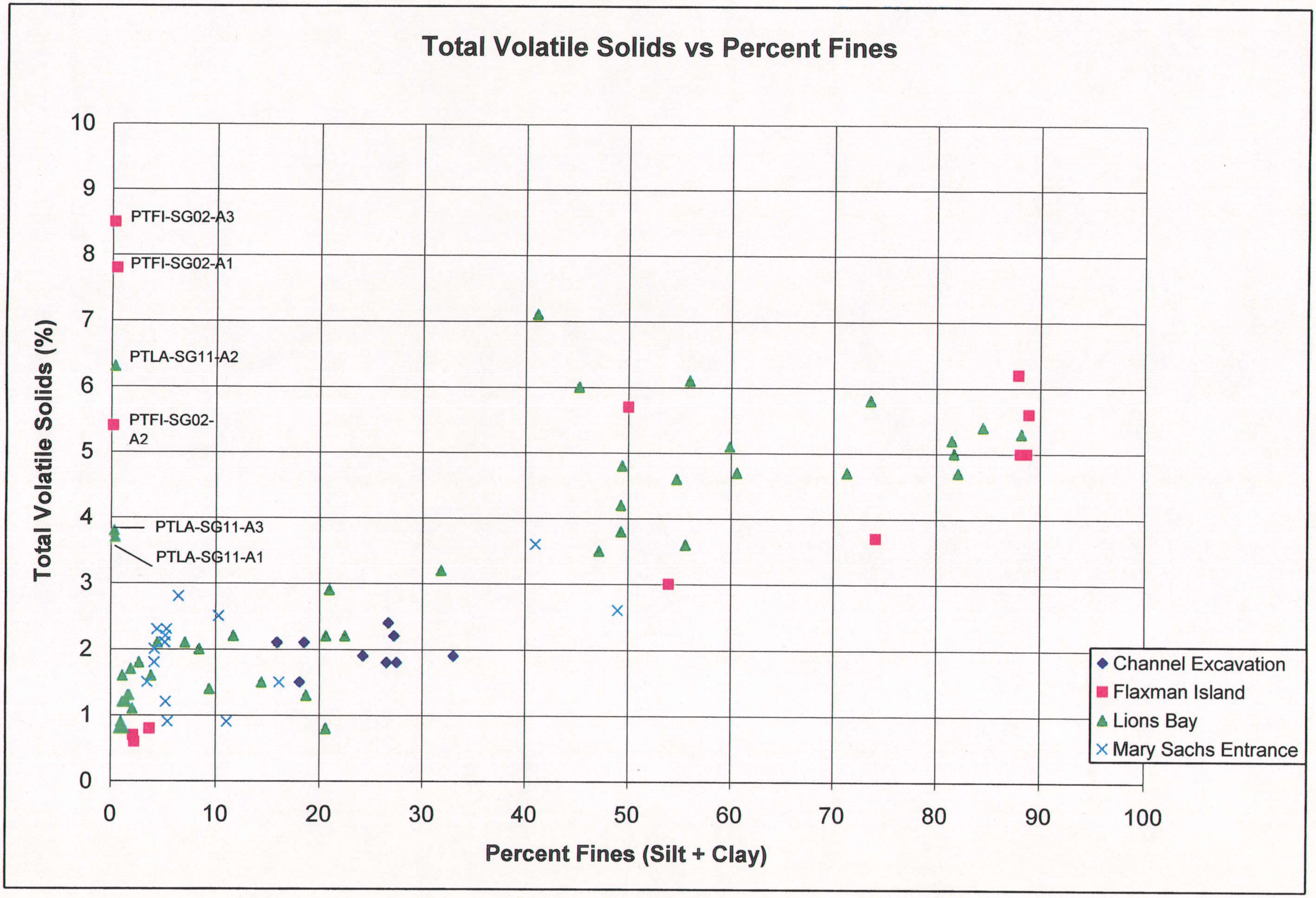


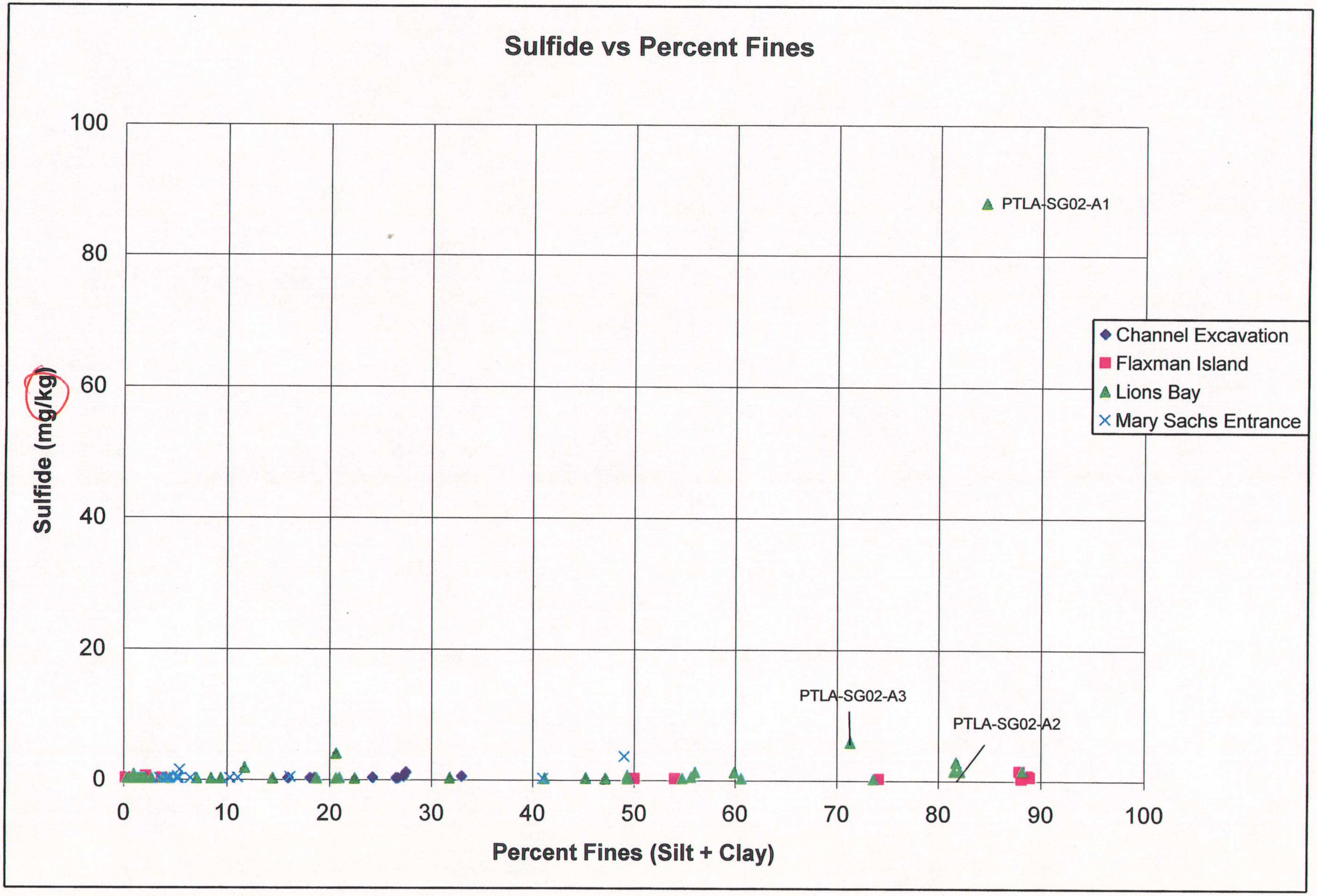
Benzoic Acid vs Percent Fines
Regulatory Screening Level = 650 ug/Kg
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance
Benzoic Acid (ug/Kg Log Scale)
1000
100
10
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)


Ammonia as Nitrogen vs Percent Fines
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance
Ammonia as Nitrogen (mg/Kg)
Percent Fines (Silt + Clay)
0
5
10
15
20
0
10
20
30
40
50
60
70
80
90
100
PTCE-SG02-A2
PTCE-SG02-A3
PTCE-SG02-A1
PTLA-SG09-A3
PTLA-SG09-A1
PTLA-SG09-A2



Total Organic Carbon vs Percent Fines
Total Organic Carbon (%)
0
1
2
3
4
5
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance


Total Volatile Solids vs Percent Fines
Total Volatile Solids (%)
10
9
8
7
6
5
4
3
2
1
0
PTFI-SG02-A3
PTFI-SG02-A1
PTLA-SG11-A2
PTFI-SG02-A2
PTLA-SG11-A3
PTLA-SG11-A1
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

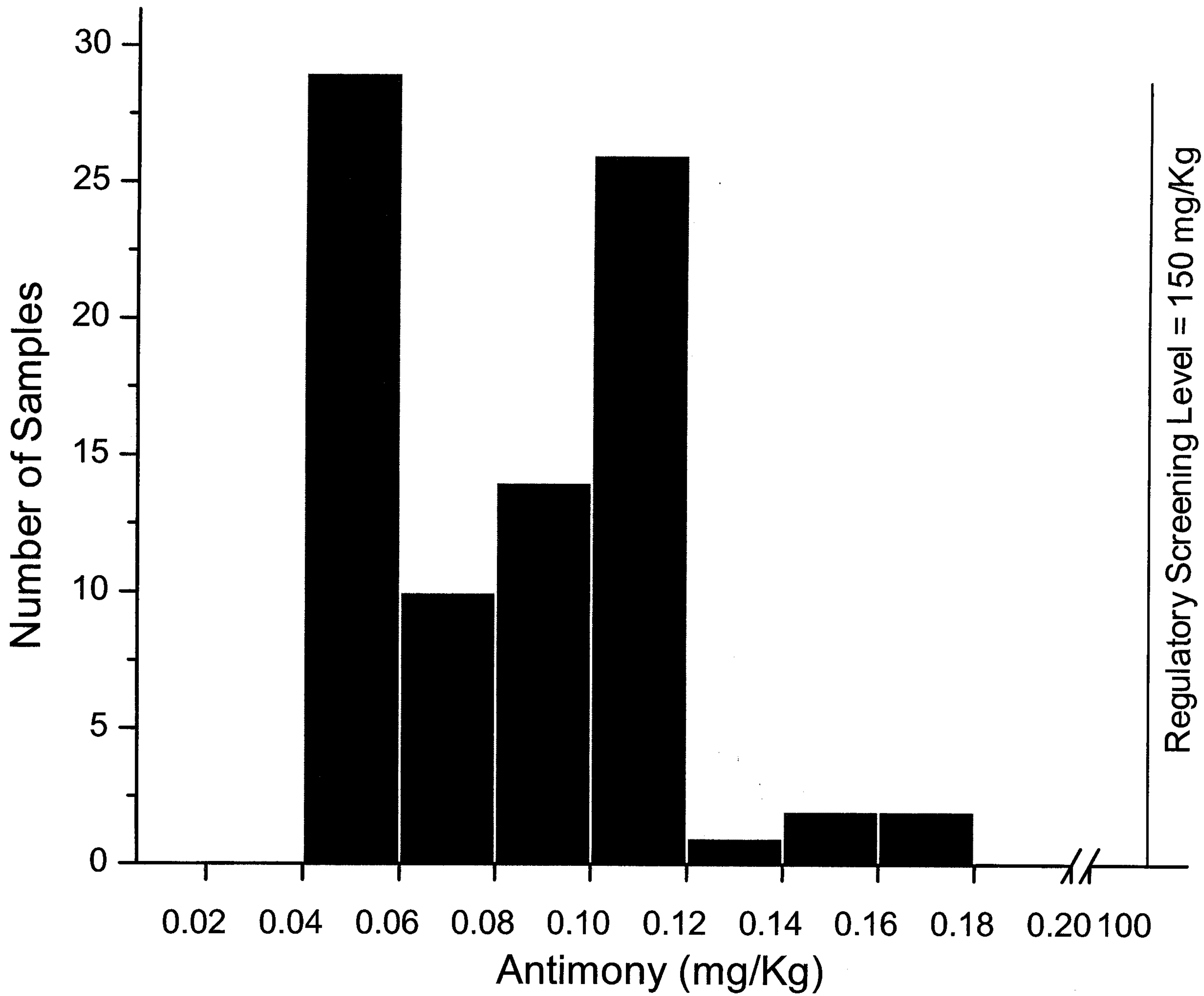

Sulfide vs Percent Fines
Sulfide (mg/kg)
100
80
60
40
20
0
0
10
20
30
40
50
60
70
80
90
100
Percent Fines (Silt + Clay)
PTLA-SG02-A1
PTLA-SG02-A3
PTLA-SG02-A2
Channel Excavation
Flaxman Island
Lions Bay
Mary Sachs Entrance

Appendix F

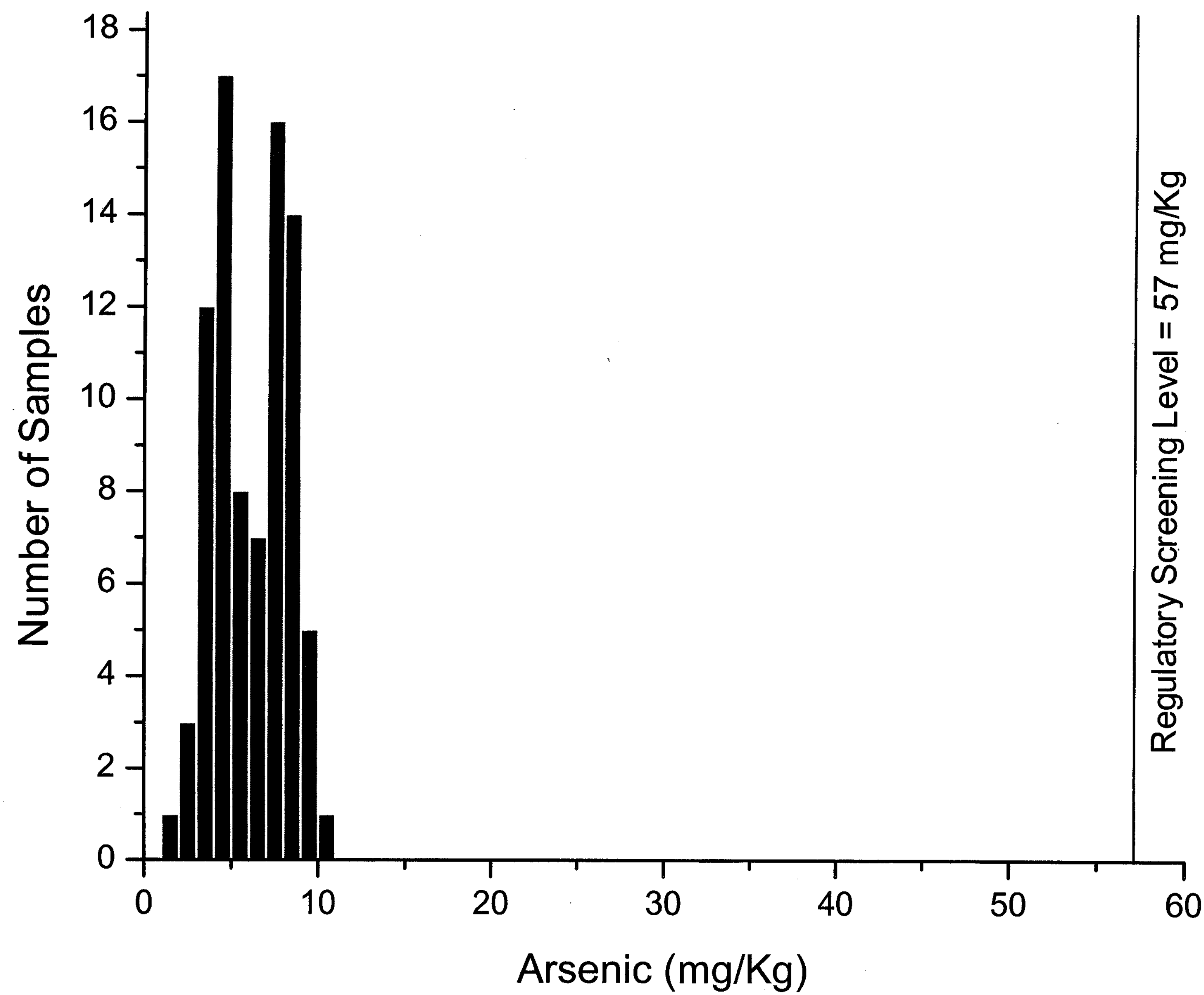
Cross Plots and Histograms

<u>Histograms</u>

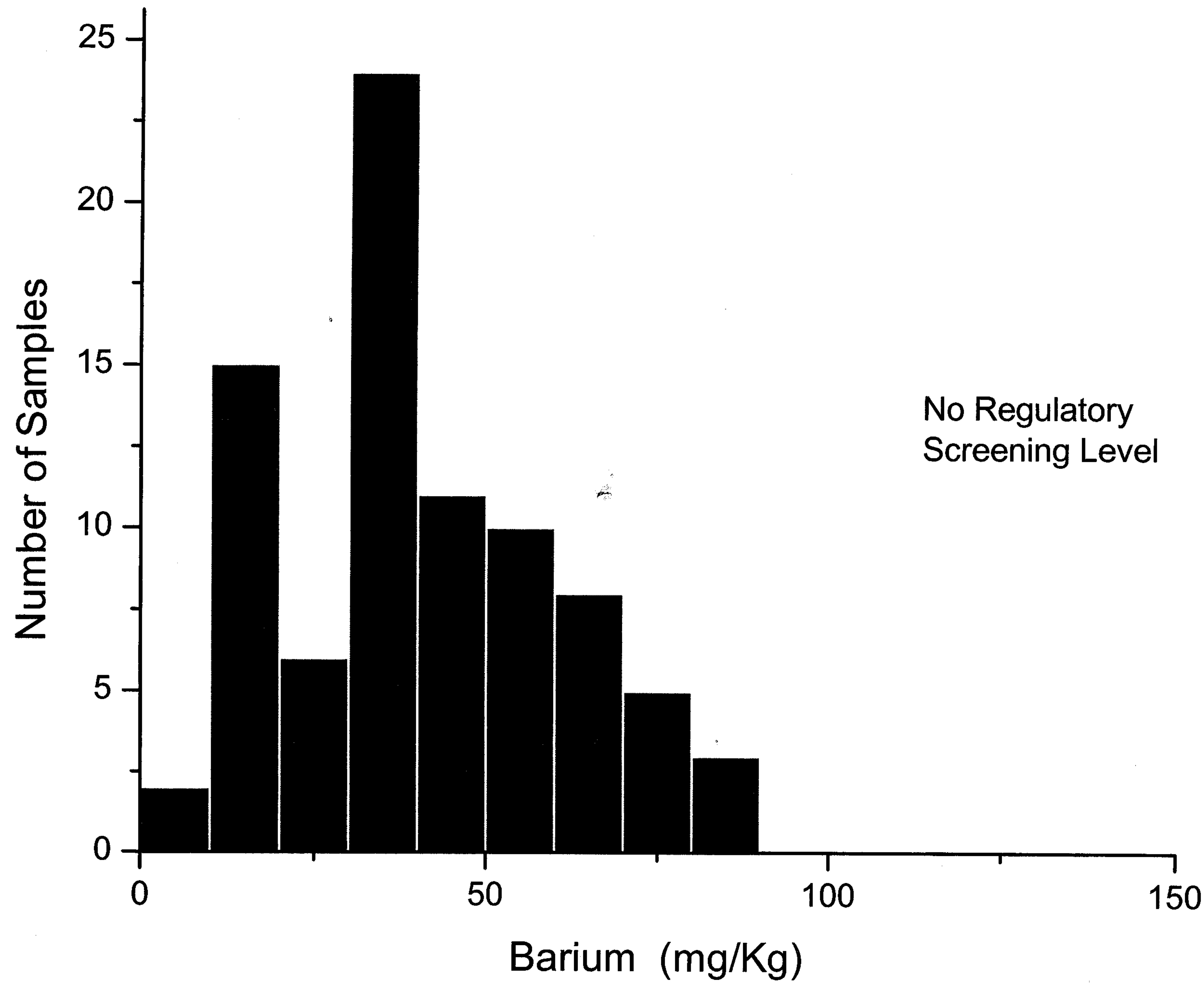
Antimony (Sb) Summary



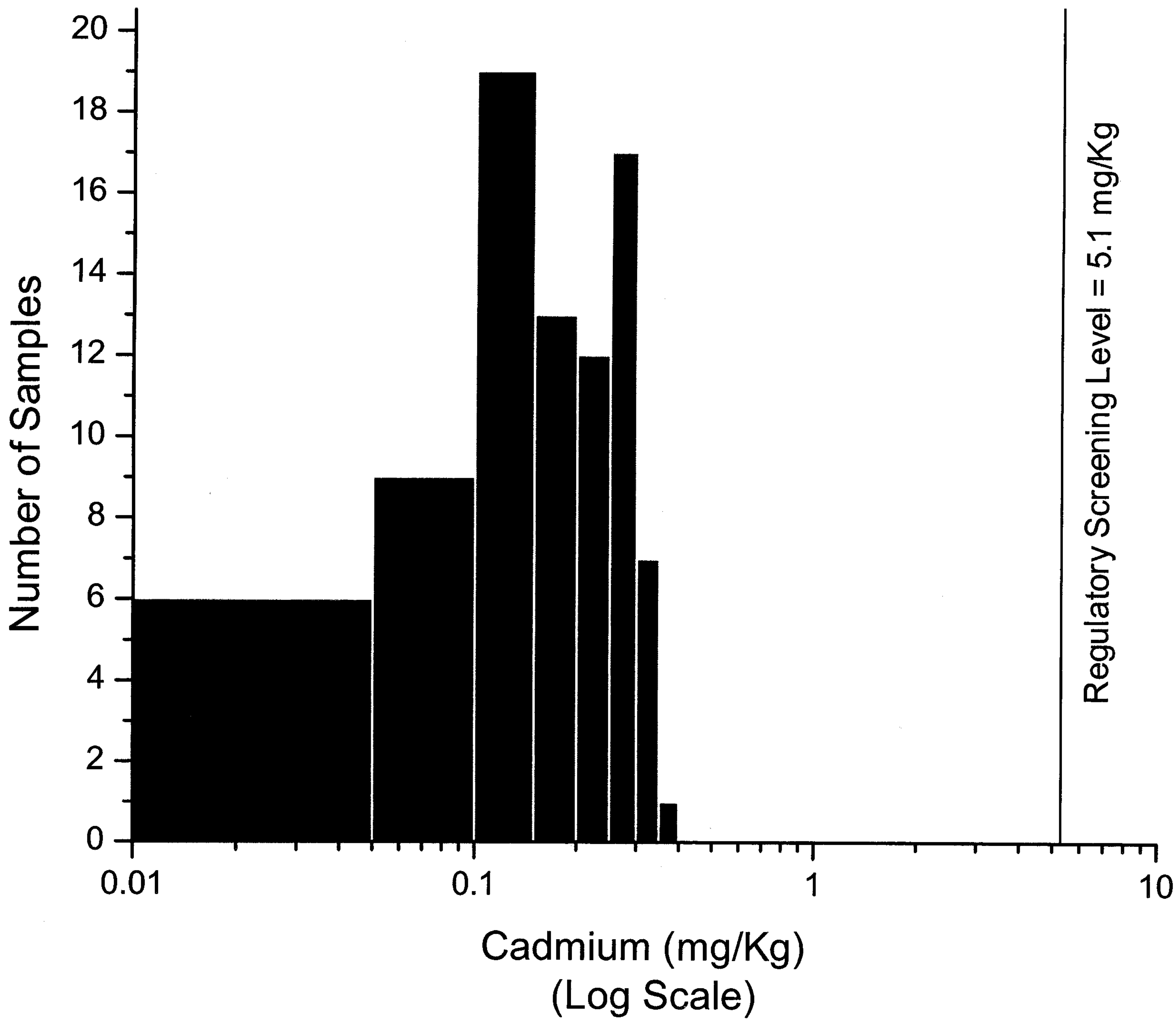
Arsenic (As) Summary



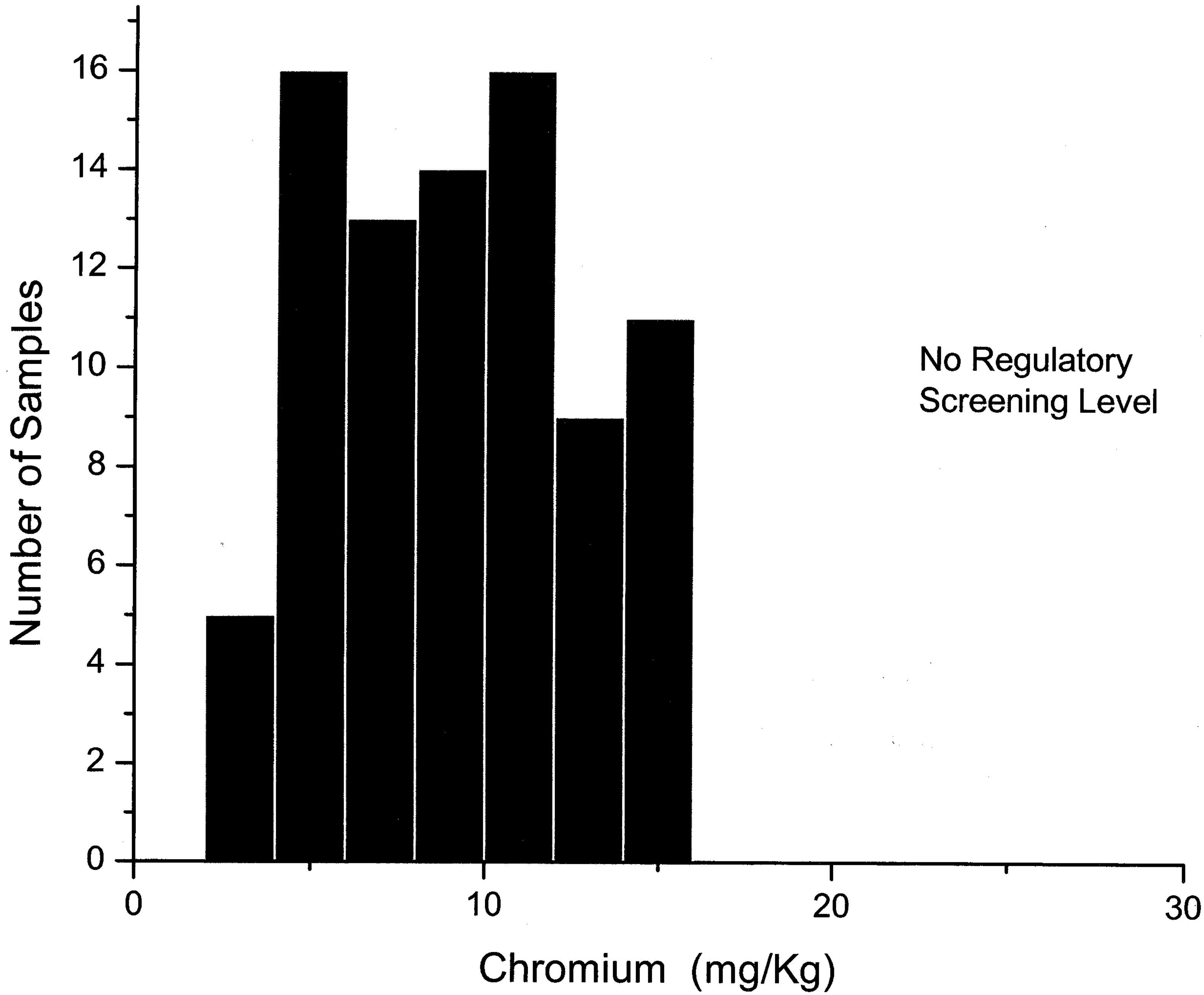
Barium (Ba) Summary



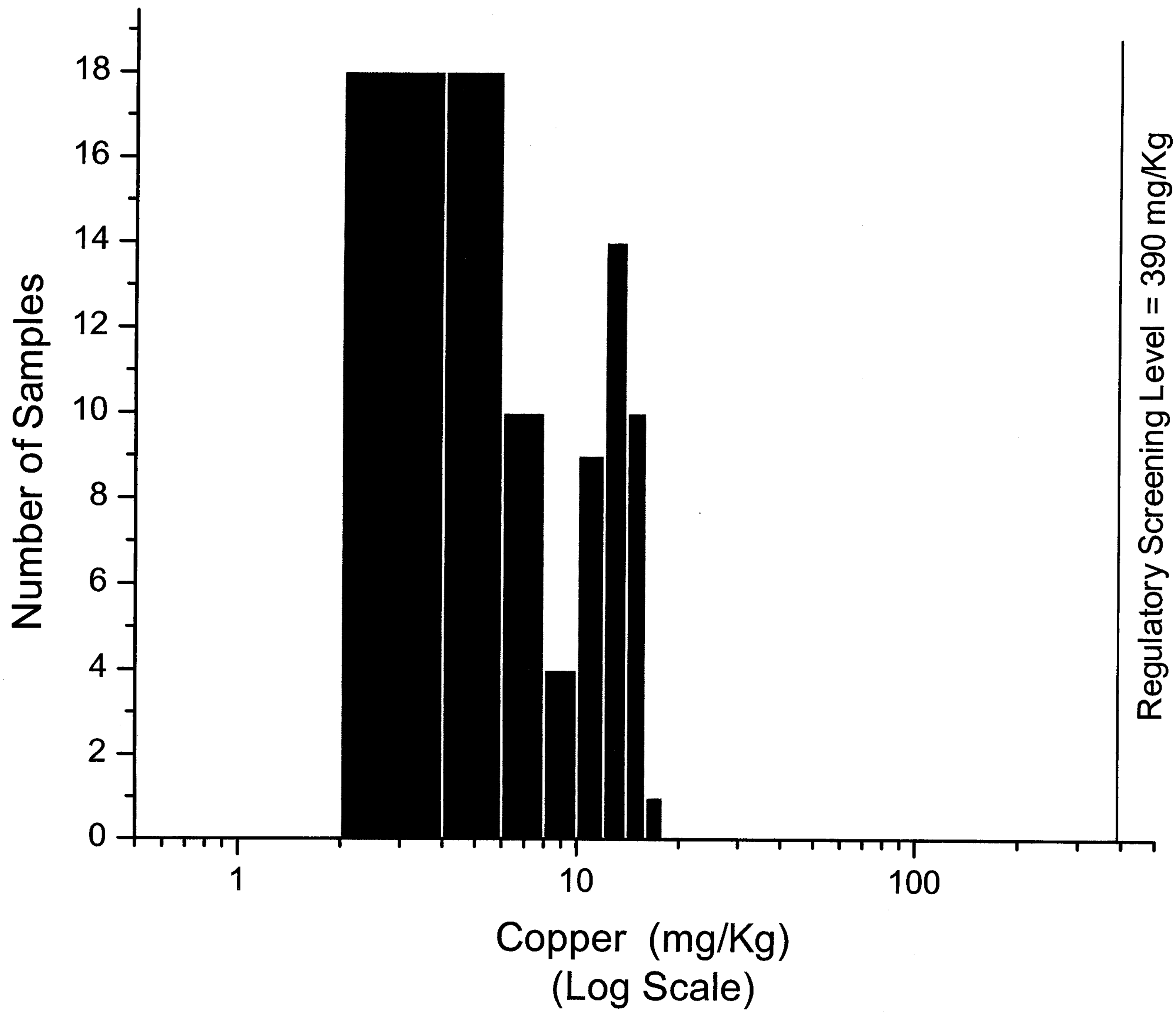
Cadmium (Cd) Summary



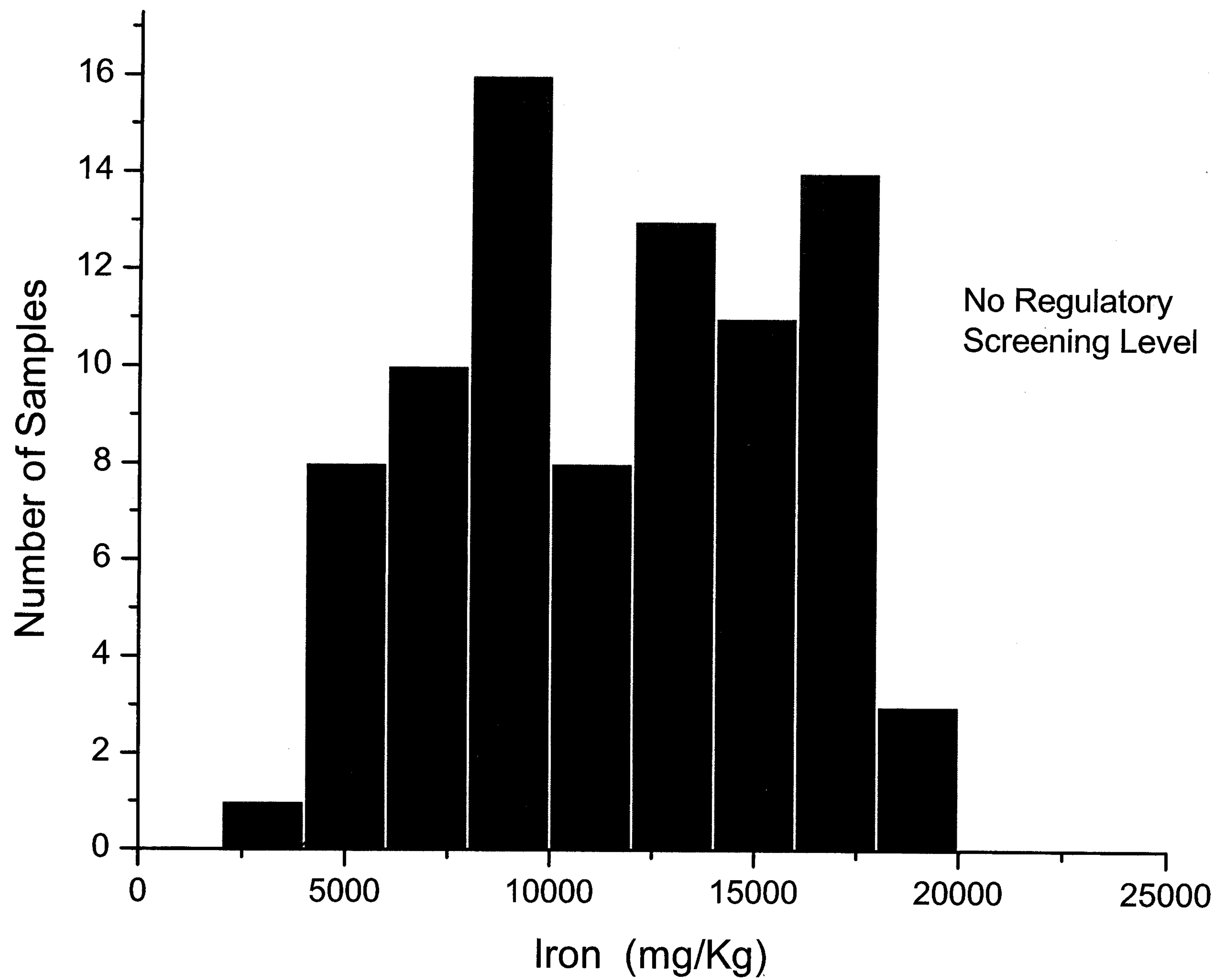
Chromium (Cr) Summary



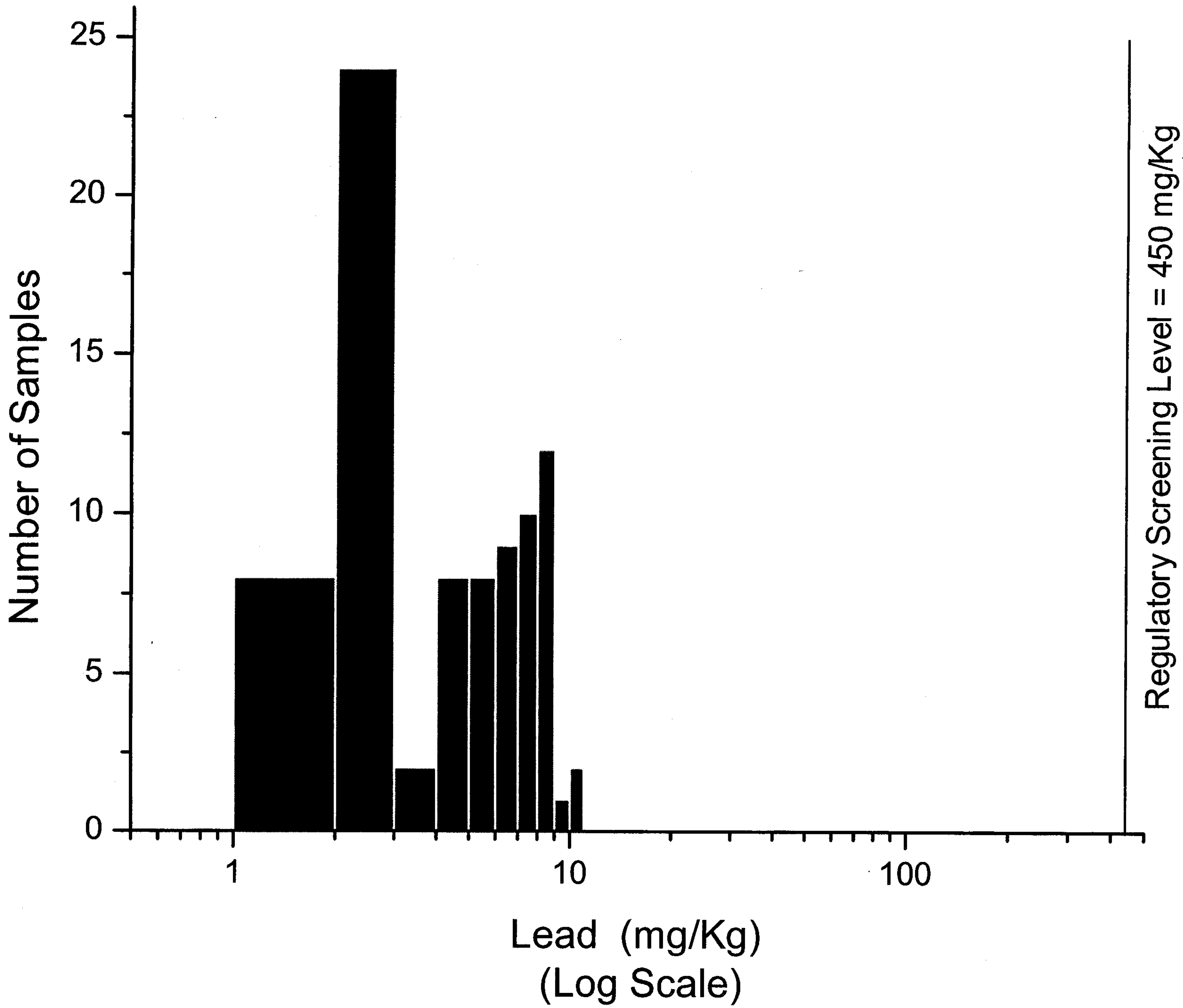
Copper (Cu) Summary

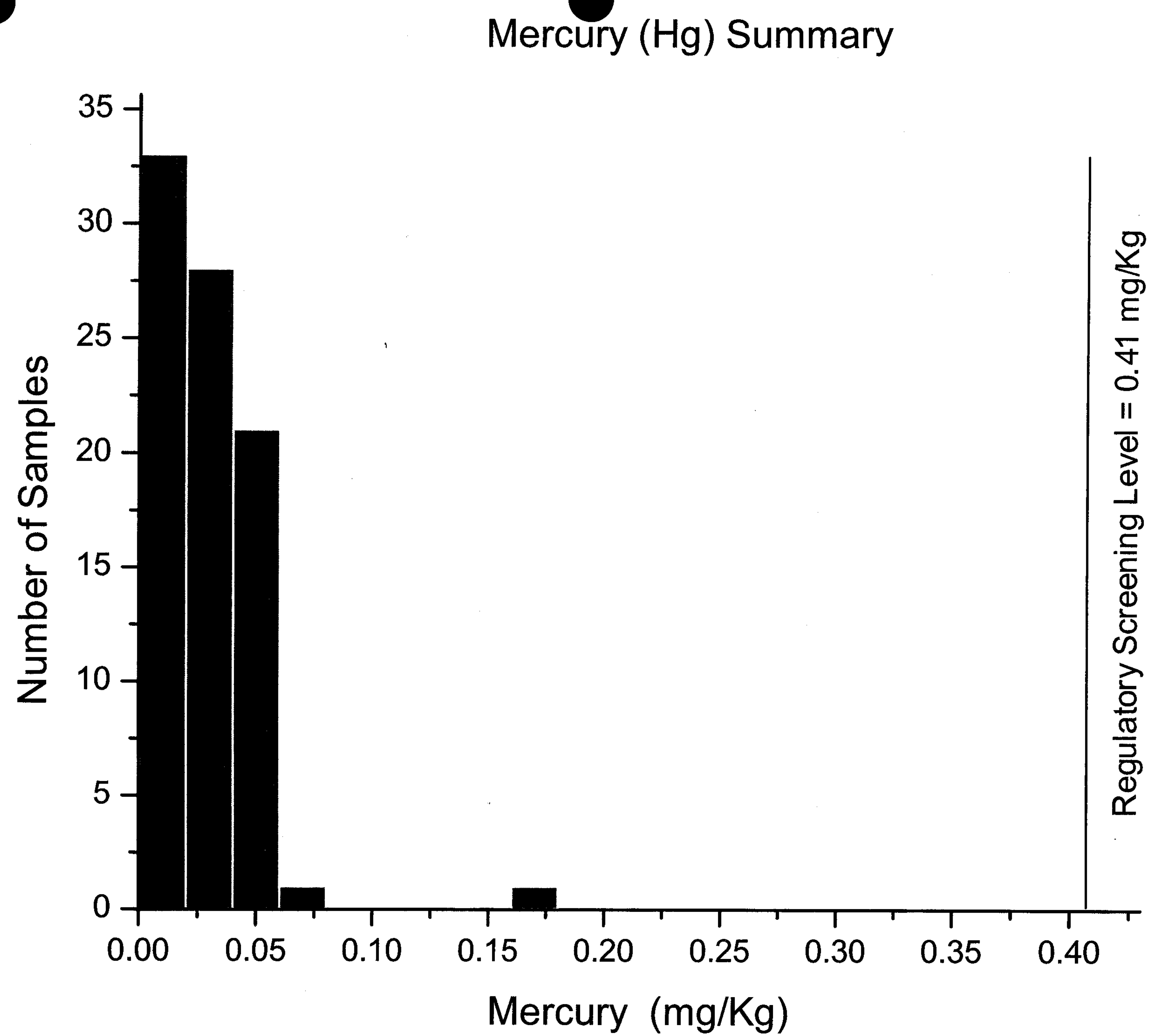


Iron (Fe) Summary

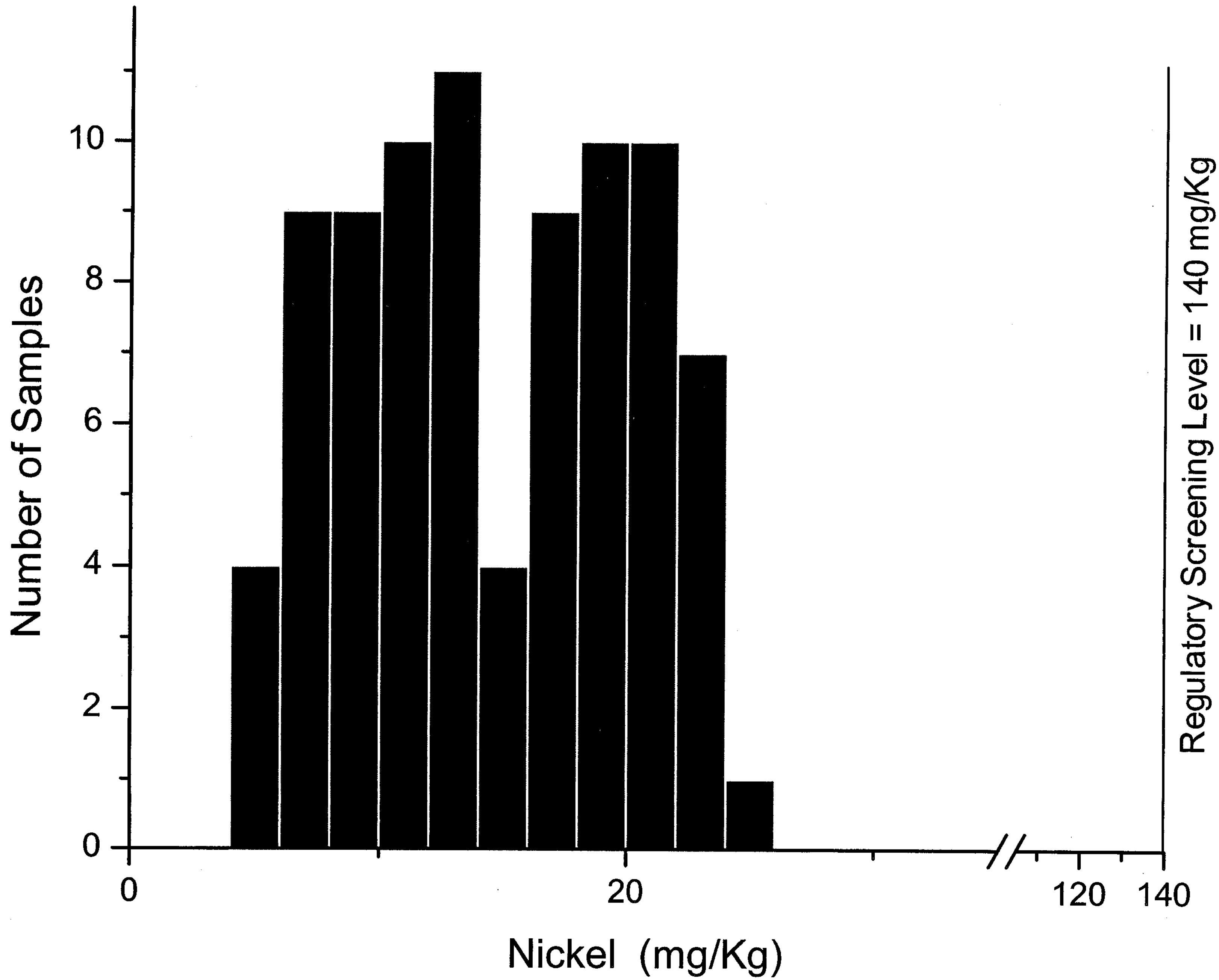


Lead (Pb) Summary

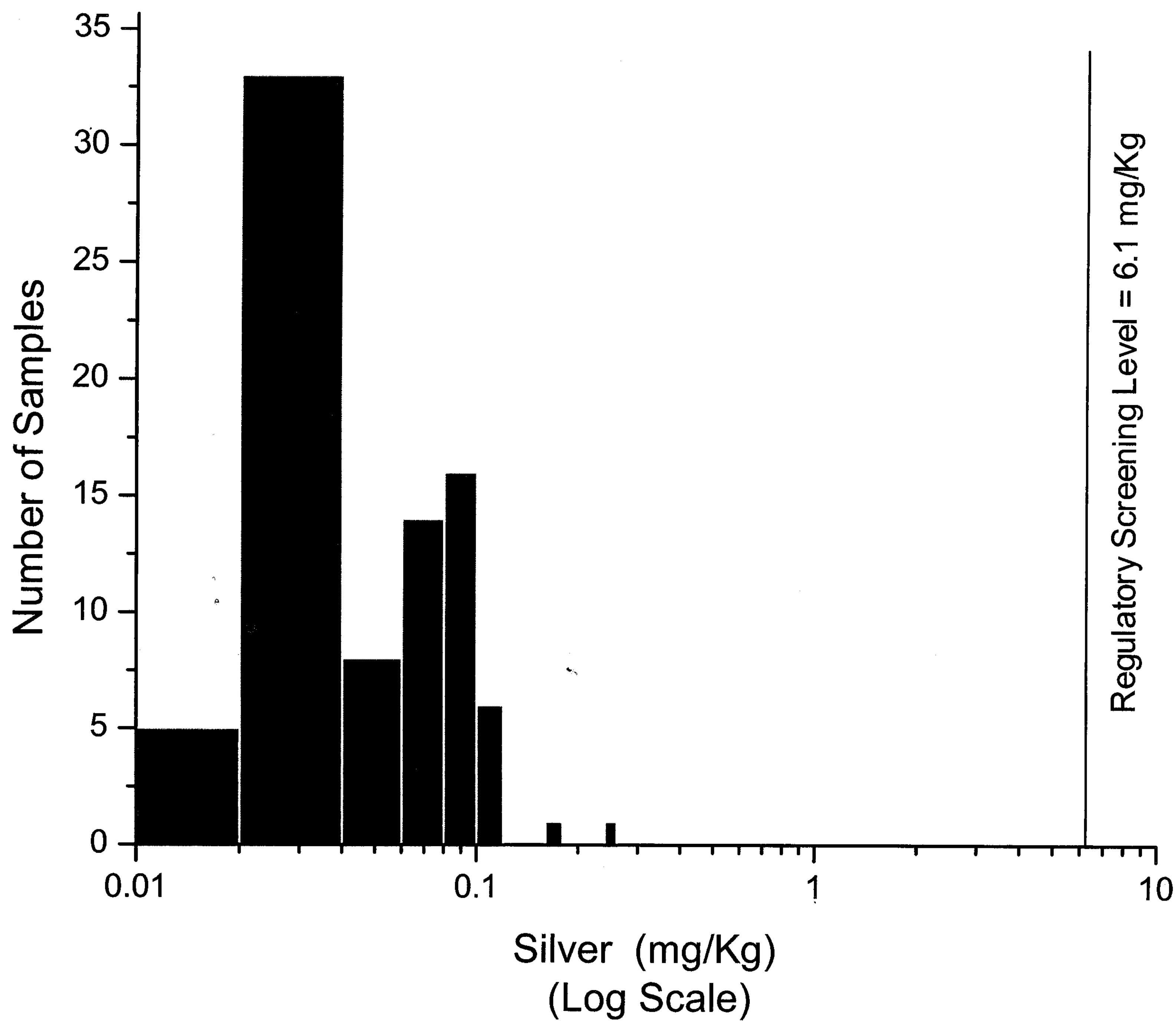



Mercury (Hg) Summary
Number of Samples
0
5
10
15
20
25
30
35
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
Mercury (mg/Kg)
Regulatory Screening Level = 0.41 mg/Kg

Nickel (Ni) Summary



Silver (Ag) Summary



Zinc (Zn) Summary